

4-Post Lift Maintenance & Service

This section will describe service procedures for major mechanical elements of your 4-Post Lift system.

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.

Set Up for 4-Post Lift Wire Rope

NOTICE

The following is a delicate procedure and should only be completed by personnel with extensive knowledge of this system and its component interactions. It is advised to contact FATA customer service for completion of this procedure.

- 1 Direct the 4-Post Lift to the raised maintenance position and complete lockout procedures.



- 2 Remove and lockout all power sources to the area.



- 3 Ensure the wire rope is the correct length of 18 m (708.66”).



- 4 Loosen the wire rope clip fastenings on the drum.



- 5 Wind the rope around the drum through the grooved slots on the wire rope clips. Cross to the second set of grooved slots once completed with the first revolution.

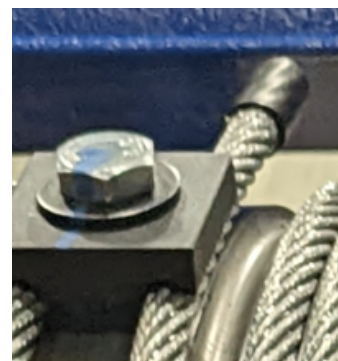
Note: Clips should be fastened finger tight as the wire rope is fed. Do not torque at this point.



- 6 After completing the second wrap through the wire clips, torque bolts down (55 Nm) with tension on the rope.



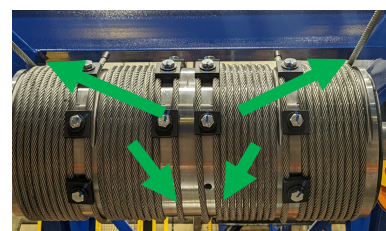
- 7 Cut and cap the end of the rope at the drum.



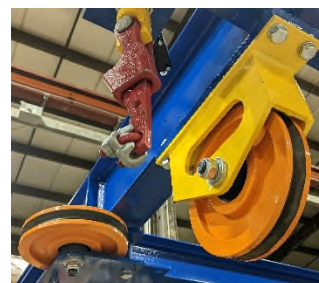
- 8 Run the motor and drive the drum to wrap the rope. Hold the rope under tension while the rope is wrapped.



- 9 When wrapping the ropes, the outer wraps should extend from the top of the drum out towards the wide pulleys and the inner wraps should extend from the bottom of the drum out towards the narrow pulleys.



- 10 After the rope is wrapped around the drum, feed the other end of the wire rope through the three pulleys:
1. Wide/Narrow Pulley
 2. Frame Drop Pulley
 3. Carriage Drop Pulley



⚠ WARNING ⚠

Do not twist, turn, or change orientation of the wire rope as it is being fed through the pulleys. Failure to do so may cause damage during operation and shortened lifespan of the rope.

Feed the end of the rope through the tension/slack switch attachment point.

11

Note: It may help to free the attachment point by removing the cotter pin.



After the rope is secure there may be a small gap at the top. This can be corrected by applying the load of the carriage, afterward the rope will be properly seated within the attachment point.

12



Wrap the excess rope. Cut and cap only after ensuring carriage is level in next steps.

13



To ensure accuracy of carriage level, measure each corner of the 4-Post Lift from the frame to the carriage. Each corner should measure equal distance.

14





If adjustments are needed complete steps 16 & 17.

15

If no adjustments are needed continue to step 18.

LEVELING ADJUSTMENTS

For course adjustments 5 mm or greater:

16

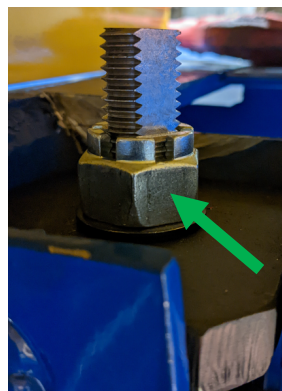
1. Release and reset the wire rope from the attachment point to the desired location.
2. Apply the carriage load to ensure the rope is properly seated before remeasuring.



For fine adjustments less than 5 mm:

17

1. Locate the adjustment bolt above the tension/slack switch and correct as necessary.
2. Apply the carriage load to ensure the rope is properly seated before remeasuring.



⚠ CAUTION ⚠

The adjustment bolt should only be used for fine adjustments. If used improperly, the tension/slack switch may not function as intended.

- 18** Unlock the carriage by removing the safety pins (2) and placing them back in their appropriate holders.



- 19** Complete restore power procedure and verify proper function.



Replacing the 4-Post Lift Pulley

1

Direct the 4-Post Lift to the lowered maintenance position with the carriage resting on the floor.

Resting position should release tension and create slack in the wire rope.



2

Remove and lockout all power sources to the area.



3

Identify which pulley is needed to be serviced. There are four types of pulleys on this system:

1. Wide Pulley – Steps 4-8
2. Narrow Pulley – Steps 9-13
3. Frame Drop Pulley – Steps 14-18
4. Carriage Drop Pulley – Steps 19-23

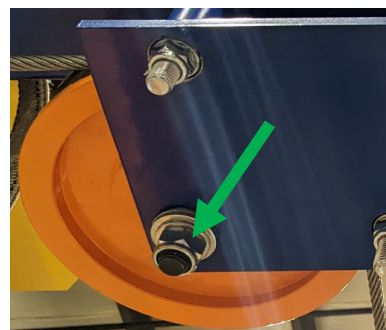


⚠ WARNING ⚠

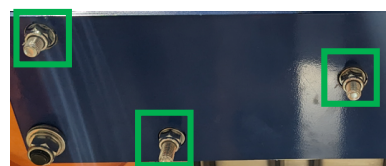
Do not twist, turn, or change orientation of the wire rope as it is being fed through the pulleys. Failure to do so may cause damage during operation and shortened lifespan of the rope.

Wide Pulley Instructions

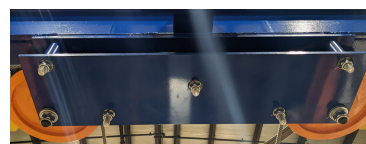
- 4 Remove the M20 bolts (2) to free the pulley wheels and wire ropes.



- 5 Remove the M16 bolts (5) fixing the pulley assembly to the 4-Post Lift frame.



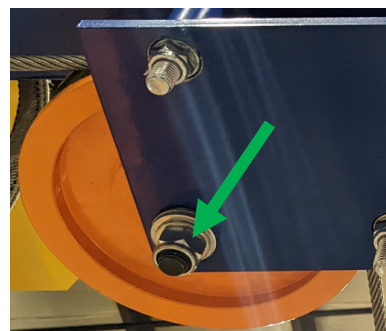
- 6 Remove and replace the wide pulley assembly.
Note: Remove the pulley wheel from the new assembly to allow the wire rope to be fed through the new pulley.



- 7 Torque the M16 bolts (5) to 219 Nm and secure the wide pulley to the frame.



- 8 Torque the M20 bolts (2) to 441 Nm and secure the pulley wheels with the wire ropes.



Narrow Pulley Instructions

- 9** Remove the M20 bolts (2) to free the pulley wheels and wire ropes.



- 10** Remove the M16 bolts (5) fixing the pulley assembly to the 4-Post Lift frame.



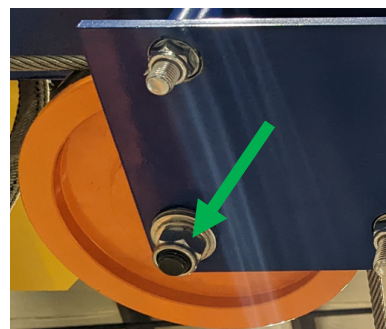
- 11** Remove and replace the narrow pulley assembly.
Note: Remove the pulley wheel from the new assembly to allow the wire rope to be fed through the new pulley.



- 12** Torque the M16 bolts (5) to 219 Nm and secure the narrow pulley to the frame.



- 13** Torque the M20 bolts (2) to 441 Nm and secure the pulley wheels with the wire ropes.



Frame Drop Pulley Instructions

- 14** Remove the M20 bolt to free the pulley wheels and wire ropes.



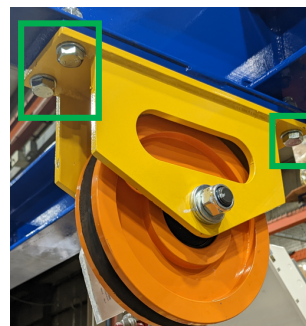
- 15** Remove the M16 bolts (4) fixing the pulley assembly to the 4-Post Lift frame.



- 16** Remove and replace the frame drop pulley assembly.
Note: Remove the pulley wheel from the new assembly to allow the wire rope to be fed through the new pulley.



- 17** Torque the M16 bolts (4) to 219 Nm and secure the frame drop pulley to the frame.
Note: Ensure proper orientation of pulley assembly frame.



- 18** Torque the M20 bolt to 441 Nm and secure the pulley wheels with the wire ropes.



Carriage Drop Pulley Instructions

- 19** Remove the M20 bolt to free the pulley wheels and wire ropes.



- 20** Remove the M16 bolts (4) fixing the pulley assembly to the carriage frame.



- 21** Remove and replace the carriage drop pulley assembly.
Note: Remove the pulley wheel from the new assembly to allow the wire rope to be fed through the new pulley.



- 22** Torque the M16 bolts (5) to 219 Nm and secure the carriage drop pulley to the frame.



- 23** Torque the M20 bolts to 441 Nm and secure the pulley wheels with the wire ropes.



24

To ensure accuracy of carriage level, measure each corner of the 4-Post Lift from the frame to the carriage. Each corner should measure equal distance.


25

If adjustments are needed complete steps 26 & 27.

If no adjustments are needed continue to step 28.



LEVELING ADJUSTMENTS

26

For course adjustments 5 mm or greater:

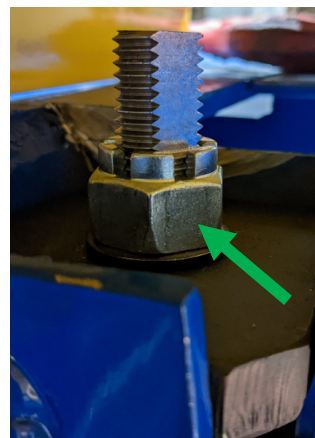
1. Release and reset the wire rope from the attachment point to desired the location.
2. Apply the carriage load to ensure the rope is properly seated before remeasuring.



For fine adjustments less than 5 mm:

27

1. Locate the adjustment bolt above the tension/slack switch and correct as necessary.
2. Apply the carriage load to ensure the rope is properly seated before remeasuring.



⚠ CAUTION ⚠

The adjustment bolt should only be used for fine adjustments. If used improperly, the tension/slack switch may not function as intended.

- 28** Complete restore power procedure and verify proper function.

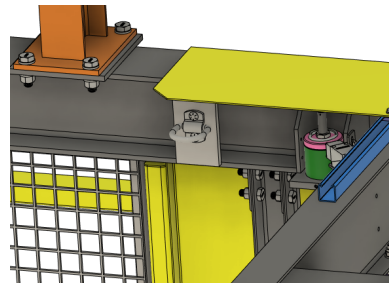


Replacing the 4-Post Lift Gearmotor

- 1 Direct the 4 Post Lift to the raised service position and complete lockout procedures.

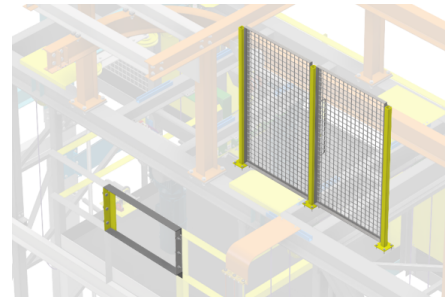


- 2 Secure yourself to one of the structures tie-off points at the top of the structure.



- 3 Remove the gate or the removable handrail based on which gearmotor is being serviced.

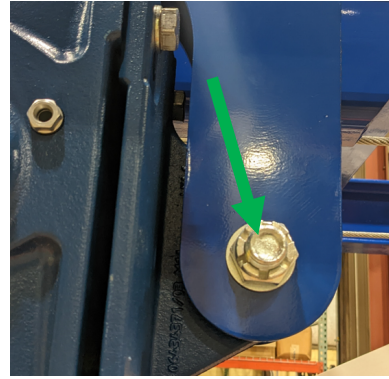
Note This step is necessary to ensure enough clearance is available when removing the gearmotor from the shaft.



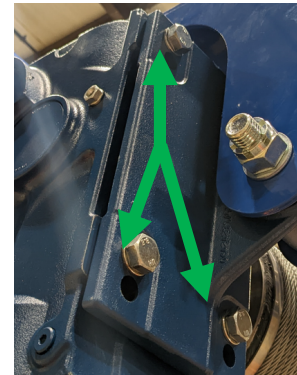
- 4 Support the gearmotor using the service rail.



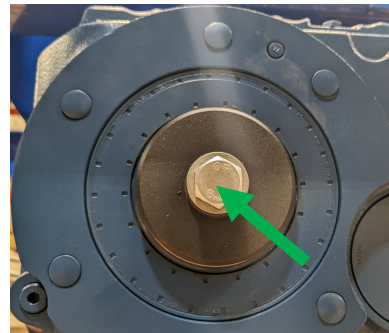
- 5 Remove the M24 bolt to free the motor from the motor mount.



- 6 Remove the M16 bolts (4) to free the motor from the plate.



- 7 Remove the M16 bolt and cap to free the motor from the shaft.



- 8 The motor will be entirely free. *Carefully* remove and hoist through upper 4-Post Lift opening.

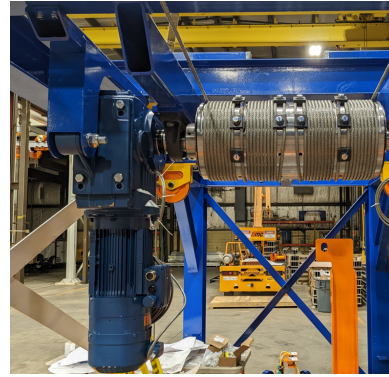
Note: Set the motor on the service platform and reattach to gain easier access to the opening.



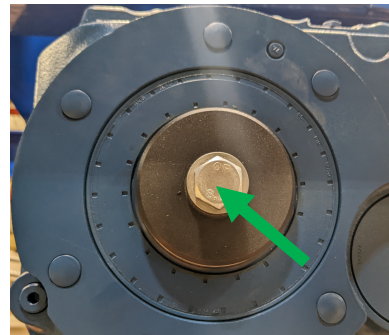
9

Bring the new motor onto the service platform via the upper 4-Post Lift opening.

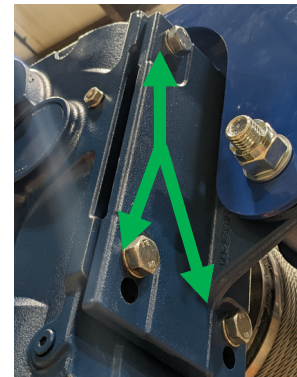
Position the motor for reattachment at the shaft.

**10**

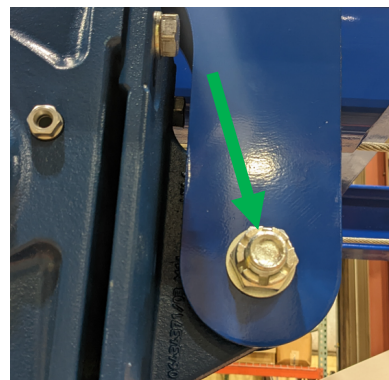
Place the cap and torque the M16 bolt to 219 Nm to attach the motor to the shaft.

**11**

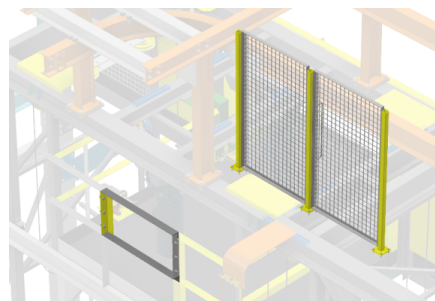
Place and torque the M16 bolts (4) to 219 Nm to attach the motor to the plate.

**12**

Place and torque the M24 bolt to 762 Nm to attach the motor to the motor mount.



- 13** Return the removed gate or handrail.



Remove any gearmotor supports from the service rail.

- 14** Remove any safety tie-offs.

Complete restore power procedure and verify proper function.

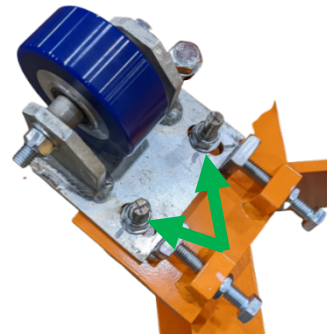


Replacing the 4-Post Lift Guide Roller

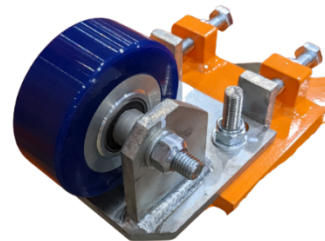
- 1 Direct the 4 Post Lift to the raised service position and complete lockout procedures.



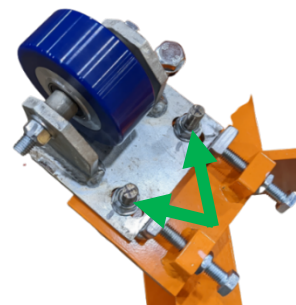
- 2 Remove the M12 bolts (2) securing the guide roller assembly.



- 3 Remove the original assembly and replace with a new one.



- 4 Place the new assembly up to the adjustment bolts and torque the M12 bolts to 88 Nm to secure the assembly.



- 5 Complete restore power procedure and verify proper function.

