Skillet Turn Table – Maintenance & Service

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

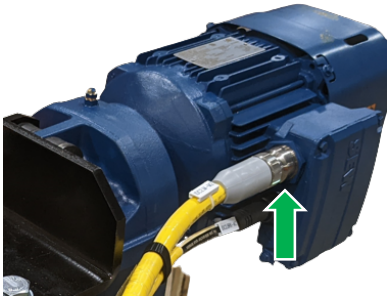
⚠ WARNING ⚠

- 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.

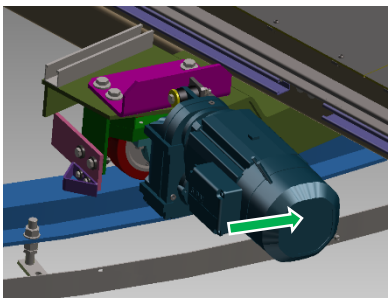
How to Replace a Gearmotor on a Turn/Pivot Table

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

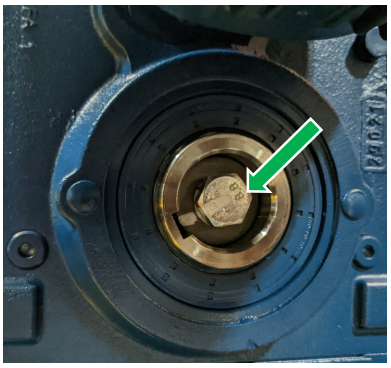
2 Disconnect the cables from the gearmotor.



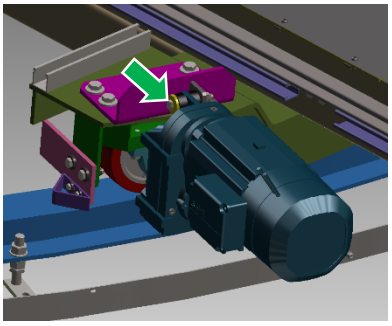
3 Remove the drive shaft cover on the gearmotor.



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

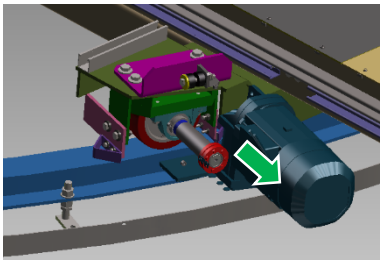


5 Remove the bolt that holds the gearmotor to the trolley.



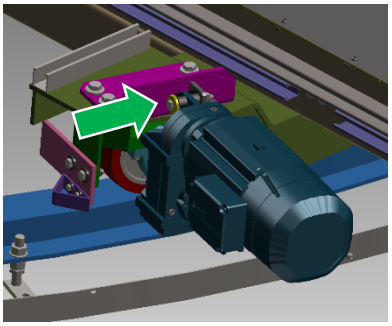
6 Remove the gearmotor from drive shaft.

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

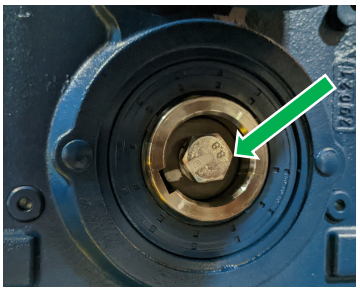


7 Install the new gearmotor on the drive shaft, after checking parallel key for integrity.

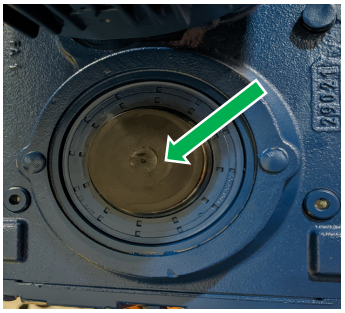
8 Insert and tighten the nut and bolt to 20 Nm that holds the gearmotor to the trolley.



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.

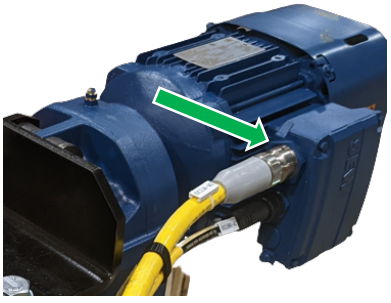
Replacing the Drive Wheel

1 Remove any payload from the Turn/Pivot Table.

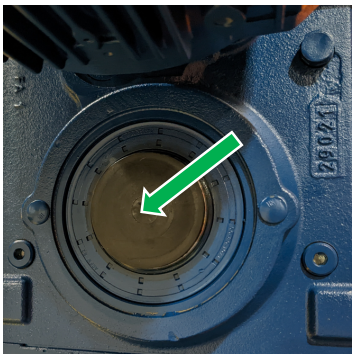
2 Remove and lockout all power sources to the area.

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.

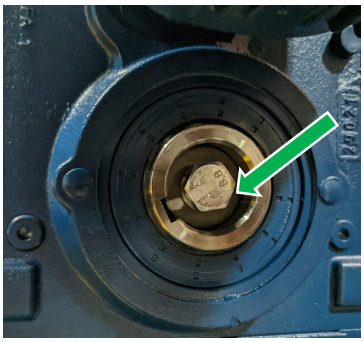
4 Disconnect the cables from the gearmotor.



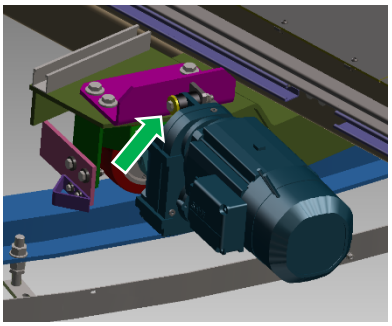
5 Remove the drive shaft cover on the gearmotor.



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

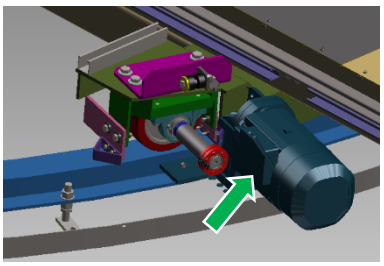


7 Loosen the nut and bolt that holds the gearmotor to the trolley.

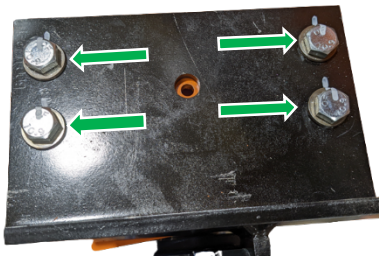


8 Remove the gearmotor from drive shaft.

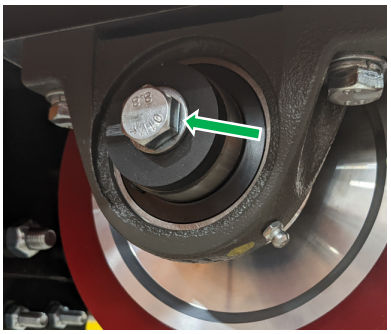
Note: *Remove the gearmotor exactly in axial direction using an appropriate handling device if necessary.*



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

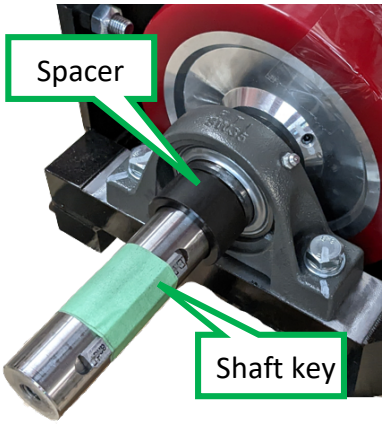


10 Remove the bolt and end cap opposite the drive shaft.



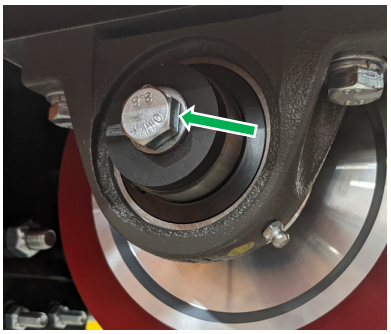
11 Pull the drive shaft through the pillow block bearings and drive wheel until you can lower the drive wheel out of the drive wheel block.

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

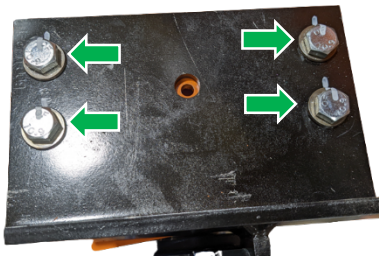


12 Place the new drive wheel into the drive wheel block and insert the drive shaft through the spacers and block.

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.

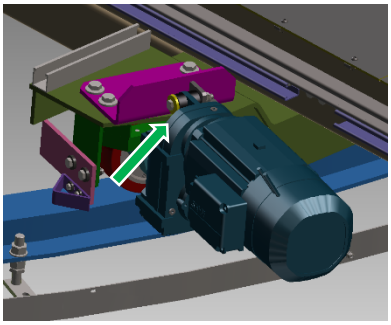


14 Install and secure the drive wheel block onto the pivot table with the four bolts and washers from step 9. Apply removable Loctite onto the bolts before inserting and tighten these bolts to 330 Nm.

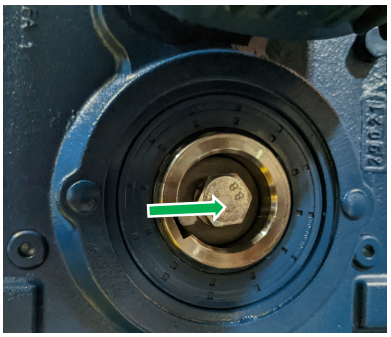


15 Install the new gearmotor on the drive shaft, after checking the integrity of the parallel key.

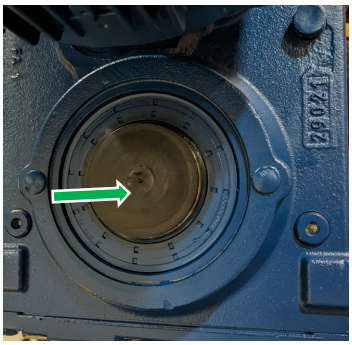
16 Insert and tighten the nut and bolt that holds the gearmotor to the trolley.



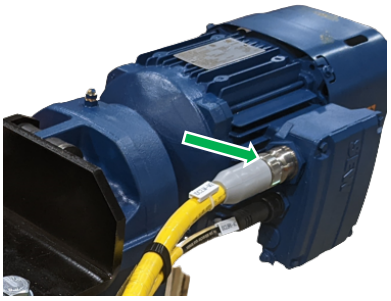
17 Insert and tighten the bolt to 88 Nm that connects the gearmotor to the drive shaft.



18 Install the drive shaft cover.



19 Reconnect the cables to the new gearmotor.



20 Lower the trolley back onto the rail.

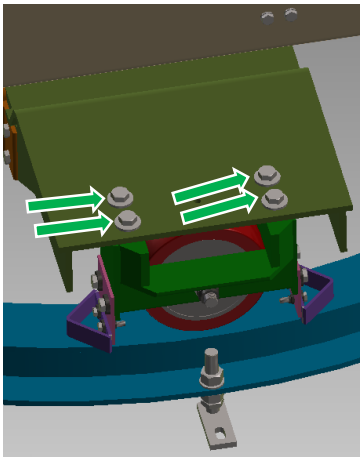
21 Complete restore power procedure and verify proper function.

Replacing the Idle Wheel

1 Remove any payload from the Turn/Pivot Table.

2 Remove and lockout all power sources to the area.

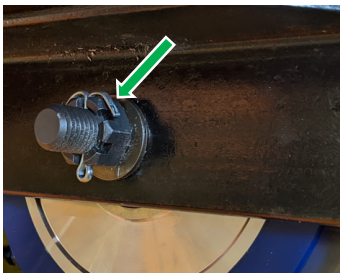
3 Raise the end of the trolley slightly using a hoisting device (chain hoist or jack), until the idle wheel is just off the rail. Do not lift further than to this point.



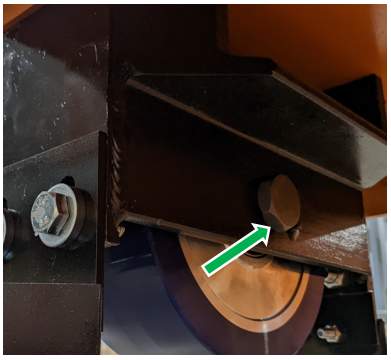
4 Loosen and remove the four bolts holding the idle wheel block to the trolley, transferring the idle wheel block to a work bench.

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

Loosen and remove the nut.

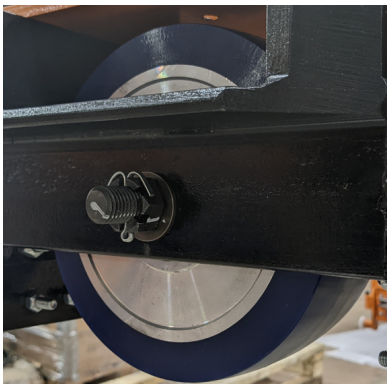


6 Remove the M25 shoulder bolt that serves as the axle for the idle wheel.

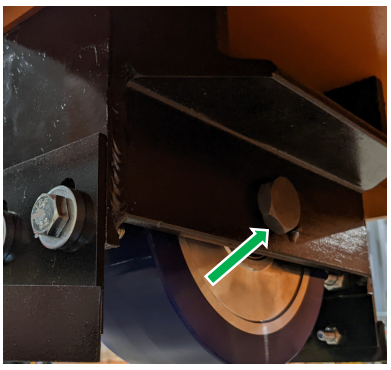


Replace the idle wheel.

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.*

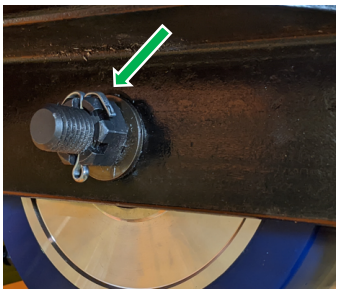


8 Insert the M25 shoulder bolt. Bolt on and snug up the hex nut.

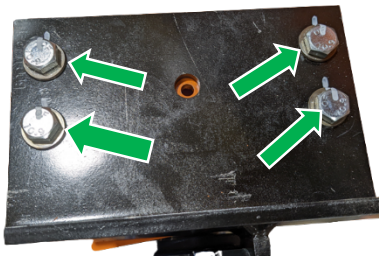


9 Insert the cotter pin to lock the hex nut in place.

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.

Skillet Power Roll Bed – Maintenance & Service

(Mounted on Lift Table)

This section describes the service procedures for major mechanical elements of a Skillet Power Roll Bed and apply to the PRB installed on the Right Angle Transfer..

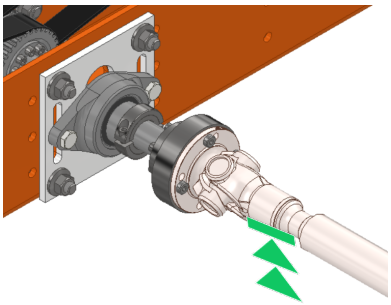
⚠ WARNING ⚠

- 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.

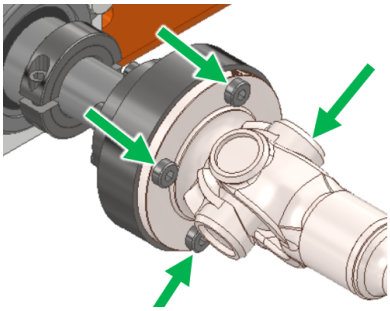
How to Replace the Cardan Shaft

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

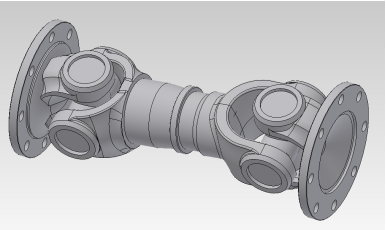
2 Support the cardan shaft.



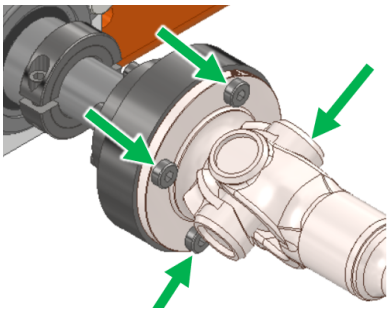
3 Remove the M8 bolts on the companion flanges on both ends of the cardan shaft



4 Replace the cardan shaft.



5 Apply Locktight before returning and tightening the M8 bolts on both companion flanges.



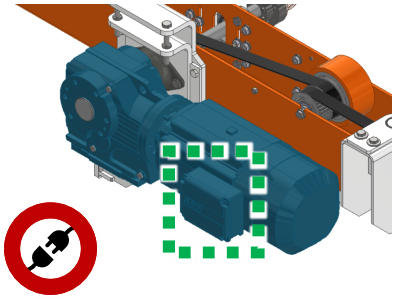
6 Run the Power Roll Bed and observe for proper function. Correct if necessary.

7 Remove all tools and equipment from the area and return the conveyor to service.

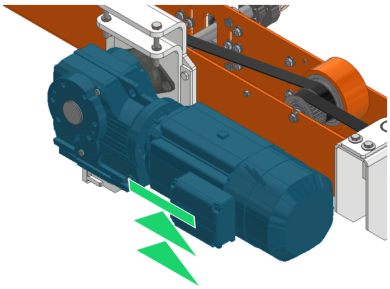
How to Replace the Drive Motor

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

2 Disconnect the cables from the drive motor.

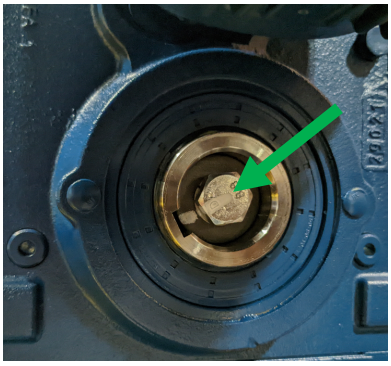


3 Support the gearmotor's weight.

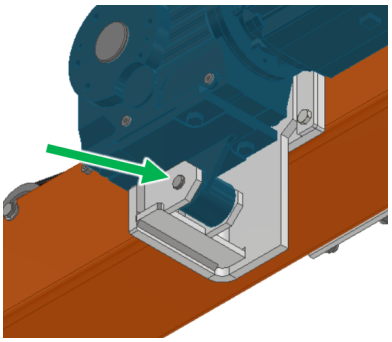


4 Remove the gearmotor's shaft cover.

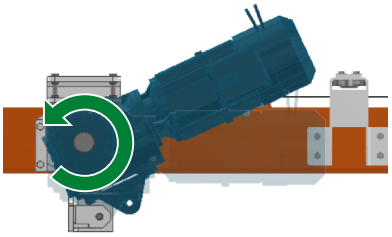
5 Loosen and remove the screw that connects the gearmotor to the drive shaft.



6 Remove the pin on the underside of the motor mount.

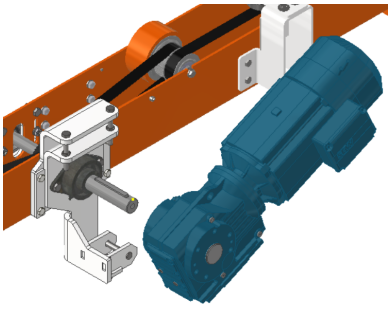


7 Rotate the gearmotor around the drive shaft until it is clear of the mounting plate.

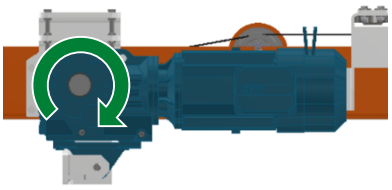


8 Remove and replace the old gearmotor with new unit.

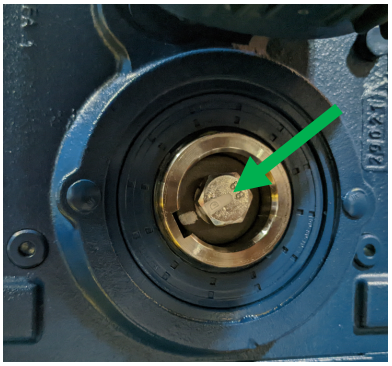
***Note**: Retain the shaft key for reuse if in good condition.*



9 Rotate the gearmotor around the driveshaft until it is back into position

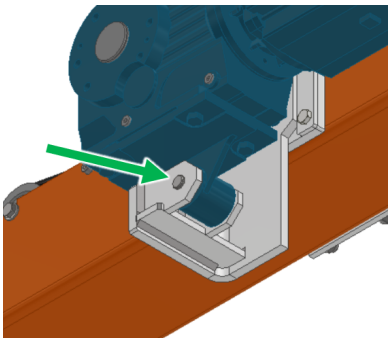


10 Insert and tighten the screw that connects the gearmotor to the drive shaft.

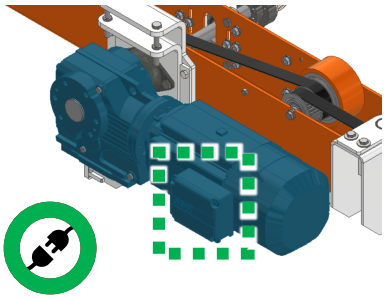


11 Replace the gearmotor's shaft cover.

12 Replace the mount pin.



13 Reconnect the cables to the drive motor



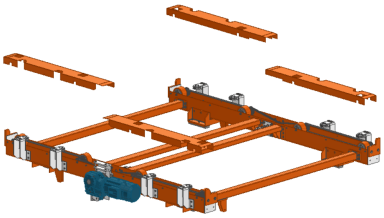
14 Run the Power Roll Bed and observe for proper function. Correct if necessary.

15 Remove all tools and equipment from the area and return the conveyor to service.

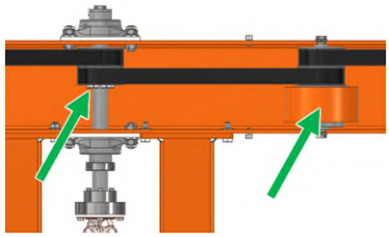
How to Replace a Drive Belt - Motor Side

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

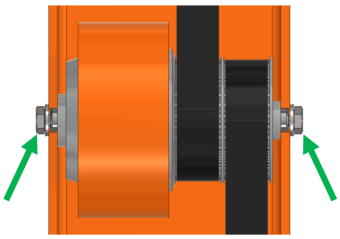
2 Remove safety covers.



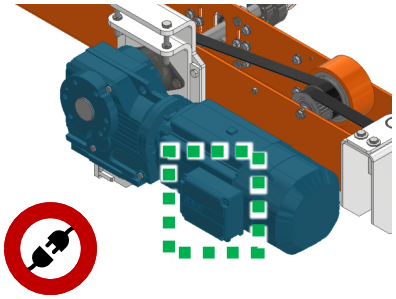
3 Both the drive shaft and the roller of the damaged belt will need to be loosened from the frame to release the belt.



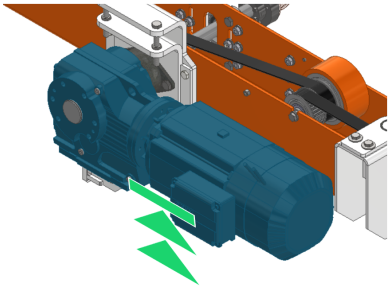
4 Loosen the bolts holding the belt-sharing roller shaft on both ends of the roller.



5 Disconnect the cables from the drive motor.

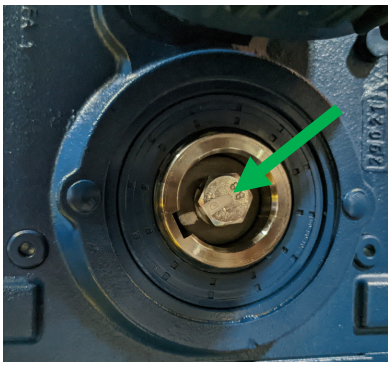


6 Support the gearmotor's weight.

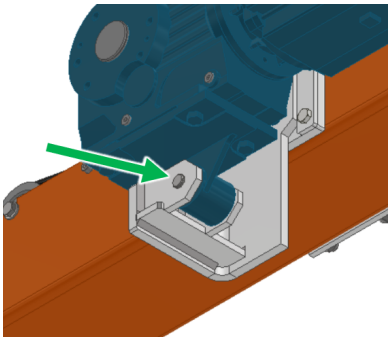


7 Remove the gearmotor's shaft cover.

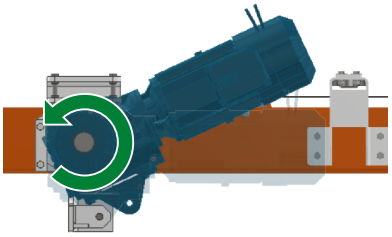
8 Loosen and remove the screw that connects the gearmotor to the drive shaft.



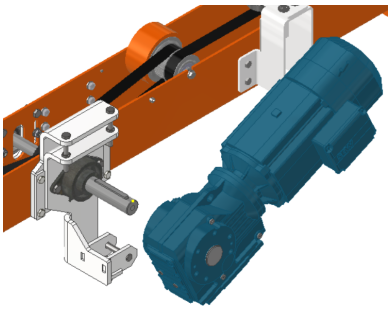
9 Remove the pin on the underside of the motor mount.



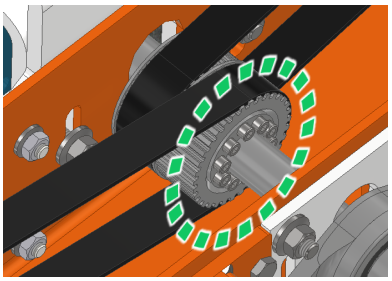
10 Rotate the gearmotor around the drive shaft until it is clear of the mounting plate.



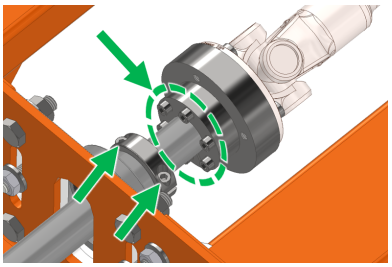
11 Remove the gearmotor from drive shaft.



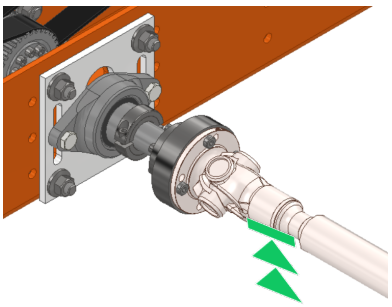
12 Loosen the coupling on the drive sprocket using a crossing pattern.



13 Loosen the hex bolts on the coupling and the shaft collar using a crossing pattern.

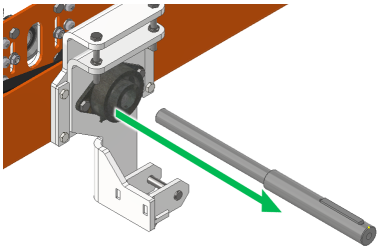


14 Support the cardan shaft.

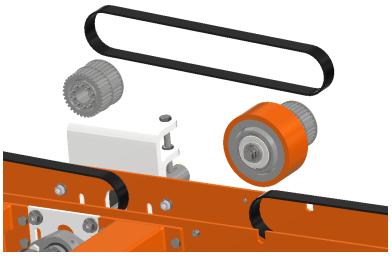


15 Slide the drive shaft out of the bearings from the outside edge.

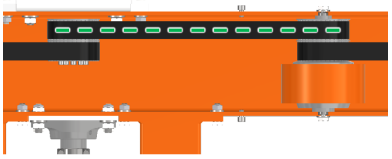
***Note**: Retain the shaft key for reuse if in good condition.*



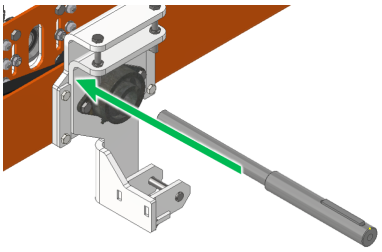
16 Remove the roller and drive sprocket from the frame and remove the belt.



17 Replace the damaged belt with the new unit. Thread the roller and drive sprocket through the toothed belt so that it is on the appropriate track.

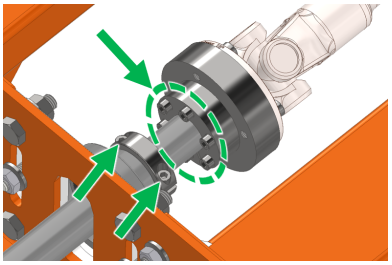


18 Re-position the drive sprocket, clamp, and coupler/cardan shaft, then re-install the drive shaft.



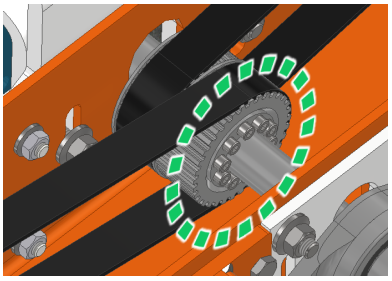
19 Tighten the bolts on the coupling and clamp.

Coupling should be torqued in stops in crossing pattern to **17 Nm.**

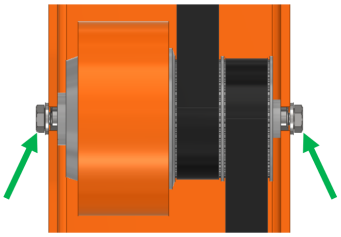


20 Tighten the coupling on the drive sprocket.

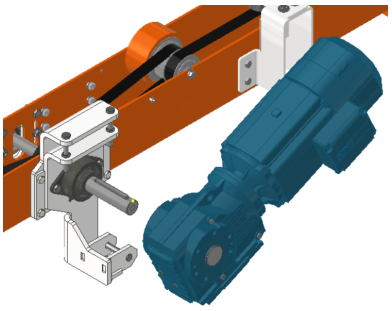
Coupling should be torqued in stops in crossing pattern to **17 Nm.**



21 Tighten the bolts holding the roller shafts on both ends of the roller.

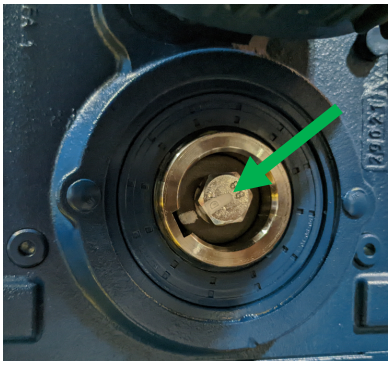


22 Place the gearmotor back onto drive shaft.



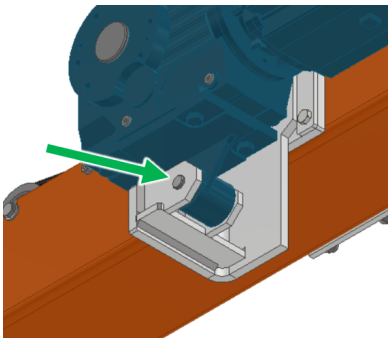
23 Rotate the gearmotor around the driveshaft until it is back into position

24 Insert and tighten the screw that connects the gearmotor to the drive shaft.

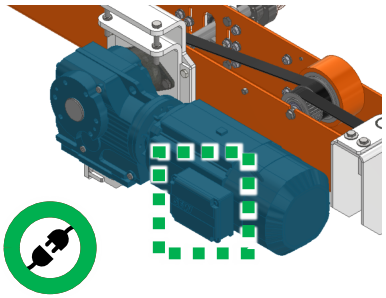


25 Replace the gearmotor's shaft cover.

26 Replace the mount pin.



27 Reconnect the cables to the drive motor



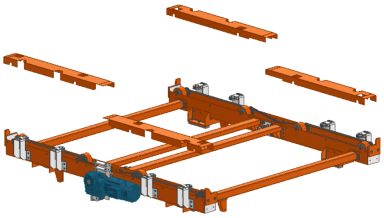
28 Run the Power Roll Bed and observe that the belts are tracking straight and that the table is even all around. Correct if necessary.

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

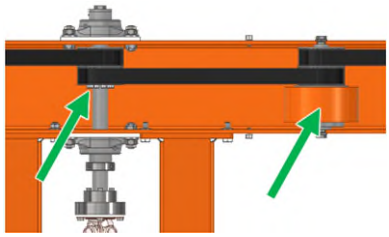
How to Replace a Drive Belt - Non-Motor Side

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

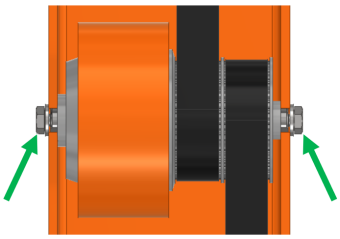
2 Remove safety covers.



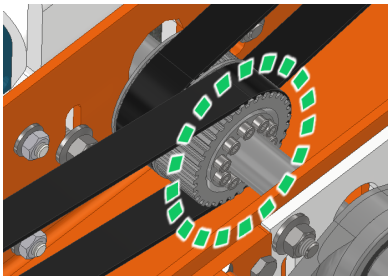
3 Both the drive shaft and the roller of the damaged belt will need to be loosened from the frame to release the belt.



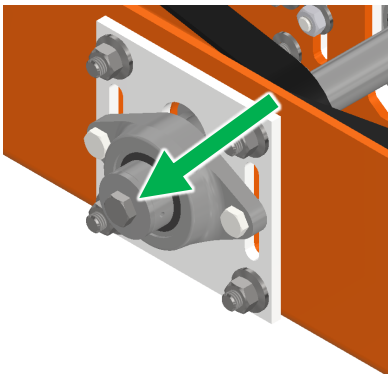
4 Loosen the bolts holding the belt-sharing roller shaft on both ends of the roller.



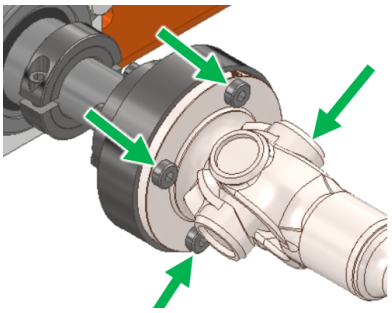
5 Loosen the coupling on the drive sprocket using a crossing pattern.



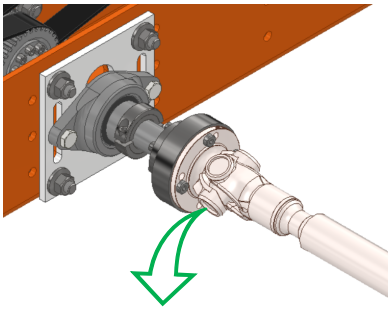
6 Remove bolt and washer from outside end of the shaft



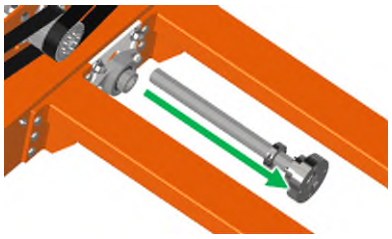
7 Remove the bolts on the companion flange on target end of the cardan shaft.



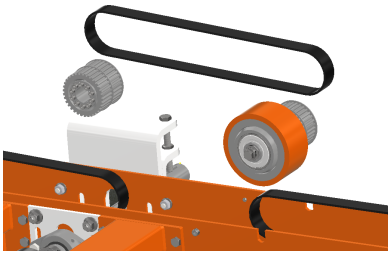
8 Swing the loose cardan shaft out of the way of the drive shaft.



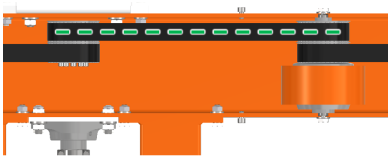
9 Slide the drive shaft assembly out of the bearings from the inside edge.



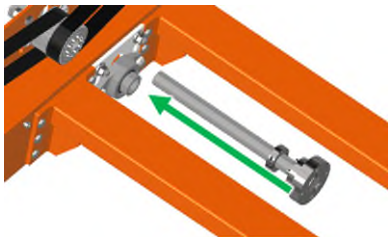
10 Remove the roller and drive sprocket from the frame and remove the belt.



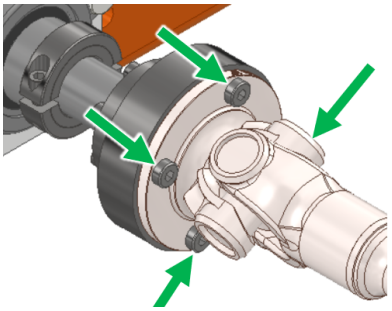
11 Replace the damaged belt with the new unit. Thread the roller and drive sprocket through the toothed belt so that it is on the appropriate track.



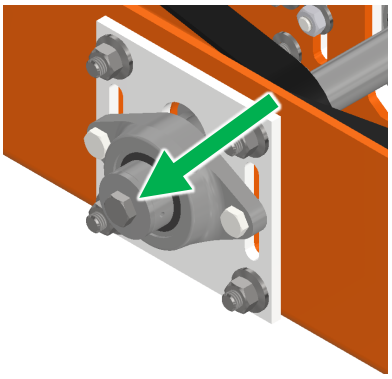
12 Re-position the drive sprocket then re-install the drive shaft.



13 Apply Locktight before returning and tightening the M8 bolts on both companion flanges.

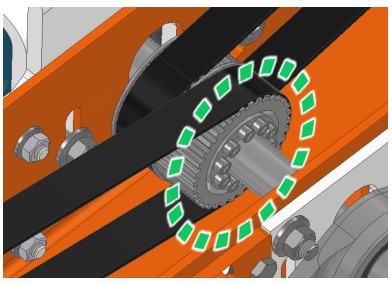


14 Re-install the bolt and washer on the outside end of the shaft.

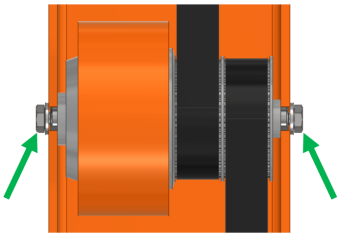


15 Tighten the coupling on the drive sprocket.

Coupling should be torqued in stops in crossing pattern to **17 Nm.**



16 Tighten the bolts holding the roller shafts on both ends of the roller.



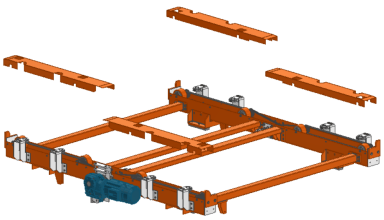
17 Run the Power Roll Bed and observe that the belts are tracking straight and that the table is even all around. Correct if necessary.

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

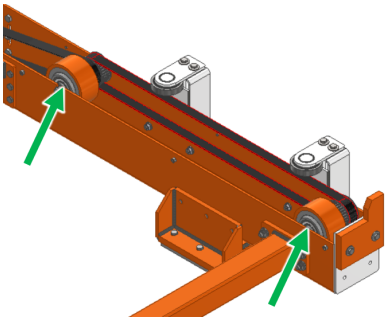
How to Replace a Driven Belt

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

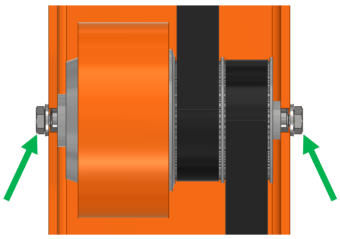
2. Remove safety covers.



3. Both belt sharing rollers of the damaged belt will need to be loosened from the frame to release the belt.

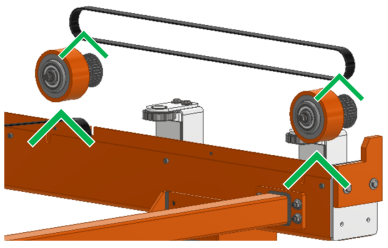


4. Loosen the bolts holding the roller shafts on both ends of the target rollers.



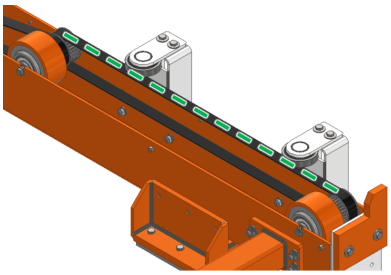
5. Remove the roller from the frame and remove the belt.

   Repeat this with the belt-sharing roller.

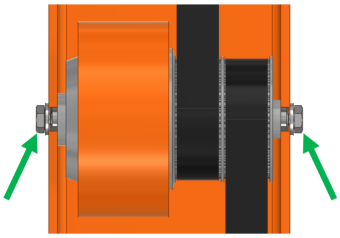


Replace damaged belt with the new unit.

6 Thread each roller through the toothed belt so that they are on the appropriate pulleys and rollers.



7 Tighten the bolts holding the roller shafts on both ends of the rollers.



8 Run the Power Roll Bed and observe that the belts are tracking straight and that the table is even all around. Correct if necessary.

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