

BUTTERFLY®
CONCEPTS, LLC

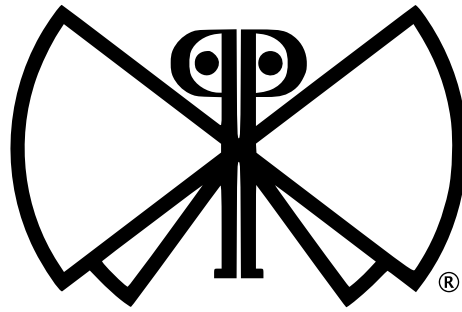
**Butterfly Tray
Assembly &
Installation Manual
G3**

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BUTTERFLY[®]

CONCEPTS, LLC

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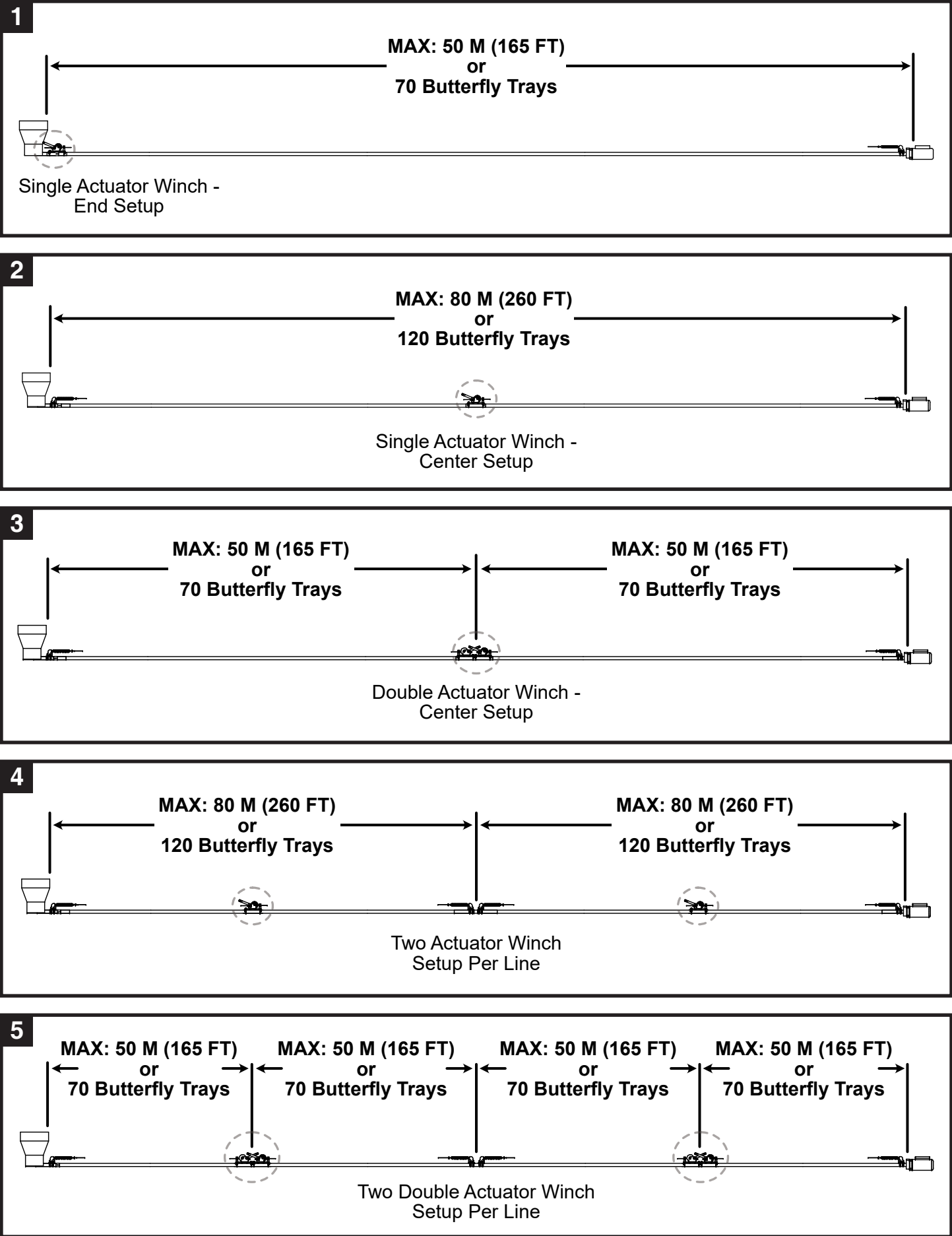
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IMPORTANT INSTRUCTIONS

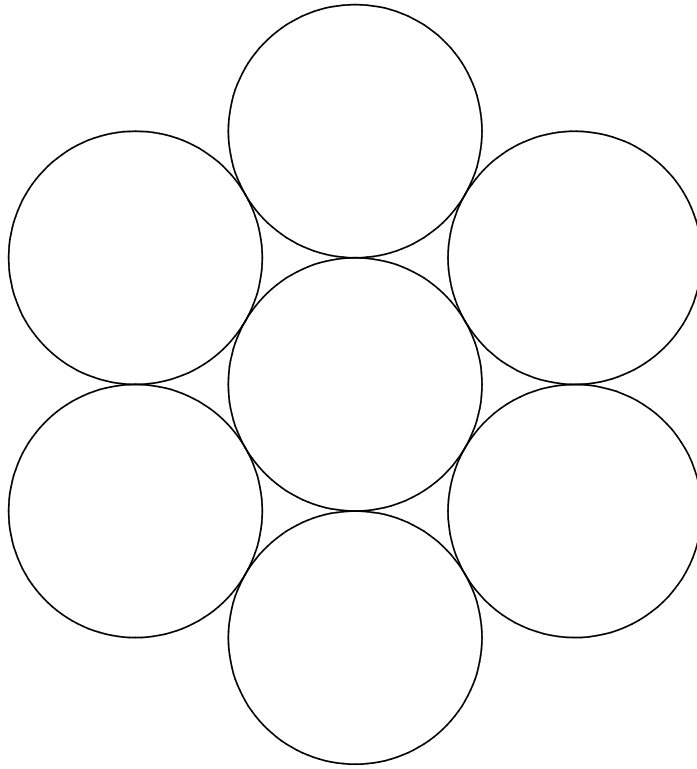
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RECOMMENDED BUTTERFLY TRAY SETUPS

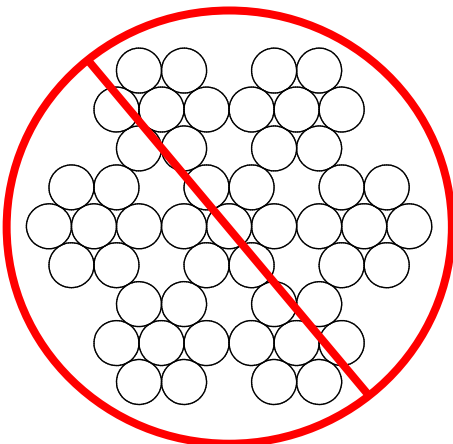


ACTUATOR CABLE

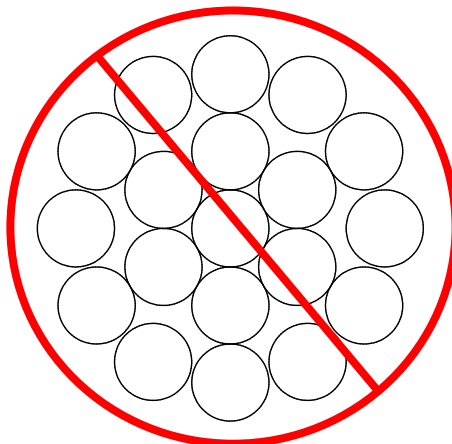
1 **IMPORTANT:** For all system installation, use 3 mm or 7/64 in 1X7 Galvanized Cable only.



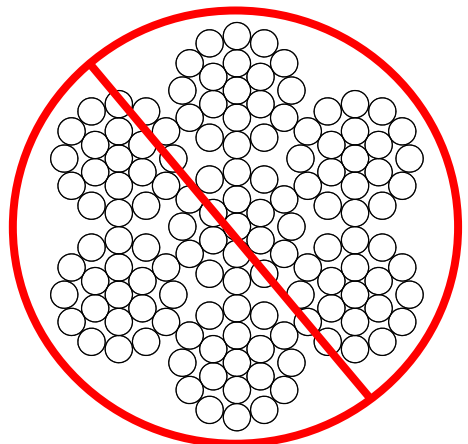
2 **Do Not** use any of these or any other strands.



7X7

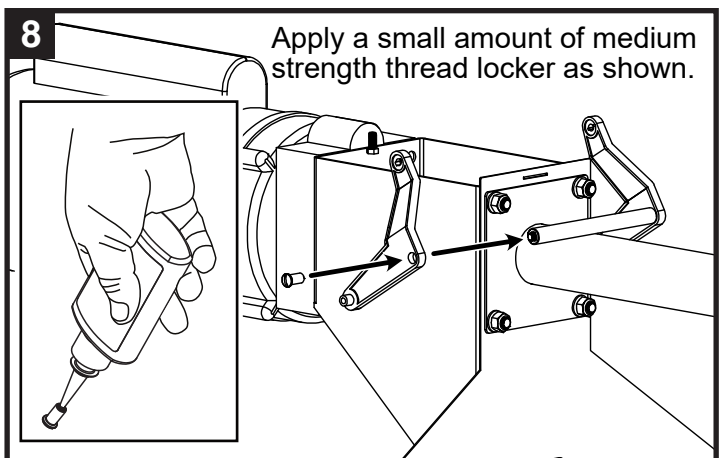
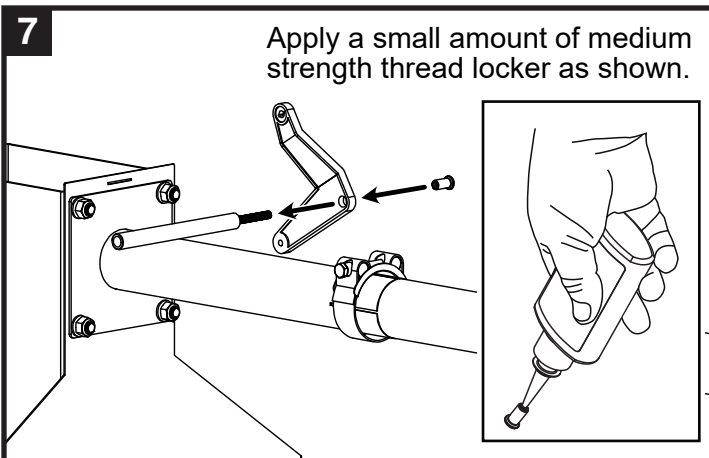
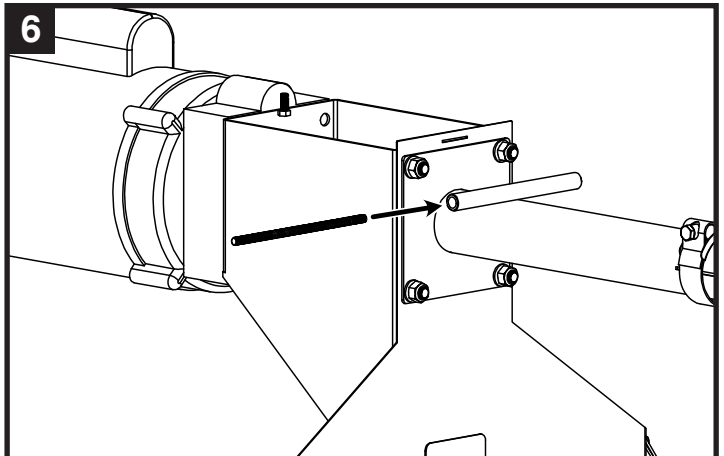
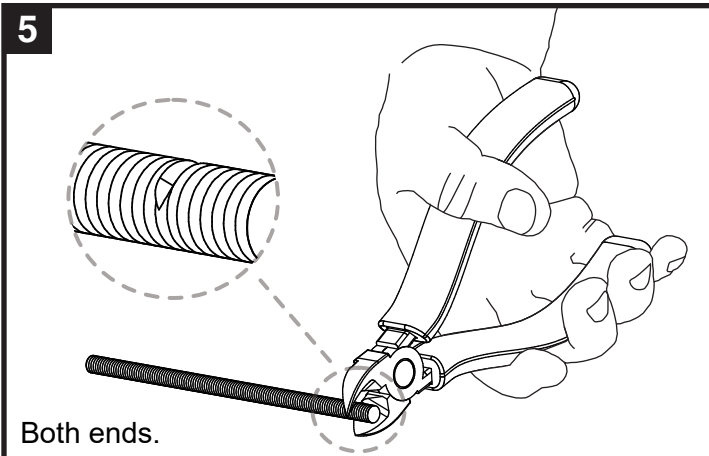
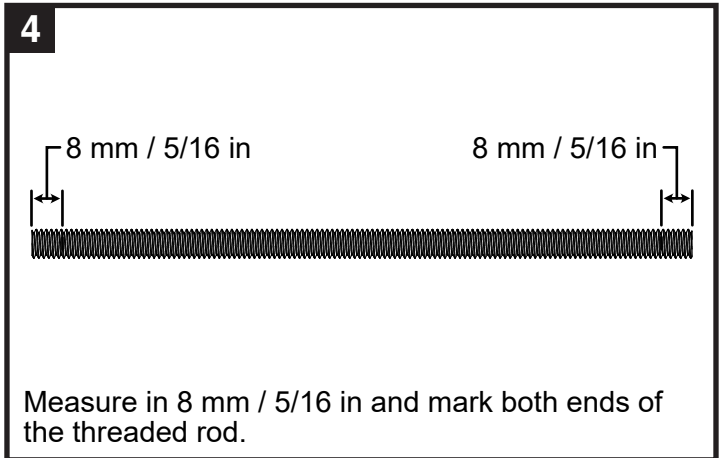
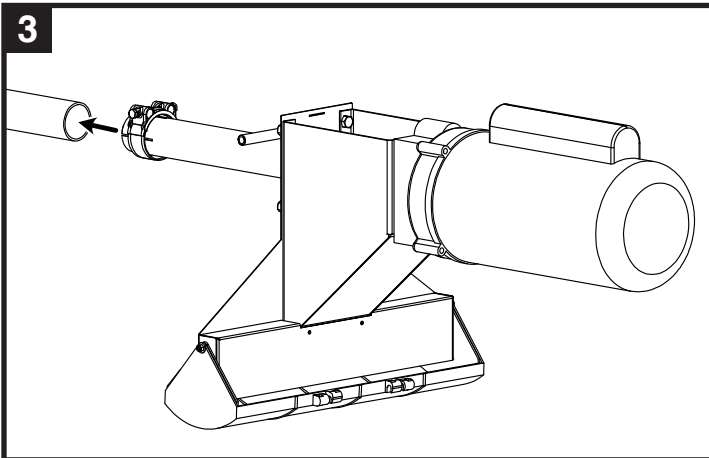
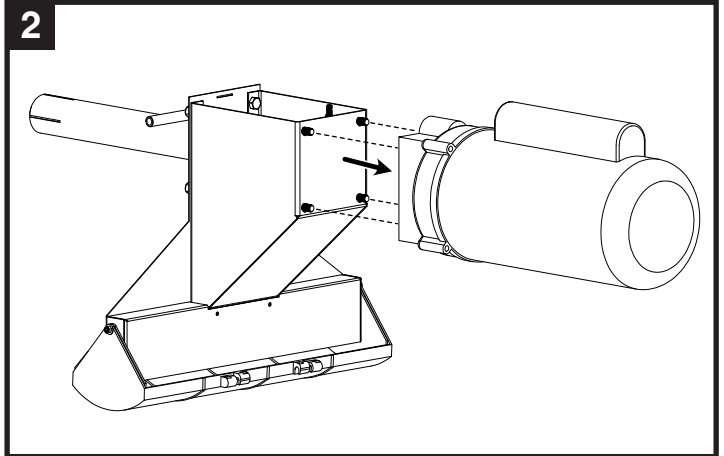
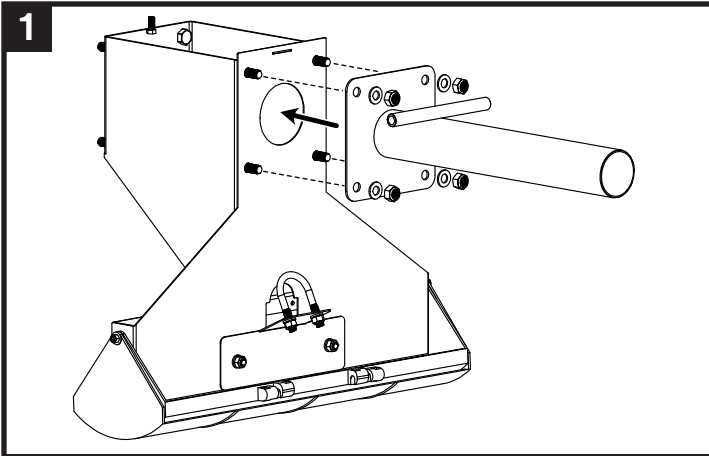


1X19

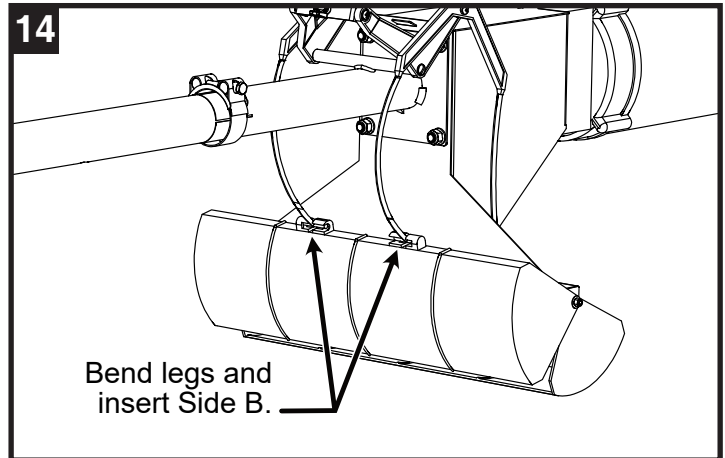
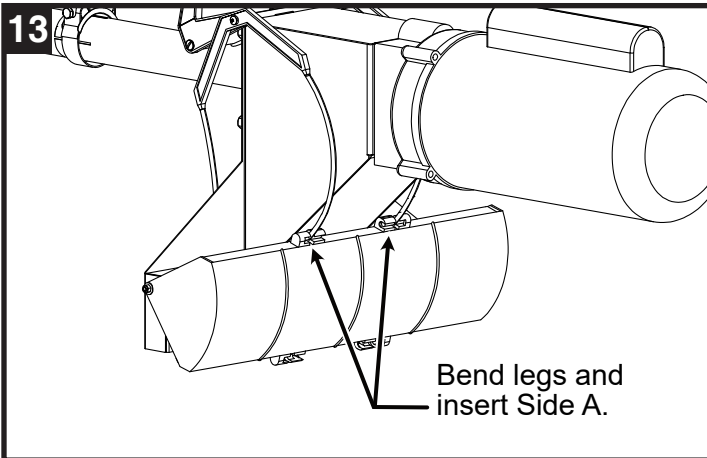
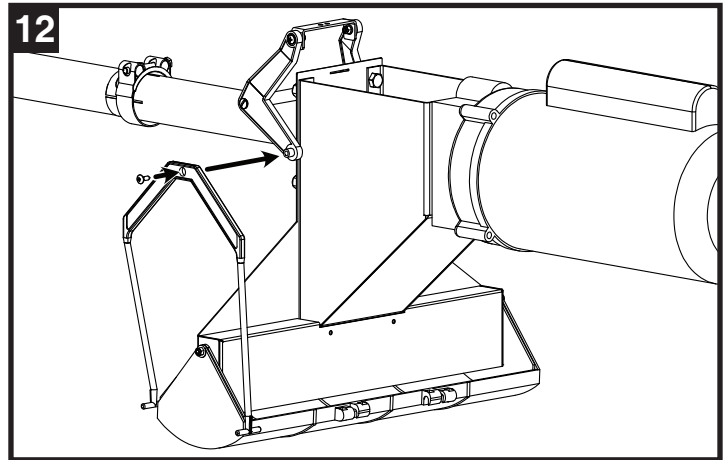
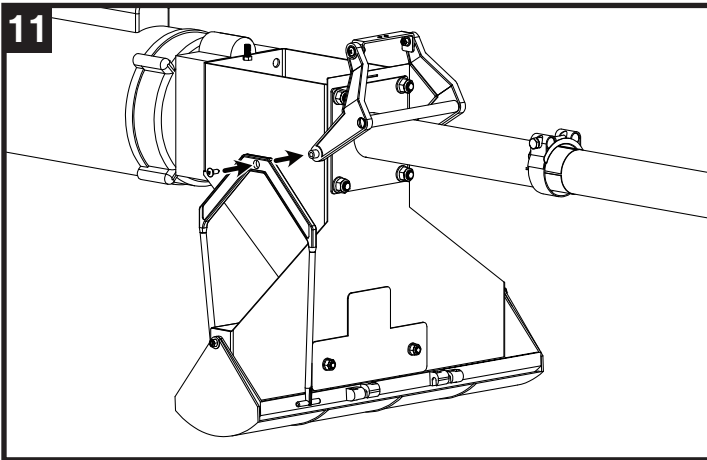
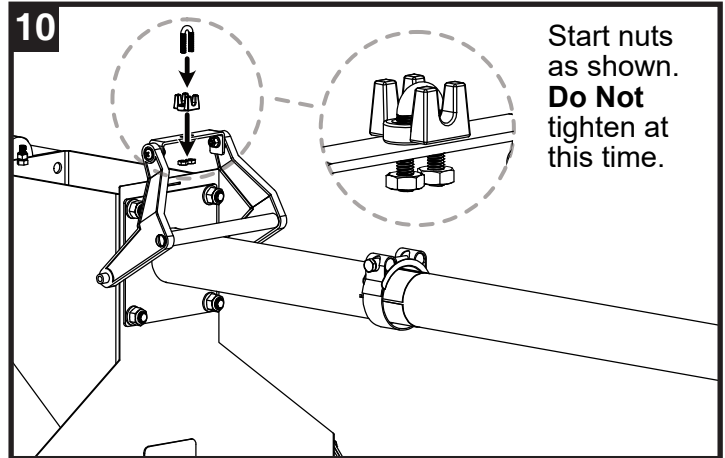
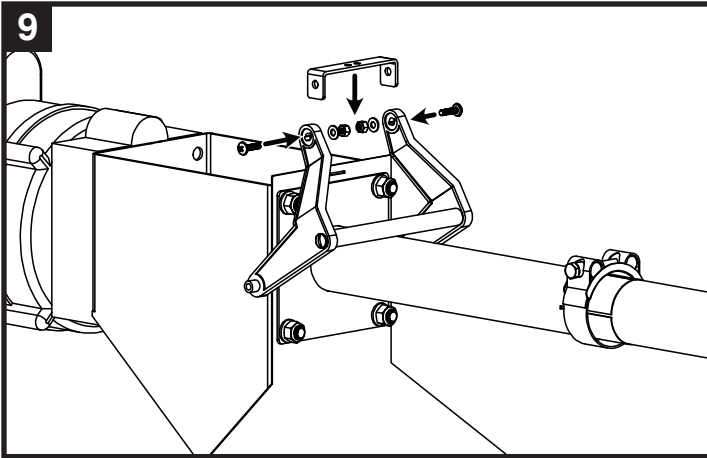


7X19

END CONTROL TRAY INSTALLATION

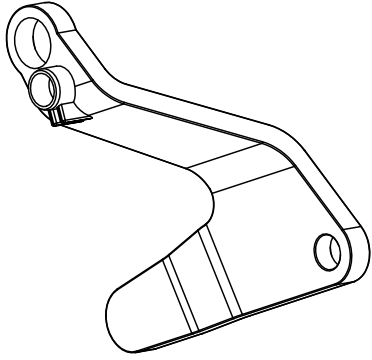


END CONTROL TRAY INSTALLATION

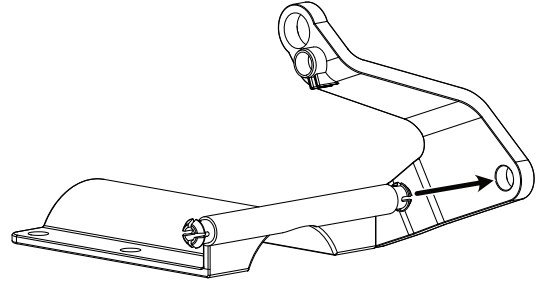


ACTUATOR ARM ASSEMBLY

1

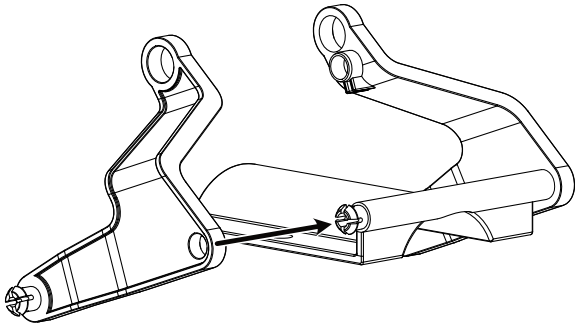


2



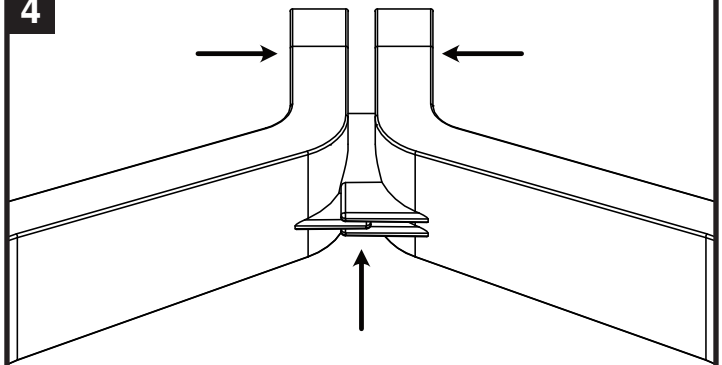
Insert Mounting Bracket into Actuator Arm until snapped.

3



Insert second Actuator Arm onto Mounting Bracket until snapped.

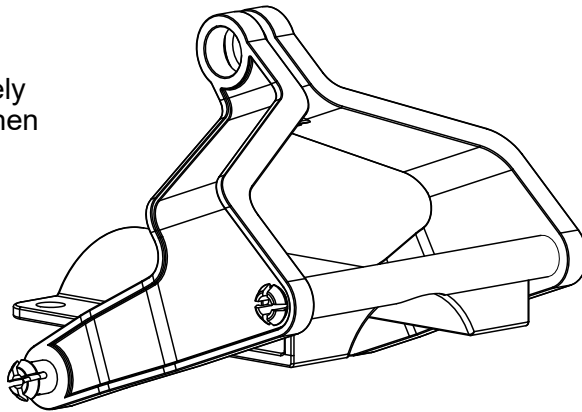
4



Fix arms until anti-rotation feature is aligned and both arms are pushed together tightly.

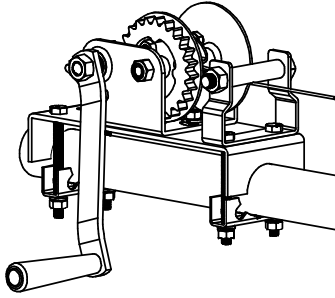
5

Actuator Arms should rotate freely around the Mounting Bracket when fully assembled.



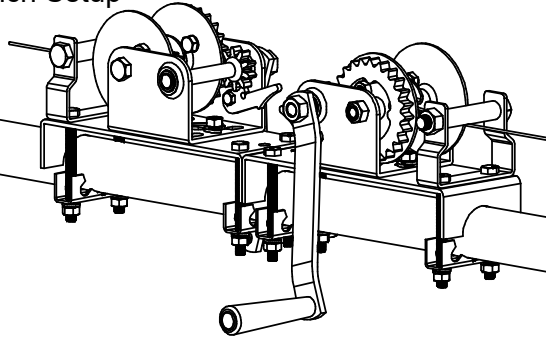
OPTIONAL ACTUATOR WINCH SETUPS (SEE PAGE 2 FOR REFERENCE)

1 Option 1: Actuator Winch Setup



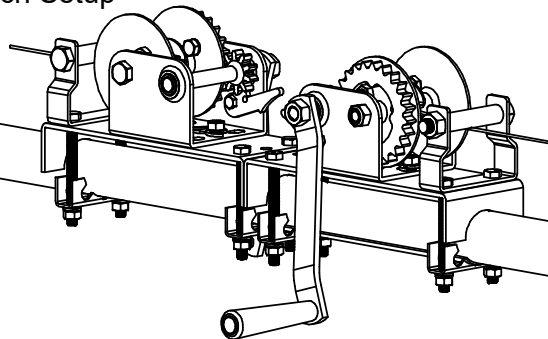
Install actuator winch as shown.

2 Option 2A: 2 Actuator Winch Setup



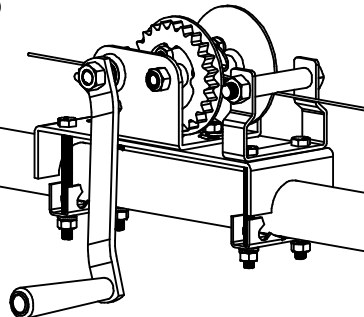
Install actuator winches as shown. This setup is for 3 or 4 trays on 3 M / 10 ft feed tube. Shown on 4 tray feed tube. For 5 trays on 3 M / 10 ft feed tube, see Option 2B.

3 Option 2B: 2 Actuator Winch Setup



Install actuator winches as shown with cover. This setup is for 5 trays on 3 M / 10 ft feed tube.

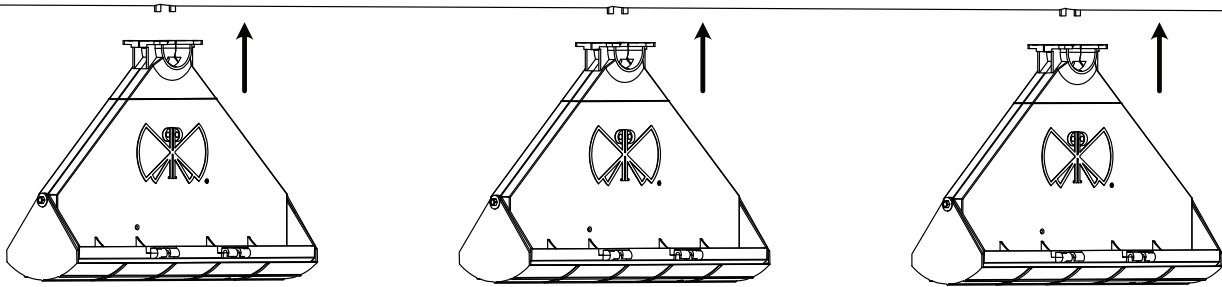
4 Option 3: Actuator Winch Setup



Install actuator winches as shown. Start fasteners, do not tighten at this time.

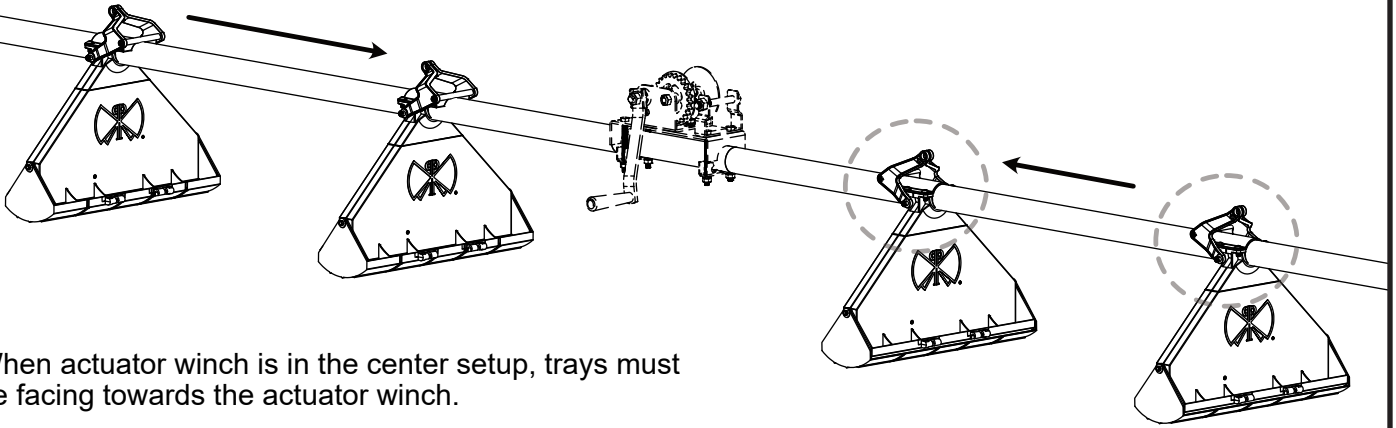
TRAY INSTALLATION

1



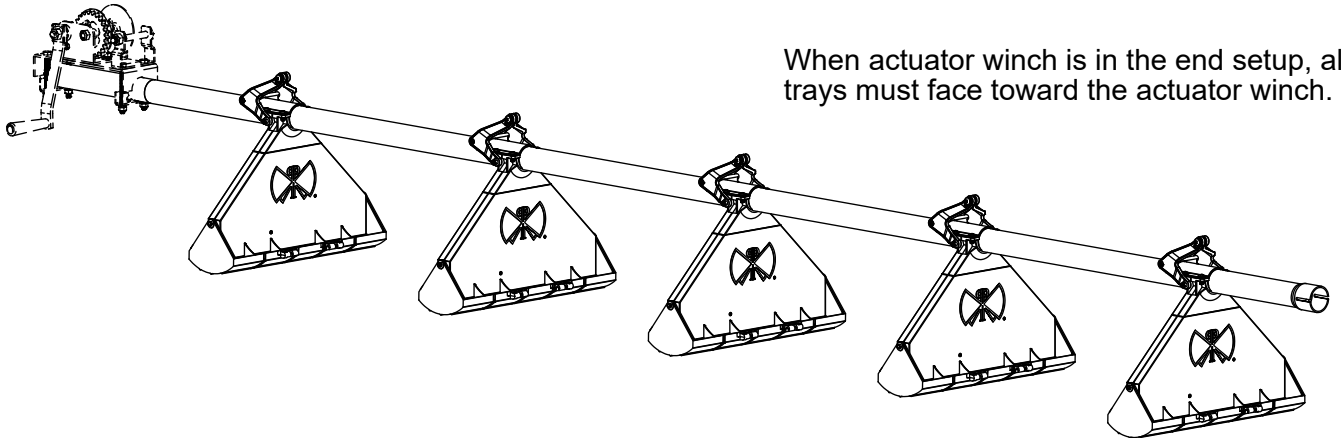
Align Butterfly Trays with the tabs on the conduit.

2



When actuator winch is in the center setup, trays must be facing towards the actuator winch.

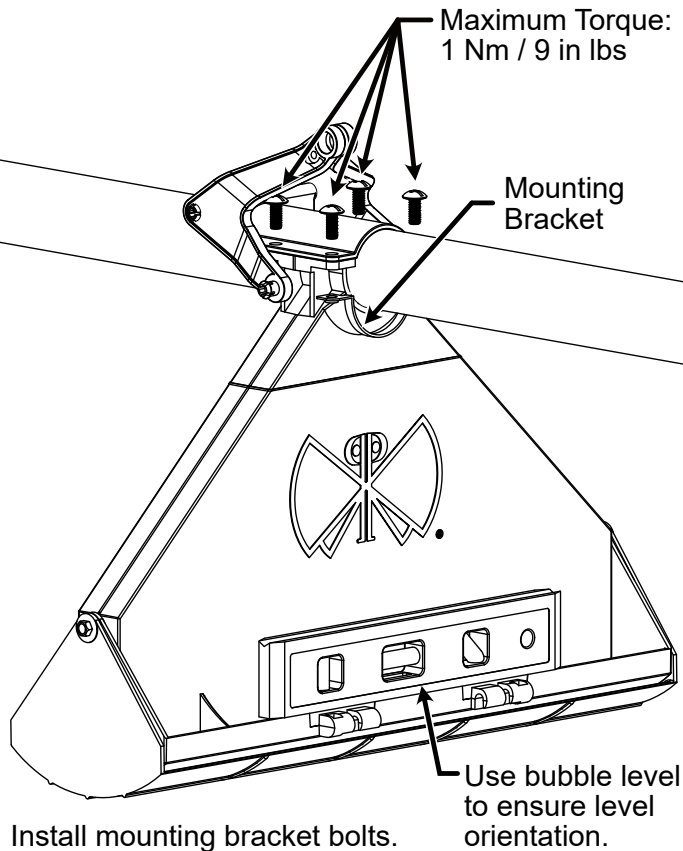
3



When actuator winch is in the end setup, all trays must face toward the actuator winch.

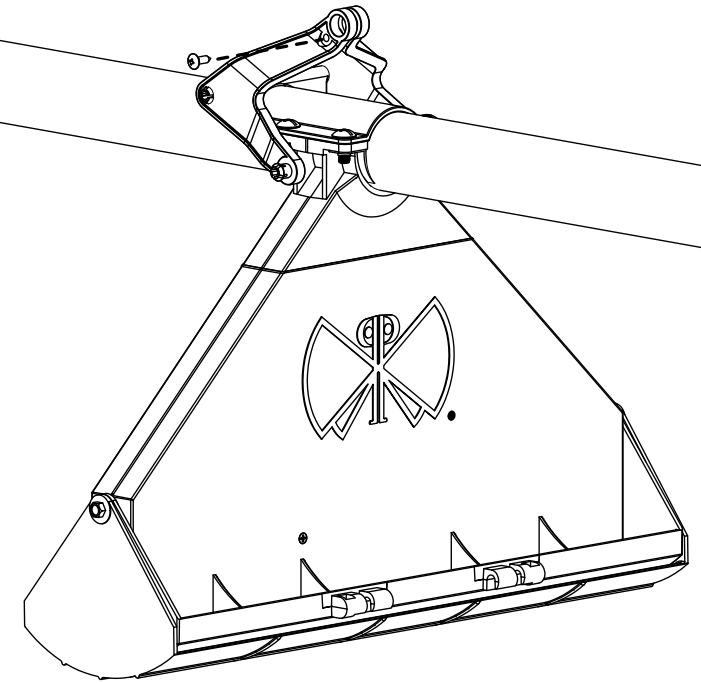
TRAY INSTALLATION

3

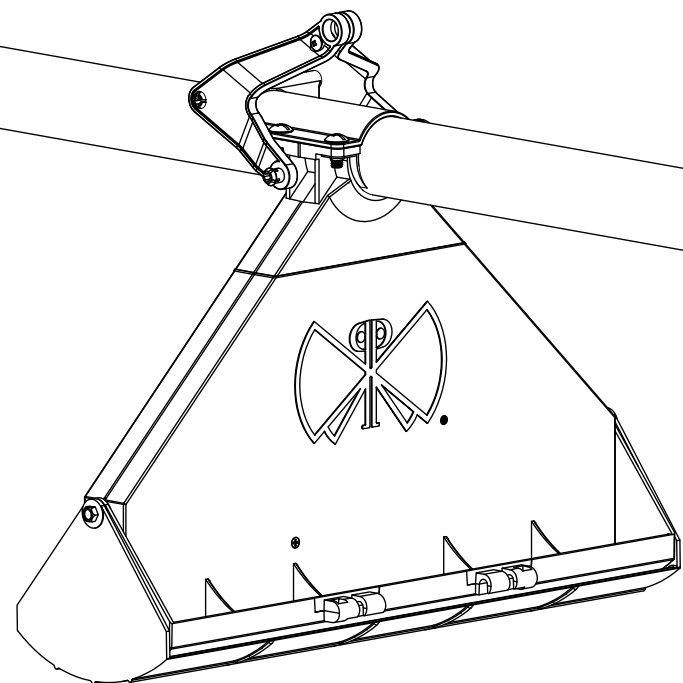


4

Install screw into actuator arm.



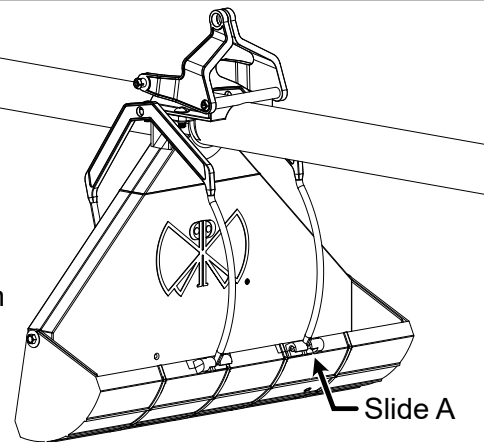
4



5

Slightly open the Tray and insert the Actuator Arms into Slide A.

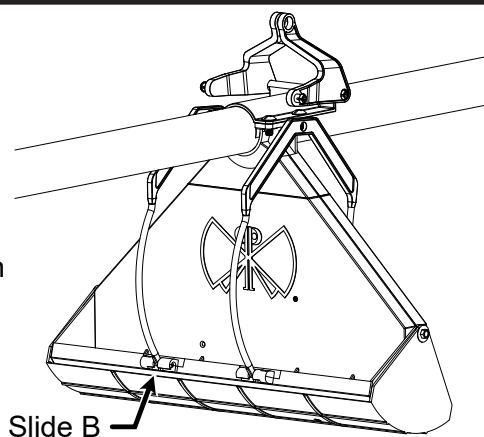
Note: Legs can bend for easier installation.



6

Slightly open the Tray and insert the Actuator Arms in Slide B.

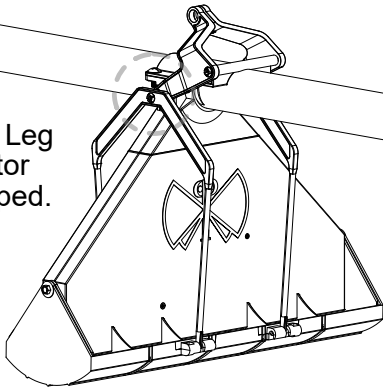
Note: Legs can bend for easier installation.



TRAY INSTALLATION

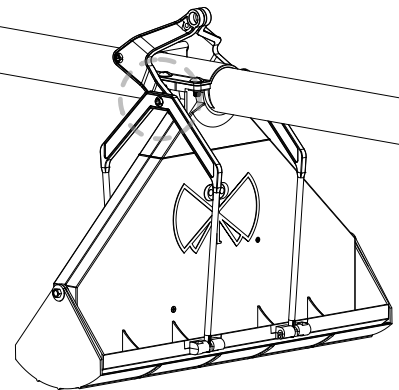
7

Insert Actuator Leg
onto the Actuator
Arm until snapped.



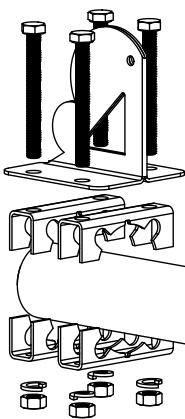
8

Insert the second
Actuator Leg onto the Actuator Arm
until snapped.



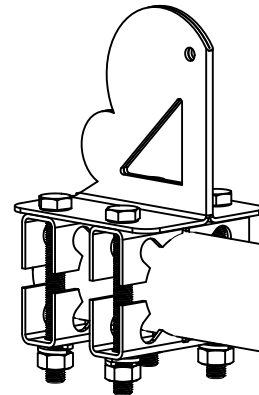
TRAY RETURN ASSEMBLY - SPRING VERSION

1

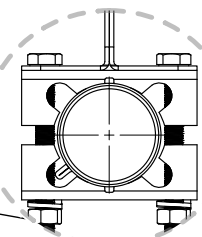


Orientation

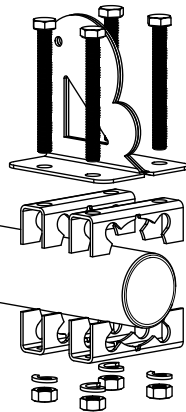
2



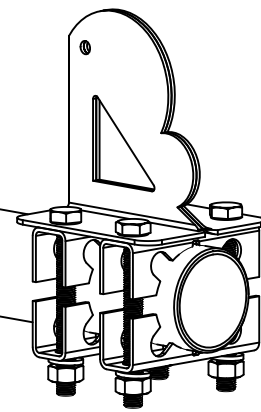
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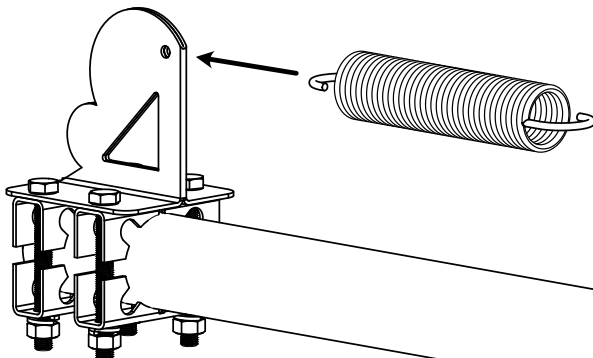
Orientation



4

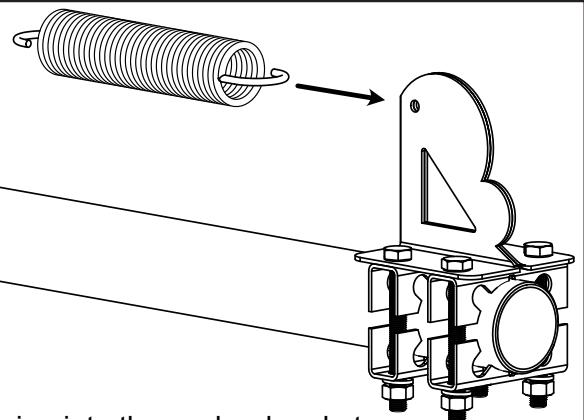


5



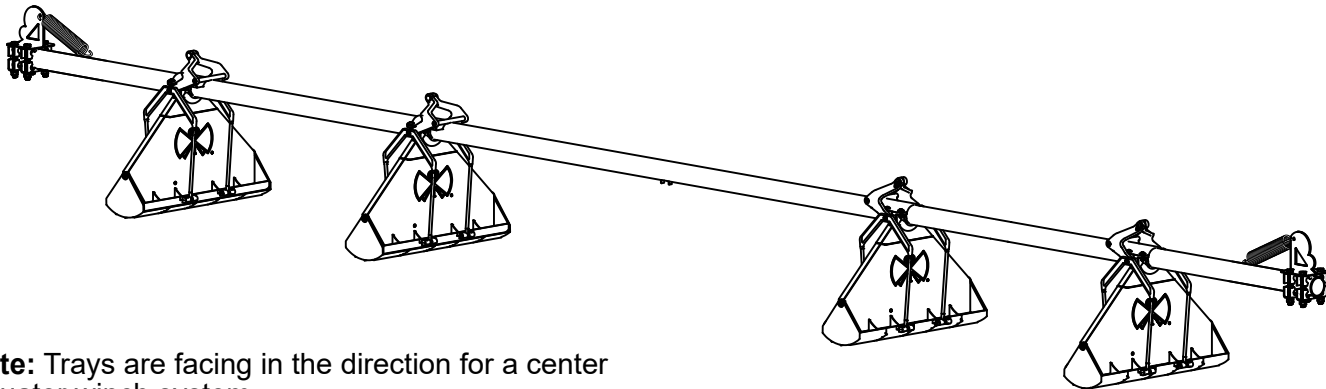
Install spring into the anchor bracket.

6



Install spring into the anchor bracket.

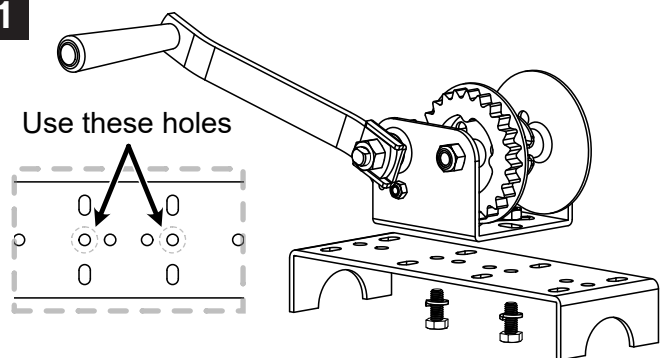
7



Note: Trays are facing in the direction for a center actuator winch system.

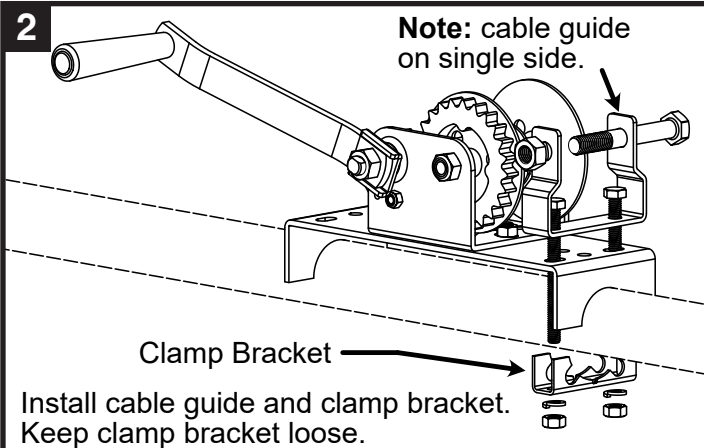
ACTUATOR WINCH ASSEMBLY

1



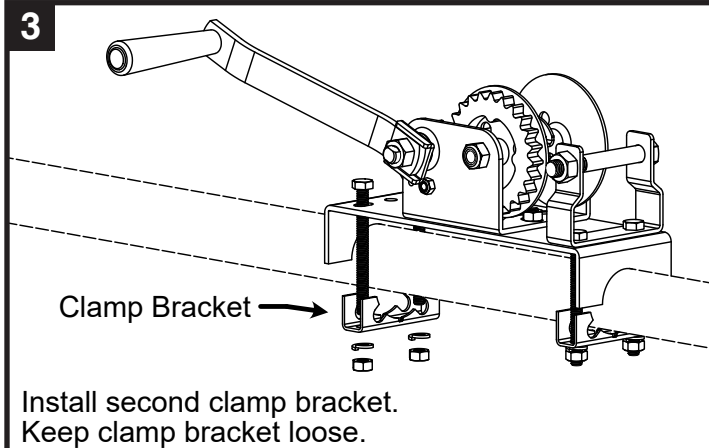
Install Actuator Winch onto the mounting bracket.

2



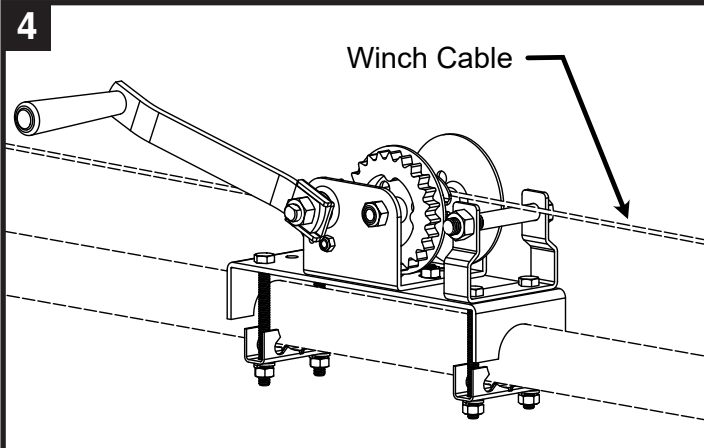
Install cable guide and clamp bracket. Keep clamp bracket loose.

3



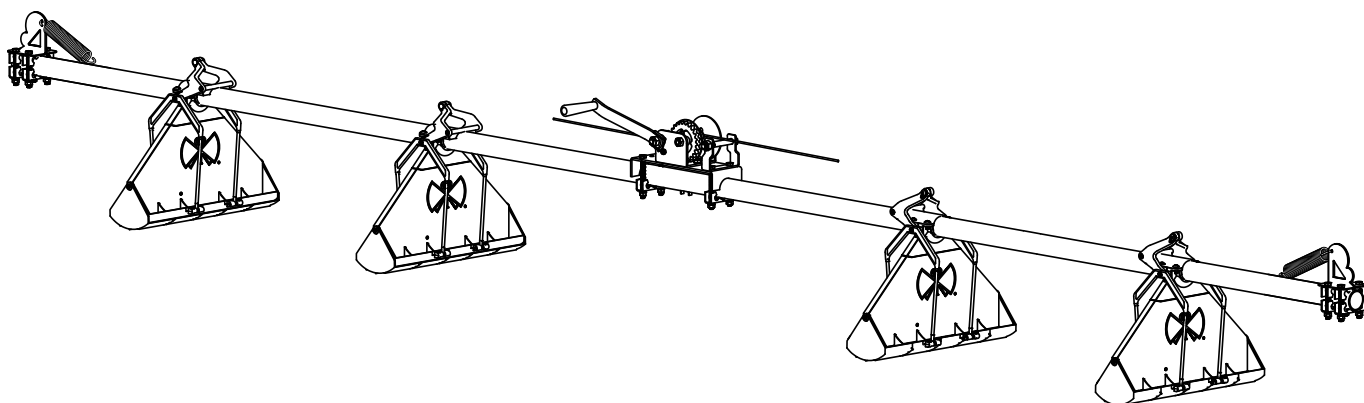
Install second clamp bracket. Keep clamp bracket loose.

4



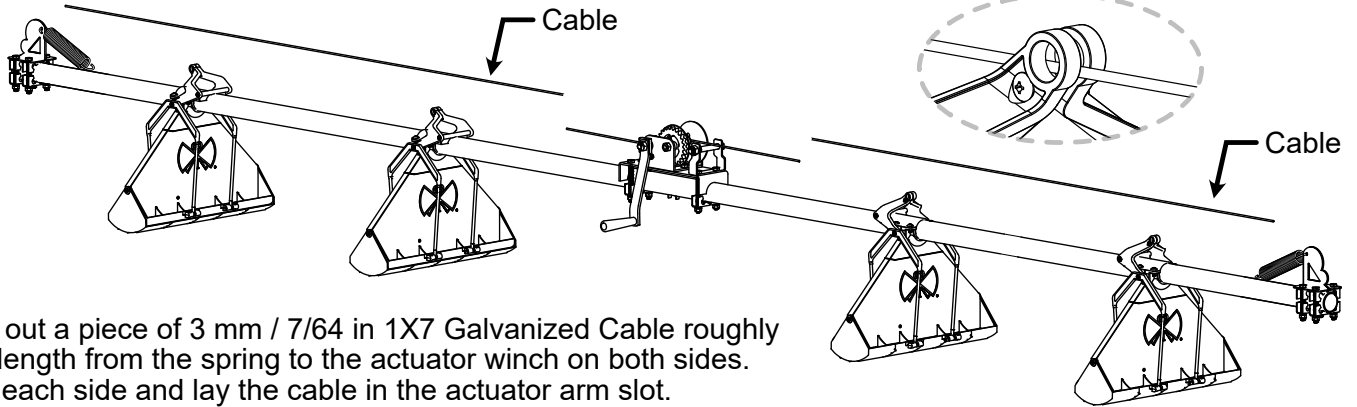
Winch Cable

5



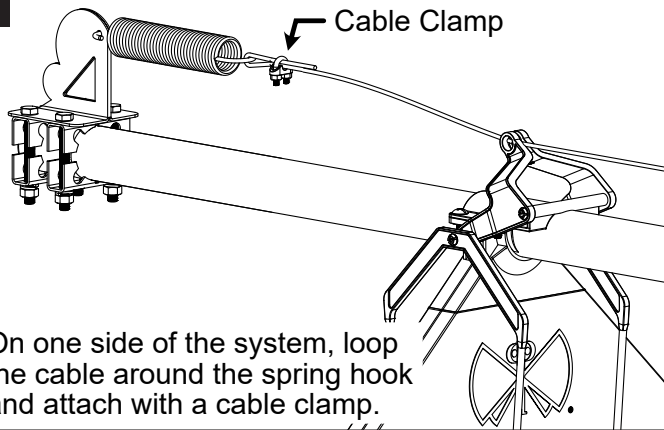
CABLE ROUTING

1



Pull out a piece of 3 mm / 7/64 in 1X7 Galvanized Cable roughly the length from the spring to the actuator winch on both sides. Cut each side and lay the cable in the actuator arm slot.

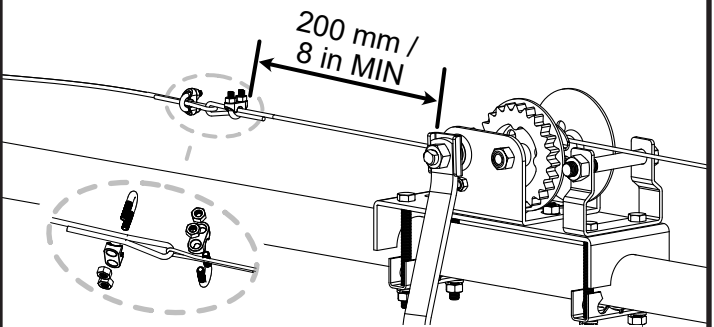
2



On one side of the system, loop the cable around the spring hook and attach with a cable clamp.

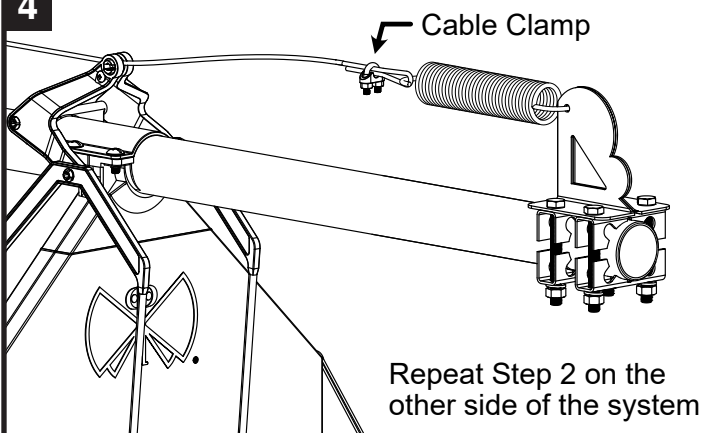
3

Important: Must have minimum distance when taut



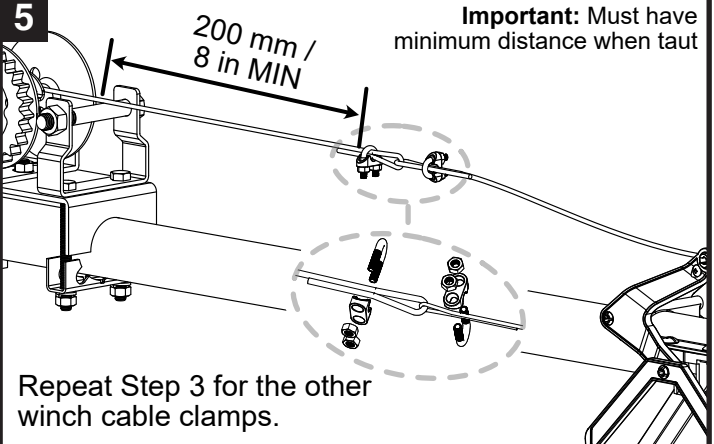
Create two loops to attach the cable to the winch cable. Use cable clamps to secure each.

4



Repeat Step 2 on the other side of the system

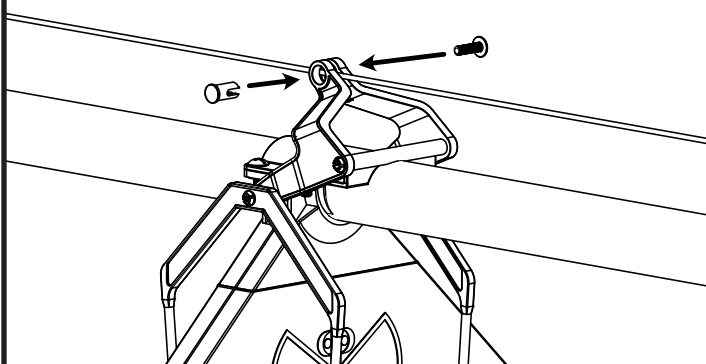
5



Repeat Step 3 for the other winch cable clamps.

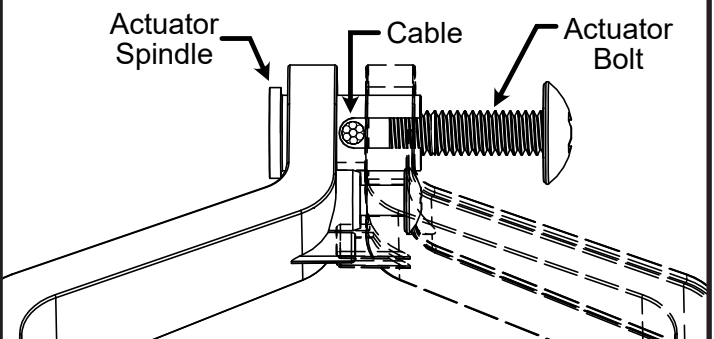
6

Install spindle along with the actuator bolt into the actuator arm slot.

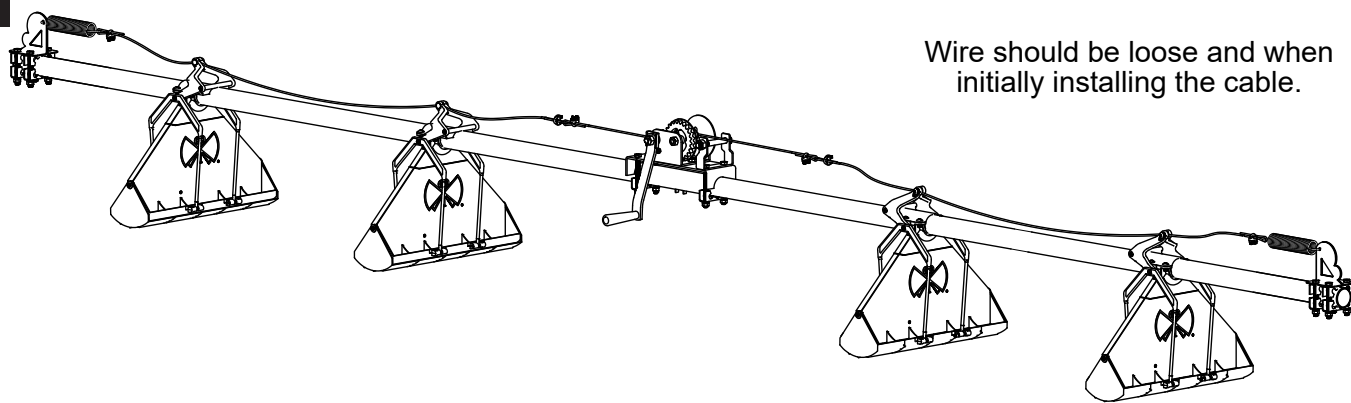


7

Note: Actuator Bolt should just start to engage with the Actuator Spindle. Leave loose for now.

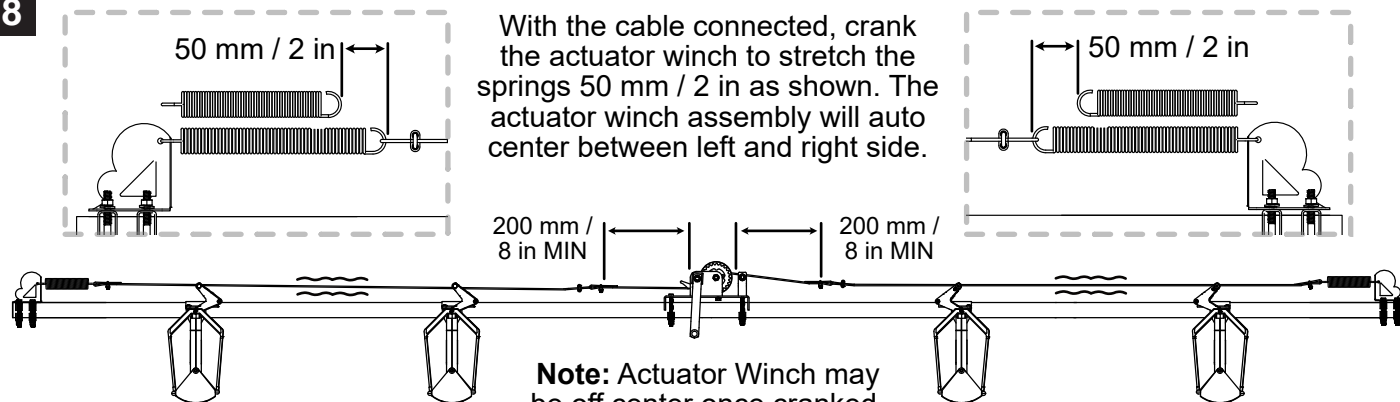


8



Wire should be loose and when initially installing the cable.

8



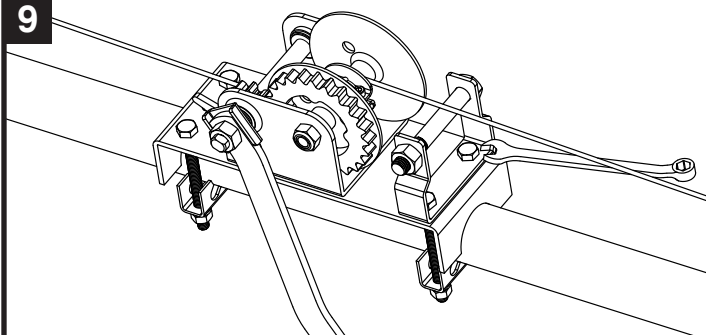
With the cable connected, crank the actuator winch to stretch the springs 50 mm / 2 in as shown. The actuator winch assembly will auto center between left and right side.

200 mm / 8 in MIN

200 mm / 8 in MIN

Note: Actuator Winch may be off center once cranked.

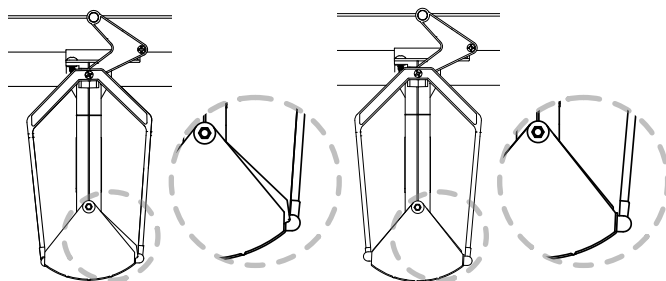
9



When actuator winch is centered between both sides of the system, tighten the actuator winch assembly to lock it in place

10

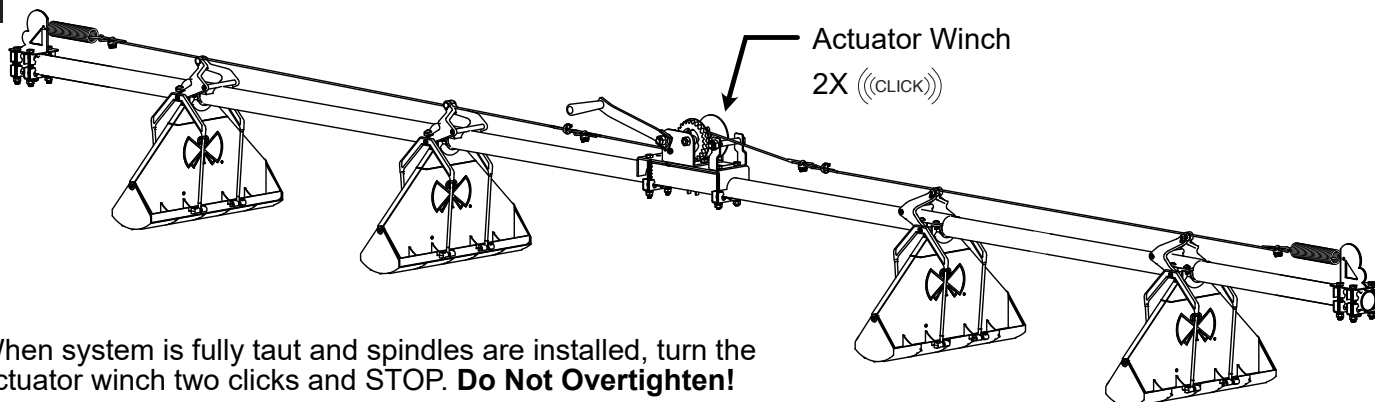
Make sure the trays are fully closed



Partially Open

Fully Closed

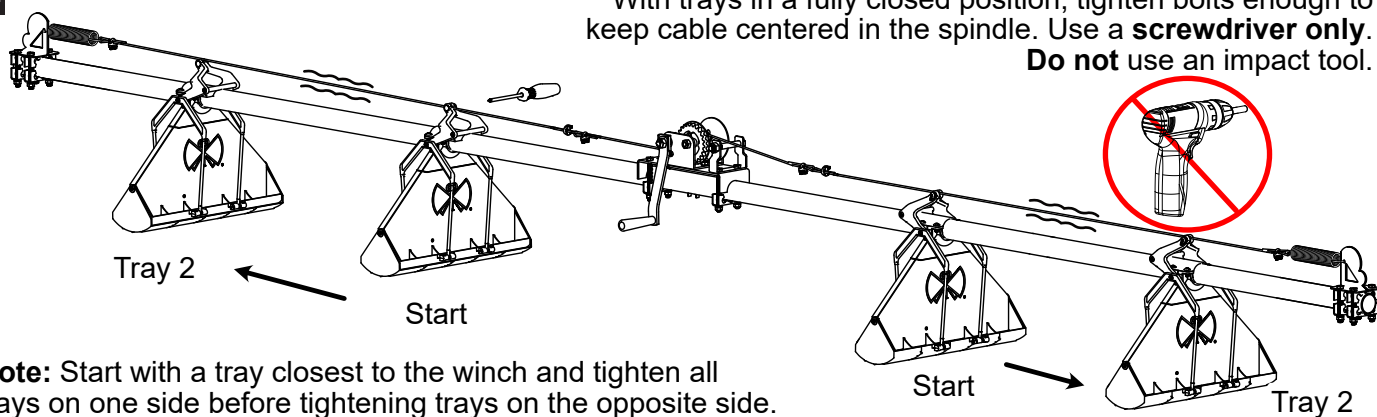
11



When system is fully taut and spindles are installed, turn the actuator winch two clicks and STOP. **Do Not Overtighten!**

12

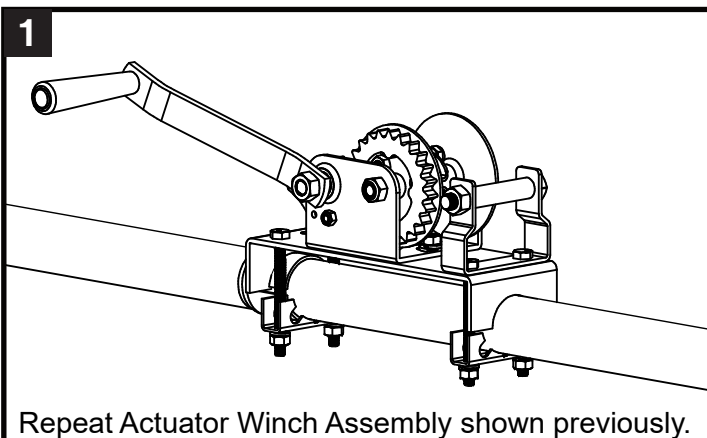
With trays in a fully closed position, tighten bolts enough to keep cable centered in the spindle. Use a **screwdriver only**.
Do not use an impact tool.



Note: Start with a tray closest to the winch and tighten all trays on one side before tightening trays on the opposite side.

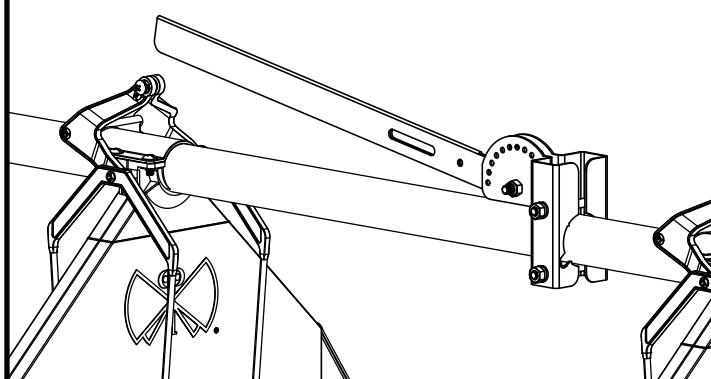
TRAY RETURN ASSEMBLY - HANDLE VERSION

1



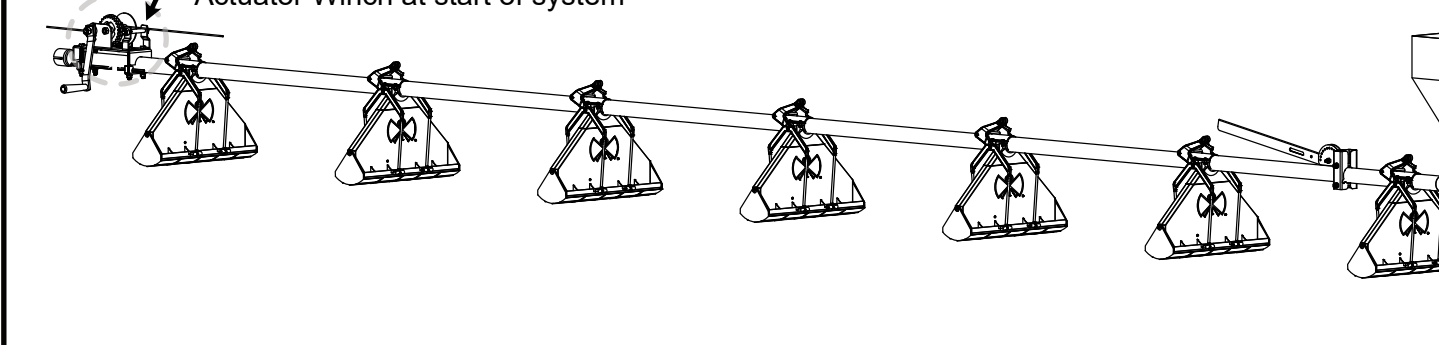
2

Secure tray return assembly to feed tube.



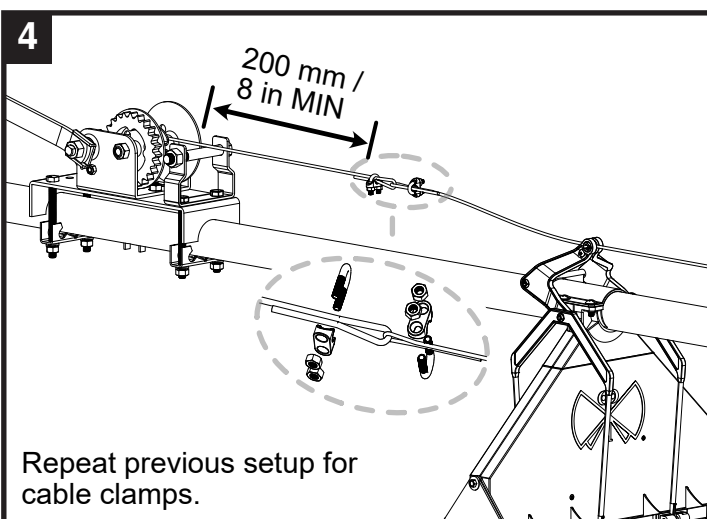
3

Actuator Winch at start of system



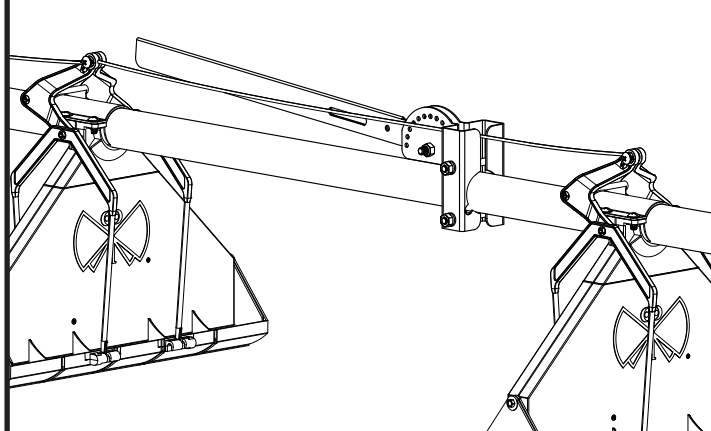
4

200 mm /
8 in MIN



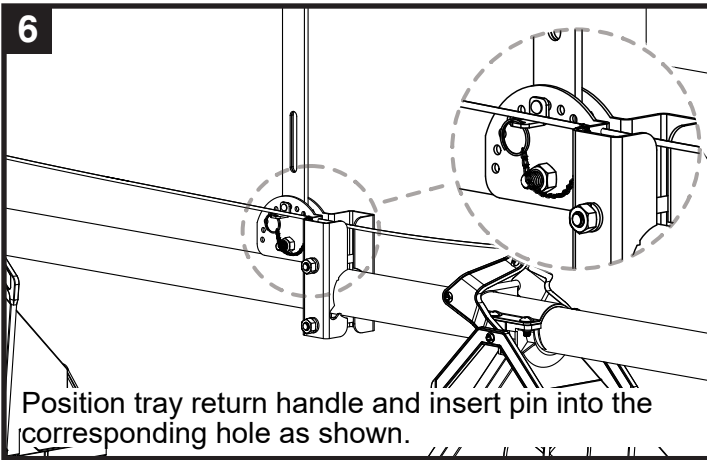
5

Attach the actuator cable to the last tray.

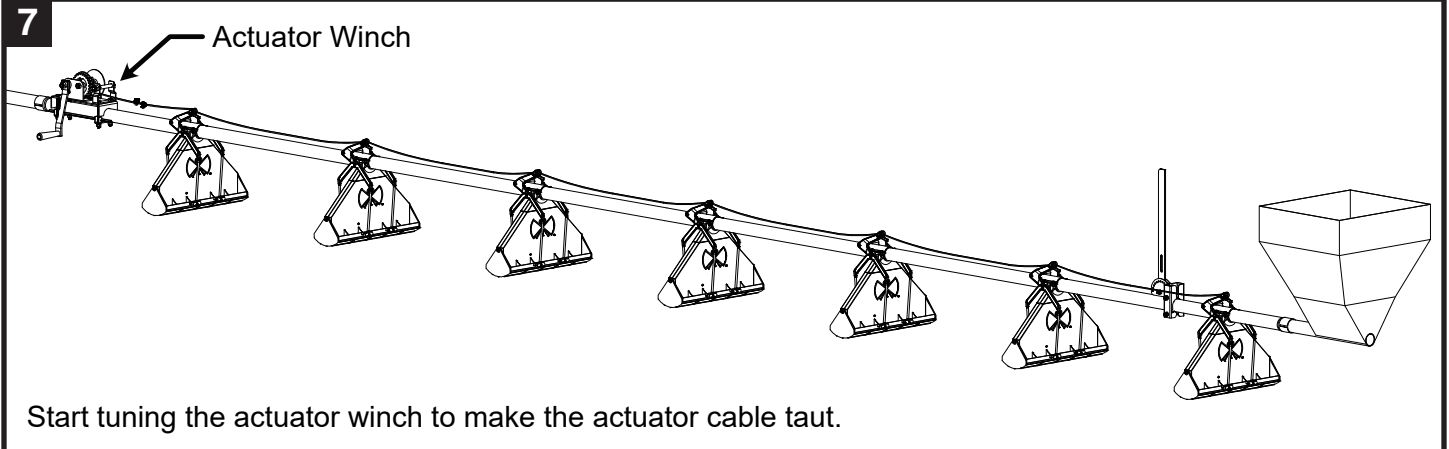


TRAY RETURN ASSEMBLY - HANDLE VERSION

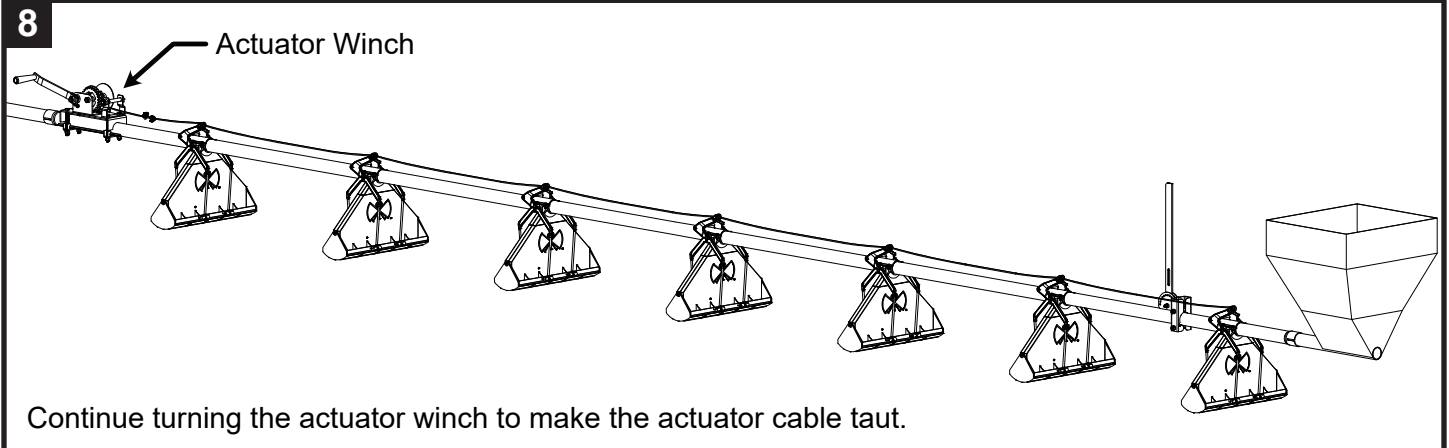
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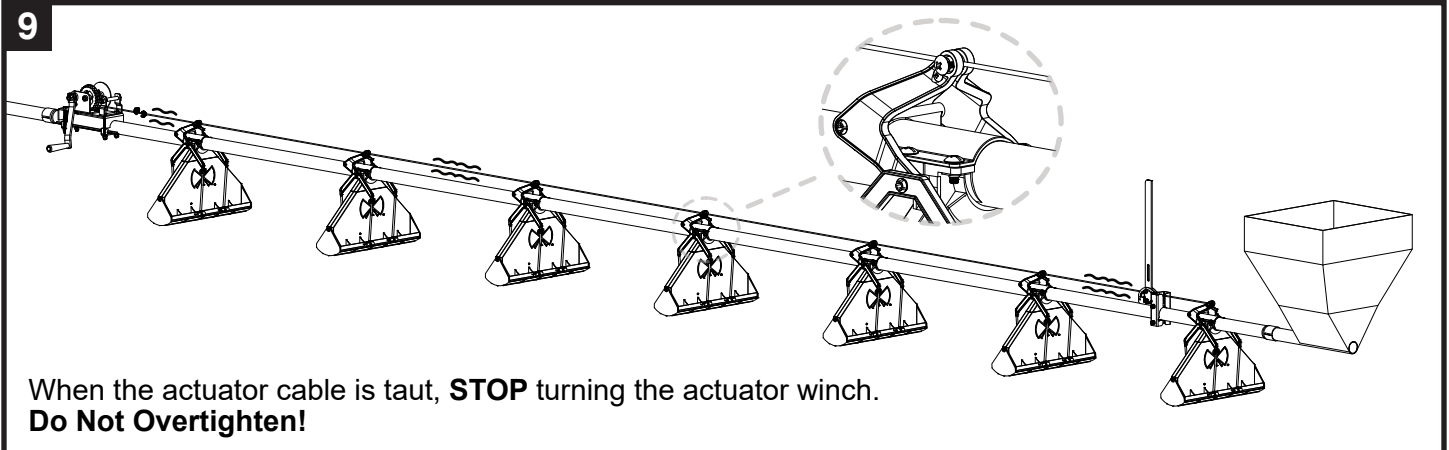
7

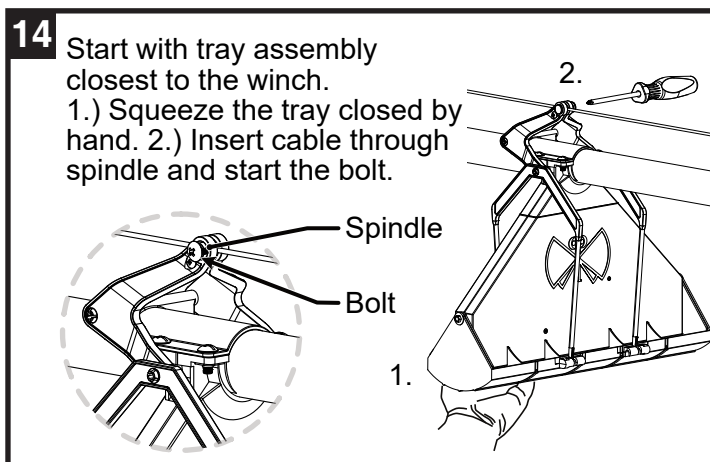
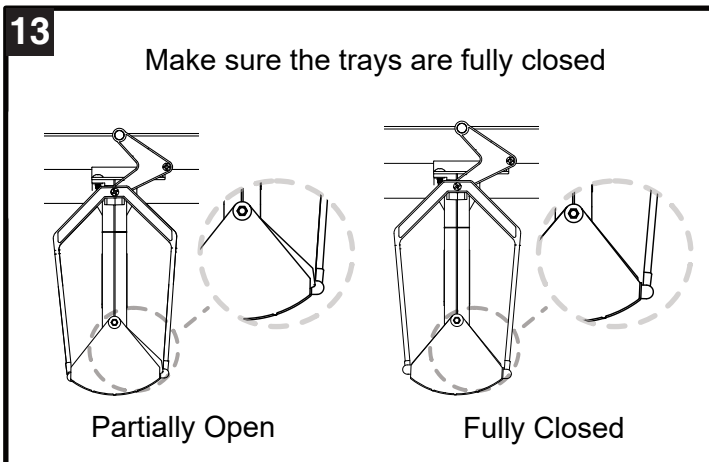
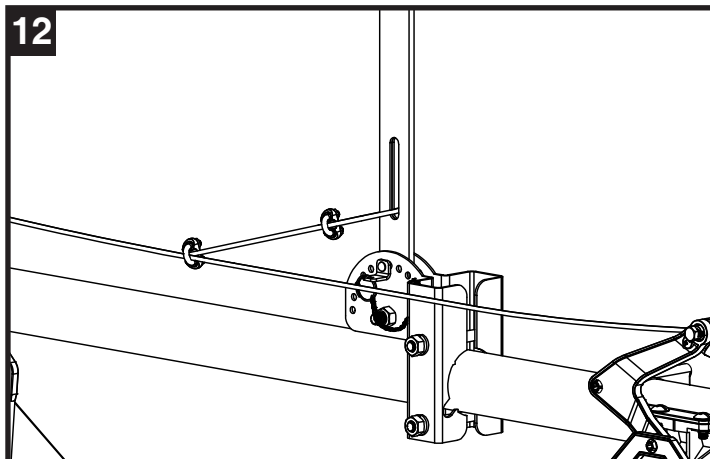
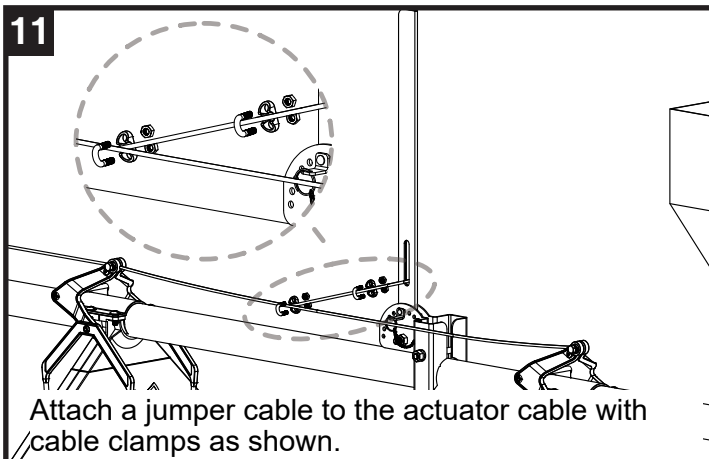
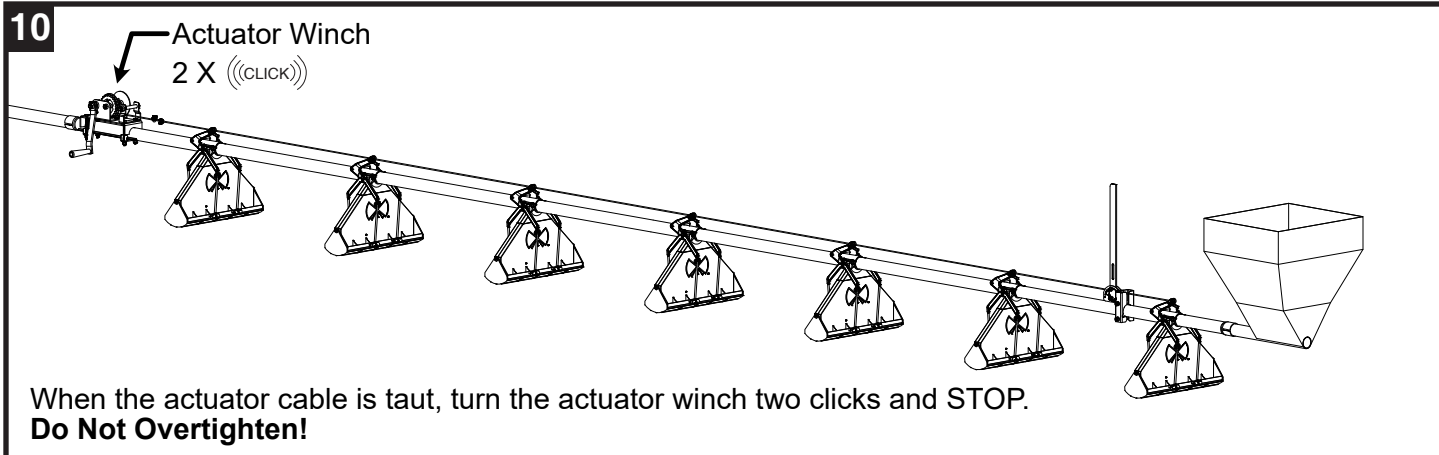


8



9

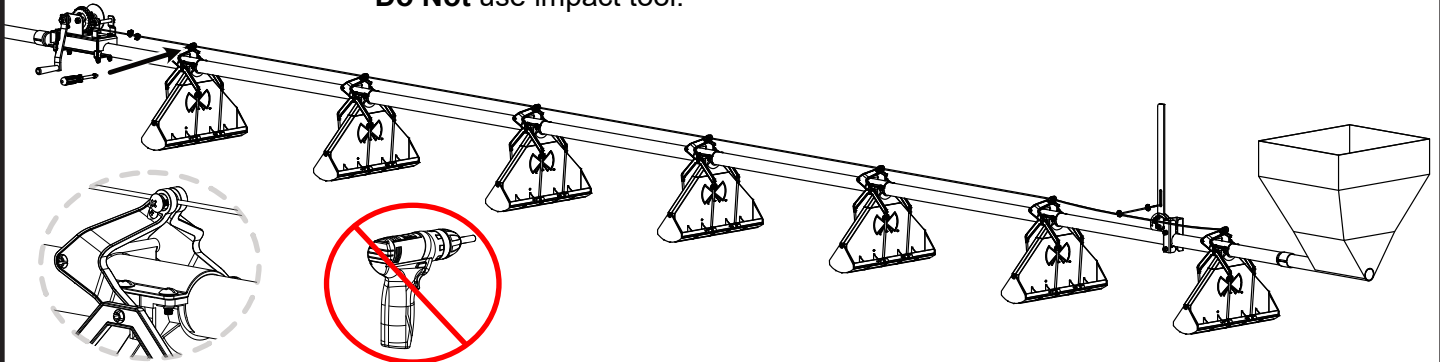




TRAY RETURN ASSEMBLY - HANDLE VERSION

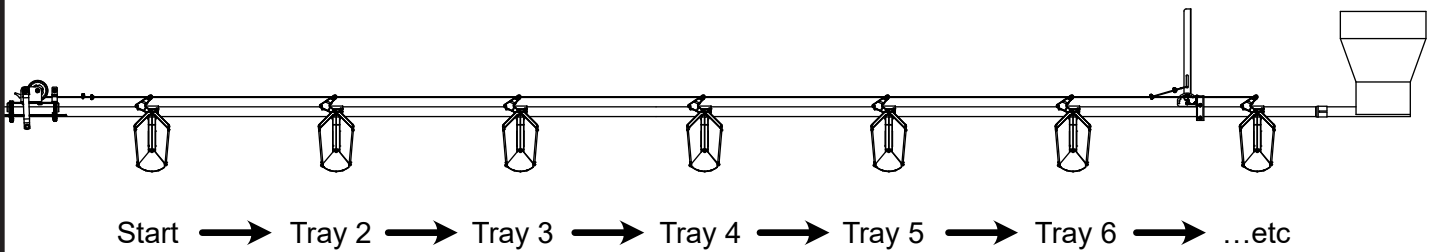
15

Maintain the hand to tray pressure and tighten the bolt with a **screwdriver only**.
Do Not use impact tool.

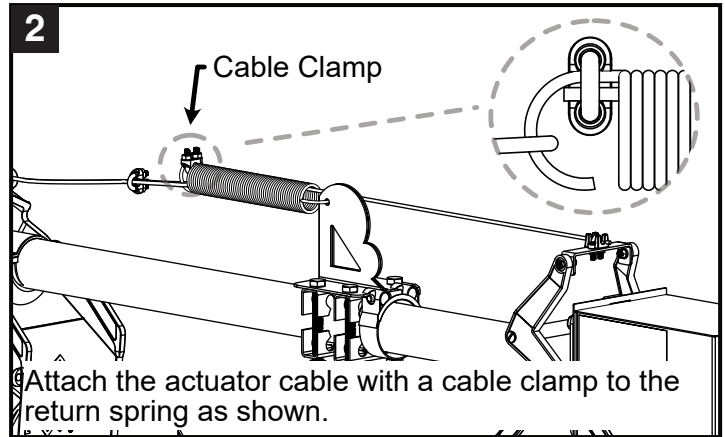
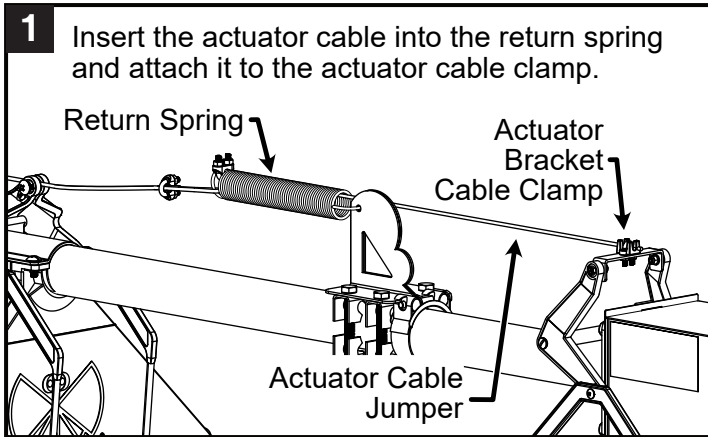


16

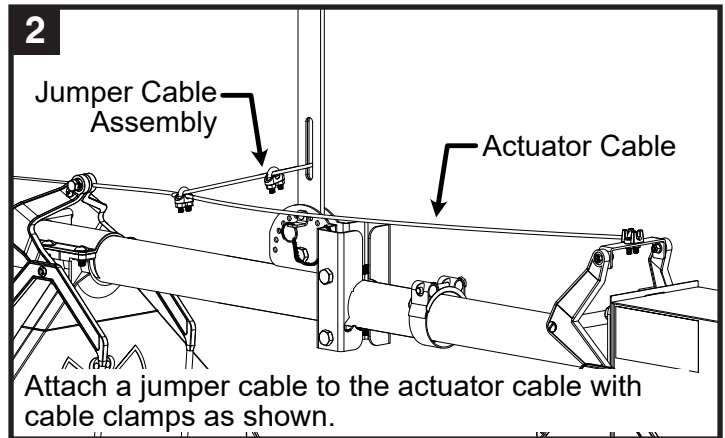
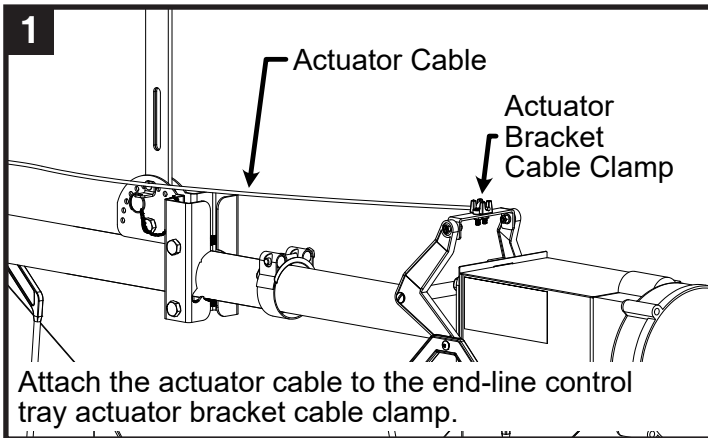
Moving away from the actuator winch, repeat these procedures on the remaining Butterfly trays to the end of the feeder line.



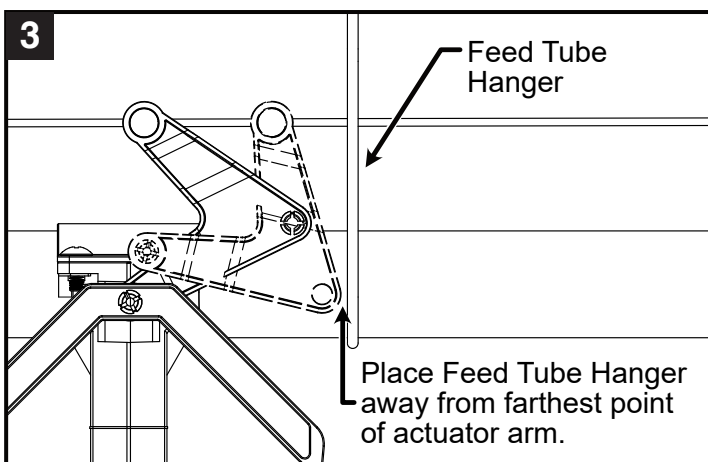
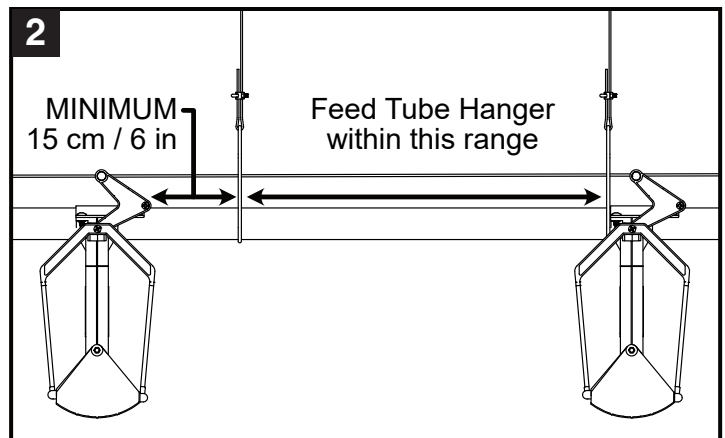
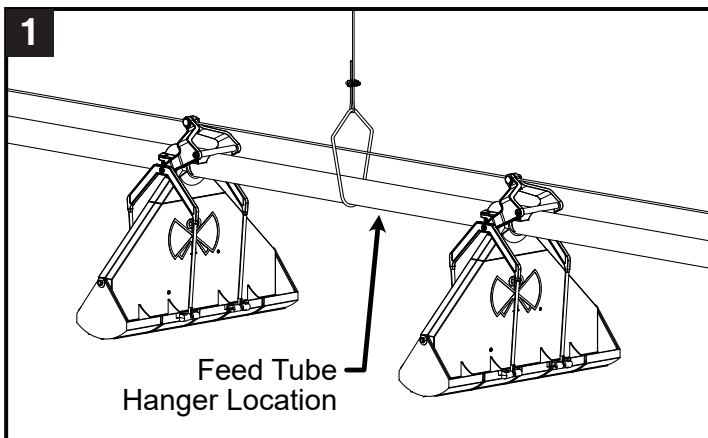
END CONTROL TRAY TO ACTUATOR CABLE INSTALLATION - SPRING VERSION



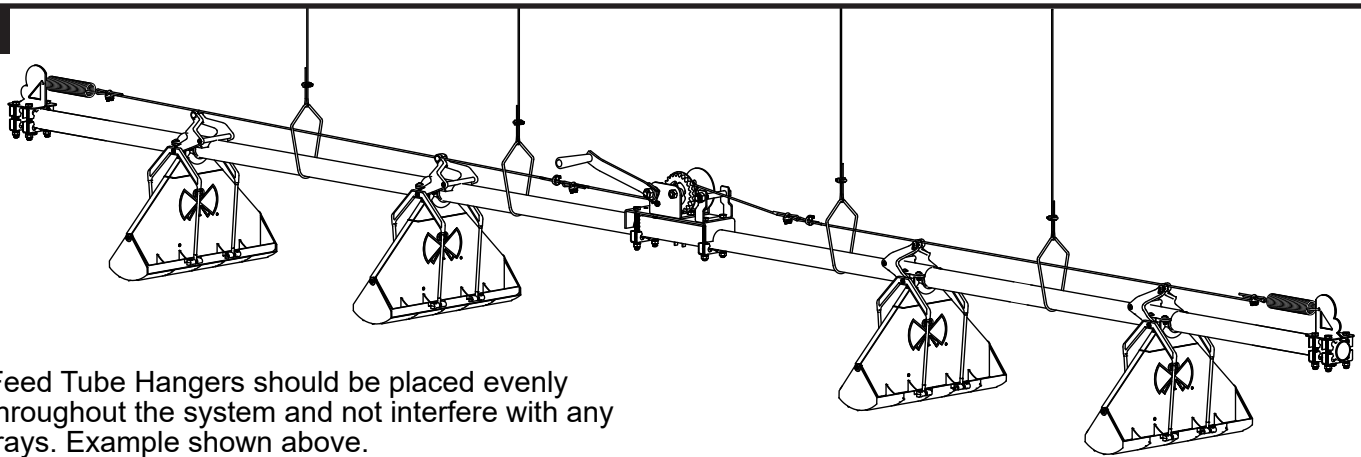
END CONTROL TRAY TO ACTUATOR CABLE INSTALLATION - HANDLE VERSION



FEED TUBE HANGER LOCATION



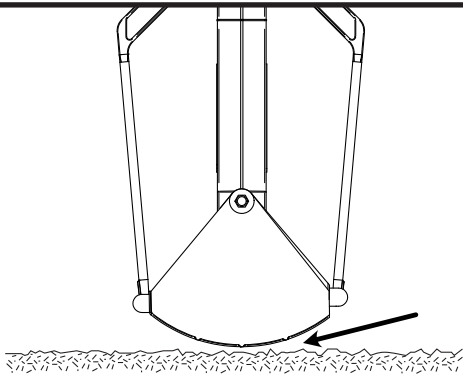
4



Feed Tube Hangers should be placed evenly throughout the system and not interfere with any trays. Example shown above.

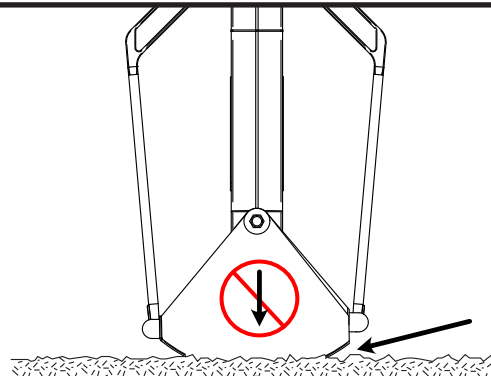
IMPORTANT INSTRUCTIONS

1



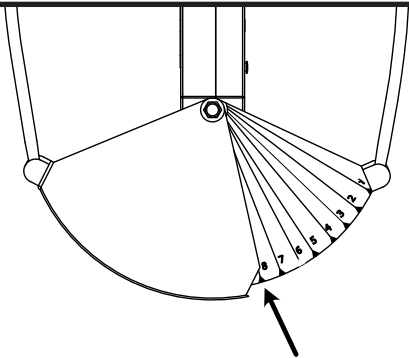
The bottom of the Butterfly Tray should **only touch** the litter.

2



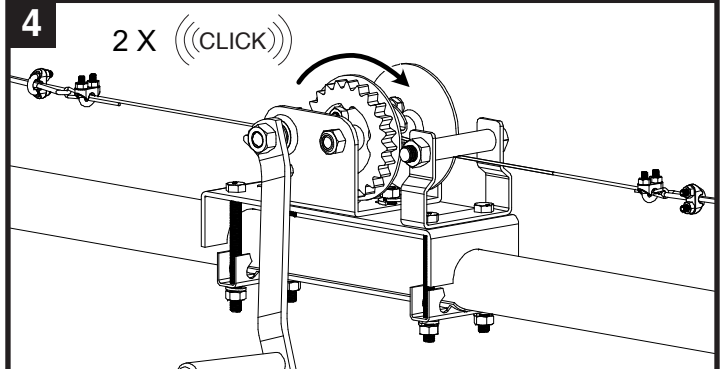
Do Not put any weight or upward pressure on the feed tray.

3



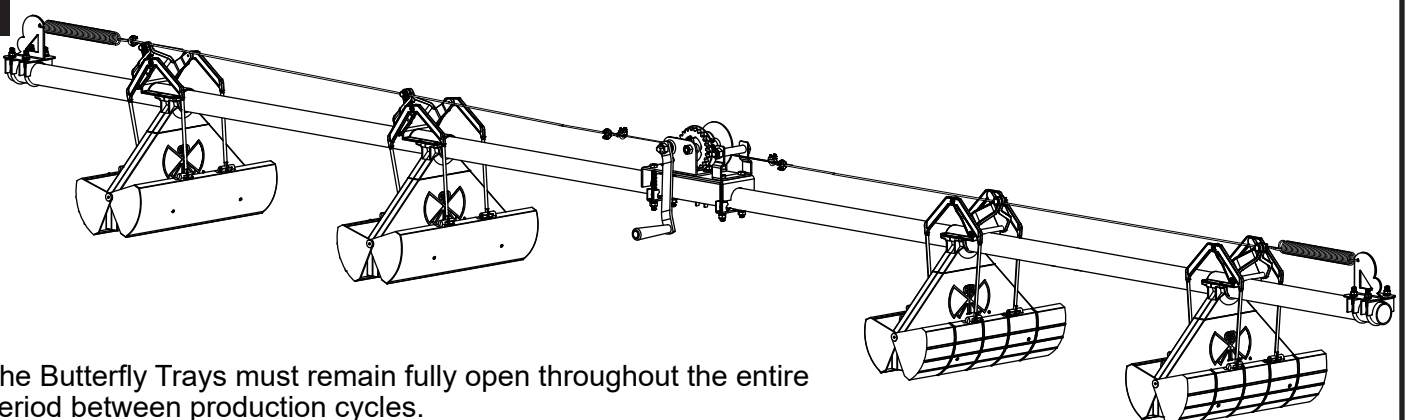
Never adjust the trays wider than the position 8 during the production cycles.

4



Never turn the actuator winch more than two clicks per day when adjusting the tray opening.

5



The Butterfly Trays must remain fully open throughout the entire period between production cycles.

TRAY RETURN HANDLE VERSION STARTUP

