

**RETRACTABLE TARPS** P/L

**TARPING SYSTEMS & COMPONENTS**

RETRACTABLE TARPS PTY LTD

## **[LONG BLOCK WATERPROOF TARP INSTALLATION INSTRUCTIONS]**

2021

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## REAR ADJUSTER

### Rear Adjuster Placement and Mounting

1. Based on the style of body, the ideal placement of the rear adjuster should be between the rear post and tailgate hinge (*as far back as possible*). The tarp should finish before the tailgate hinge.
2. Double check the tarp length and make sure rear adjusters will be clear of this measurement.  
(*Tarp Length should be written on blocks*)

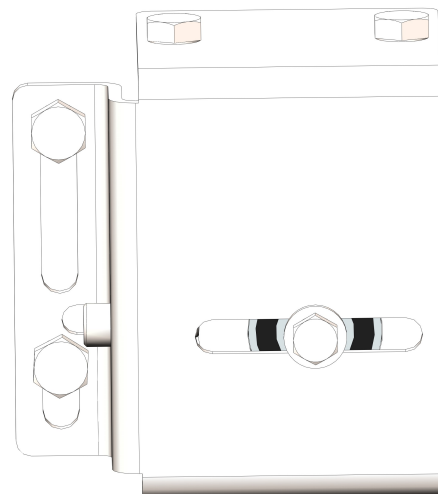


Figure 1: Extended Rear Adjuster

3. Set the rear adjusters to the specified cable centres. (*This should already be written on the blocks*). The rear adjuster if mounted directly to the coaming rail will have a cable centre of 25mm per side wider than the outside of rail measurement. So to ensure the cable centre is correct, measure the outside of rail distance and add the required 25mm per side (*50mm total*). If the measurement you have is not the same as the cable centre written on the blocks you may need to pack the rear adjusters out or adjust the shaft centres later in the installation. However, the system should be made to suit the widest section of the bin as per the measurement sheet required upon ordering your system.
4. Once the adjuster's final position is found, fix the assembly to the coaming rail with M10 x 30 mm self-tapping bolts, pre-drilling 8.7mm to 9 mm guide hole(s) is recommended. Repeat for the opposite side.

Self-Tapping Bolt



**(REAR CABLE CENTRES (OUTSIDE OF ONE PULLEY TO INSIDE OF THE OTHER))**

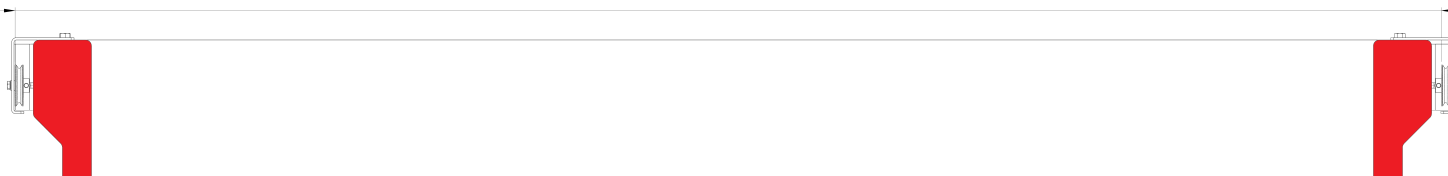


Figure 2: Extended Rear Adjuster Cable Centres

## WATERPROOF (WIND / RAIN) DEFLECTOR MOUNTING

1. Deflector (Figure 3) should be made to suit the style of rail. Deflectors can be welded or bolted to the rail depending on the design. The purpose of having a deflector as part of the installation on a waterproof system is to prevent water from getting in through the front of the blocks.
2. The front bow should be bolted through the deflector to fix it in place. As per (Figure 3).
3. A further long bolt should be fixed through the block and deflector in the slot where the bottom cable runs. Fix this bolt between the 2 cables securing the lower part of the block to the deflector. Doing this ensures the sides of the tarp are tight when the tarp is out. This also helps prevent the lower part of the front block from flexing, which can lead to cracking over time. (Figure 4) shows side view of the bolt through the block to secure it (6mm bolt and nylon lock nut).

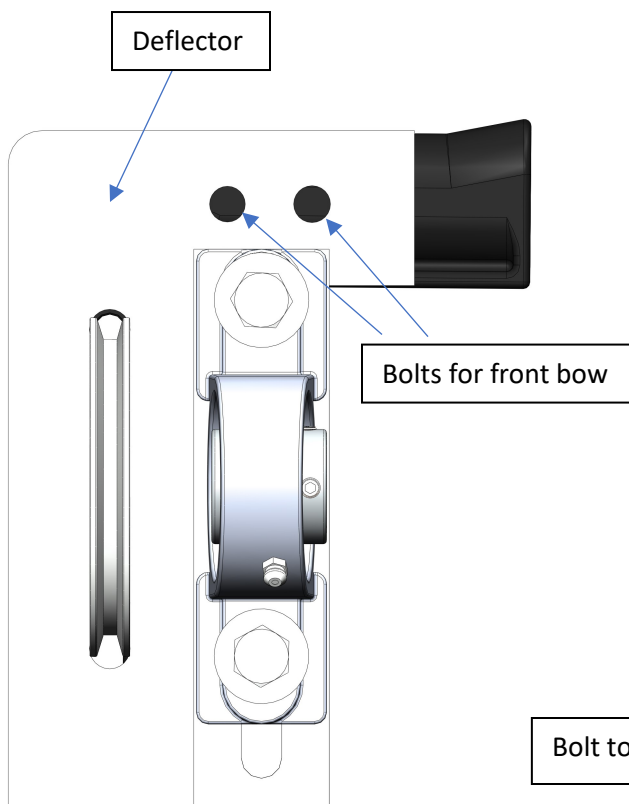


Figure 3: Waterproof Deflector

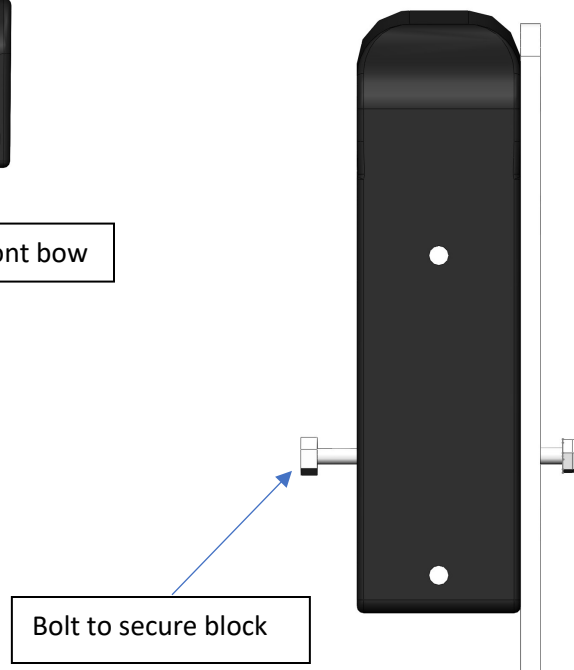


Figure 4: Front Block Lower Support Bolt

## FRONT SHAFT INSTALLATION

Bearings & Shaft Spacers (*REFER TO ELECTRICAL FITTING GUIDE IF INSTALLING ELECTRICS*)

**NOTE:** On any Retractable Tarps dual cable systems, the front shaft requires a **minimum** of 4 support bearings evenly spaced across the headboard. These bearings are placed on 40x40x165 RHS packers supplied in the kit. This allows clearance for chain sprocket and/or Roll Rite motor in the case of fitting electrics.

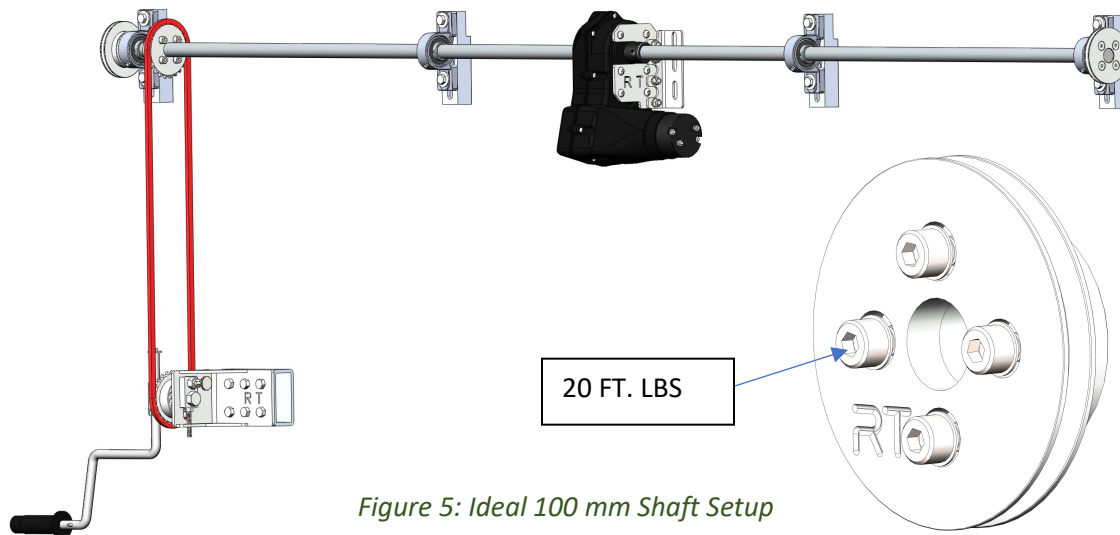
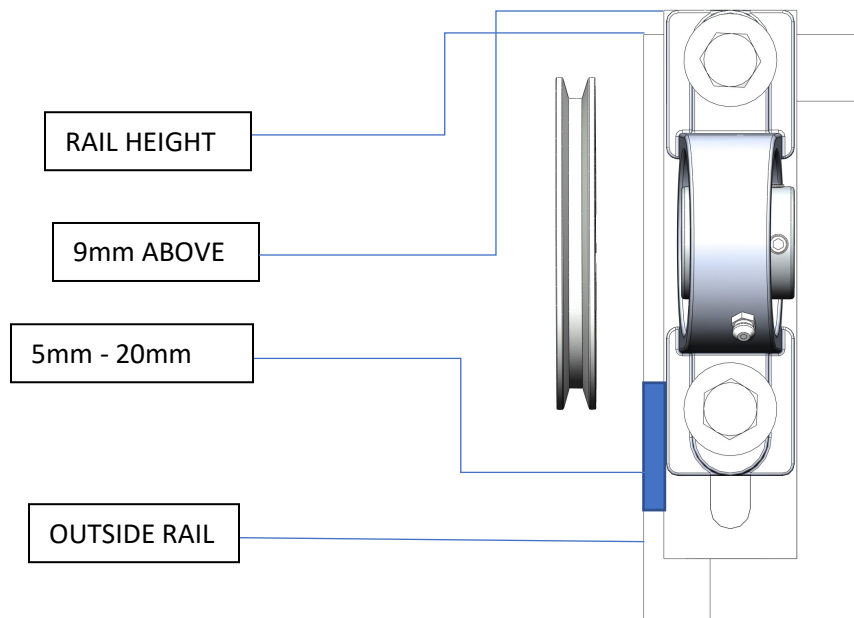


Figure 5: Ideal 100 mm Shaft Setup

1. The first two shaft bearings should be placed between 5 & 20 mm (Figure 6) in from the outside edge of the coaming rail, on either side.
2. The two remaining bearings can be placed evenly across the centre of the shaft, between the two outer bearings. When using 40 x 40 x 165 RHS packers, make sure the top edge is 9 mm above the coaming rail. (Figure 6)
3. For the smaller 100 mm pulley, the bearing housing should be level with the top of the packer. The shaft centerline should sit 61 mm down from the coaming rail.
4. Remove the grub screws from each bearing, then slide the shaft through from the passenger side. Taking care to put the chain sprocket on the driver's side of the shaft before feeding it through the final bearing.
5. Measure the shaft and body, ensure that it is centred. Shafts are cut to 70 mm over provided width of the body as standard. Again, check that the bearings are level as per (Figure 5). Tighten grub screws in bearings to lock shaft away.
6. The two cable pulleys are then pressed onto the ends of the shaft and adjusted to match the rear cable centre width measured and set up previously. Make sure to measure from outside of one shaft

pulley to the inside of the other, across the shaft to determine you have the correct cable centre measurement. The 4 socket head bolts in the pulleys are then evenly torqued to 20ft. Lbs, as illustrated in (Figure 5).



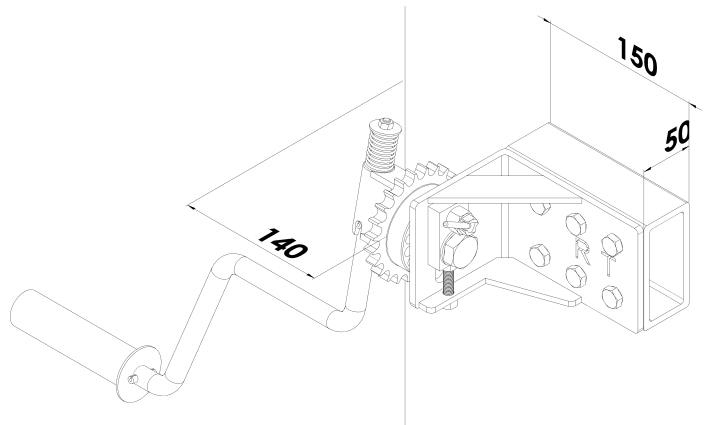
*Figure 6: Bearing Placement / Measurements*

### Handle Placement

1. Hang chain off upper drive sprocket (PVC tarps must use a chain sprocket drive)
2. Fully loosen handle tensioner and hang complete handle assembly off loose chain to determine correct alignment/mounting position. Make sure chain is running straight between sprocket and handle.
3. Mount handle to headboard, it may require a spacer, we recommend using a 150 x 50 RHS section.
4. As a chain sprocket is used on the top shaft, evenly tighten the 4 cap screws to 20 ft-lb of torque once in correct position.

**If using electrics, remove the winding bar from the handle assembly before use.**

**If an electric motor is fitted, it is recommended to either remove the chain when not using the override handle or purchase and fit a chain guard to prevent possible injury.**



*Figure 7: Ideal Chain Drive Handle Placement*

## MOUNTING THE TARP PACK

### Fixing the front Bow

1. Ideal fixing of the front bow is through the deflector mounted on the front as in (Figure 3).
2. The front bow can also be secured by drilling through the front blocks into the rail. Then tapping the rail for a M10 bolt. (*Not recommended*)
3. The sail track should be pulled down and secured with 5 to 6, 6mm rivets to ensure the front panel is tight. (*Sail track is not a load bearing fixture*) Use screws in sail track ends to prevent tarp floating.

### Running the Cables

1. Place the start of the cable loop inside the front half of the double back block. Tighten the front wire grip bolts **evenly**.
2. Run the cable towards the front of the body, taking care to feed the cable through the upper holes on each waterproof block.
3. Loop around the front pulley and run the cable back through the lower slot in each block, around the rear adjuster pulley and back to the double back block. (**Note:** *the rear adjuster should have no tension at this point*) Make sure the rear adjuster pulley is all the way forward, so maximum adjustment is available.
4. With the end of the cable seated in the back half of the double back block, tighten the rear cable grip bolts **evenly**. Once both sides are done, slide the pack up against the headboard so all the blocks are touching evenly next to each other.
5. The rear adjusters are then tensioned with a 6 mm Allen key. A good way to test if tension is correct is to be able to squeeze the top and bottom cable between thumb and forefinger at arm's length from the rear pulley. The cable should touch but resist the squeezing motion. This is done with the tarp pack at the front of the body. If cable slips when using tarp the cables will need more tension.

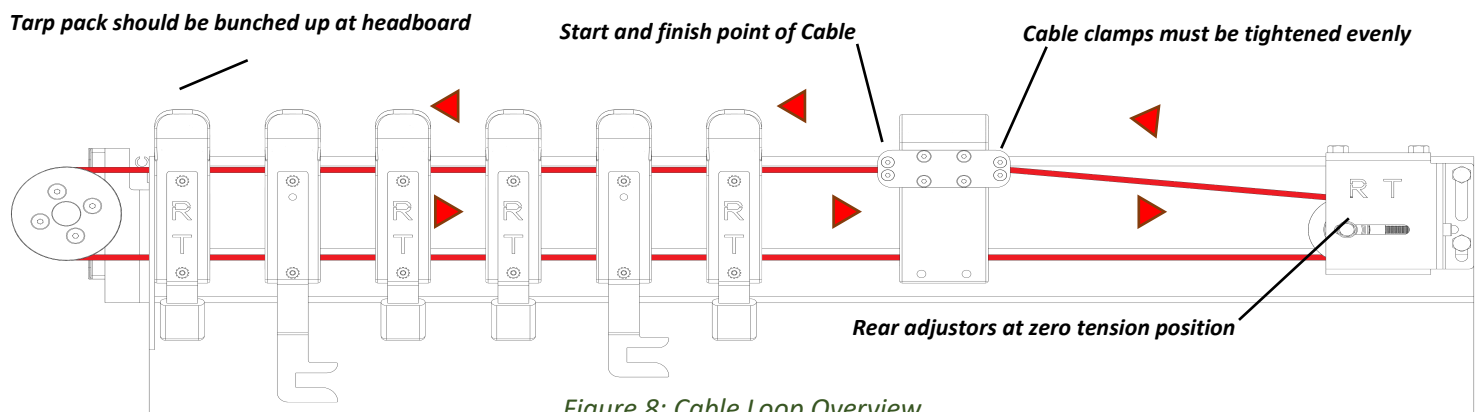


Figure 8: Cable Loop Overview

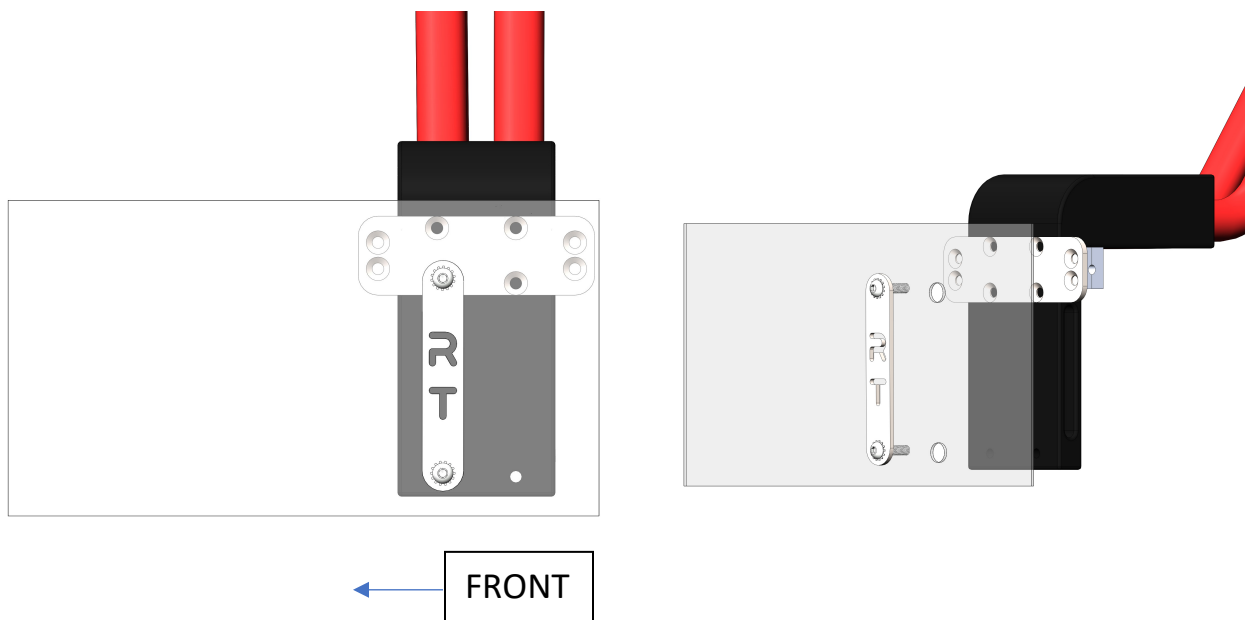
## Waterproof Tarp lock down Instructions

1. Once the tarp pack is anchored to the headboard. The tarp should come with 6 mm holes pre-drilled as per (Figure 9). If not, these holes will need to be drilled in line with the thread inserts in the blocks. Proceed to bolt on the first pair of locking plates on the fixed front bow.

2. Attach plates to the inside inserts on the drive bow block as per (Figure 9) below.

**Note:** On common waterproof systems, the drive bow is generally a double back bow as per (Figure 9). If this is the case, secure the tarp to the front half of the double back block only. This aids in the process of rolling up the rear flap.

3. Once you have secured the plates to the front block and the drive block, fully extend the system out and make sure the tarp is evenly spaced along the length of the body. As well as checking that the blocks are spaced evenly off the rail. If using electrics make sure to fit suitable tarp stops as to prevent tarp from overstretching and causing damage.
4. Once placement is correct, attach plates down both sides. In the standard kit, stainless lock down tags are provided. These should be evenly spaced down each side as per the following locking brackets section. (Figure 11)



*Figure 9: Waterproof Lockdown Plates*

5. Further waterproofing measures include filling any holes and/or gaps present after mounting the front sail track with silicon filler. Usually, the top corner above the fixed front bow between the block and tarp edge will require silicone to seal and prevent water leakage.

### Locking Brackets (Old Style / Flush Sides)

1. Ensure that the locking plates are facing towards the rear of the body during installation.
2. The placement of these brackets can differ depending on the length of the tarp. For a short tarp under 5 metres use 1 bracket on the centre bow. For a long tarp over 5 metres use 2 brackets, 1 short and 1 long. The long bracket should be situated closest to the headboard, these are best placed toward the centre of the tarp with 1 or 2 bows in between them.
3. With the tarp system fully extended, position the locking plate on the block and mark the mounting points for the body tab.
4. Drill out guide holes and mount the body tab in place. *(Ensure that the shorter of the two sets of locking plates are set up on the rear half of the body).*

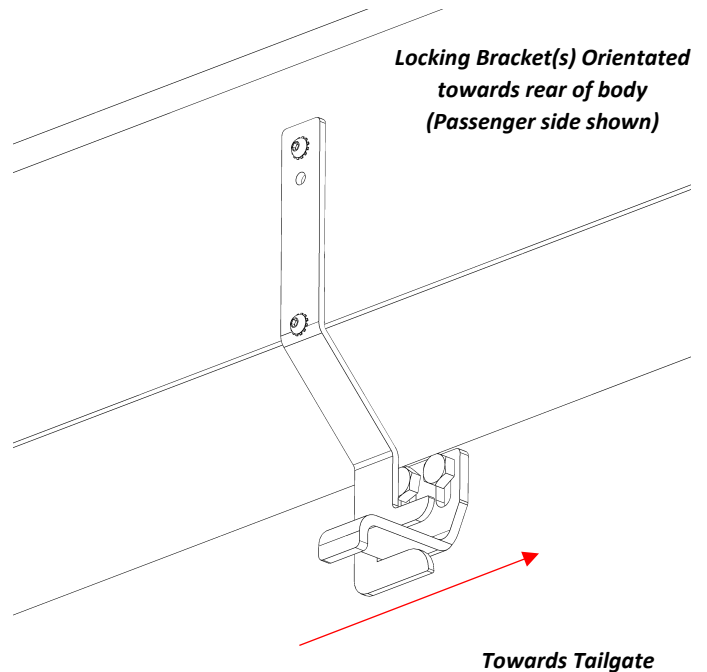


Figure 10: Locking Plate Orientation

**NOTE:** Do not use Locking Brackets to stop the tarp. Appropriate tarp stops should be used. These brackets are used **ONLY** to help prevent tarp from lifting. Not designed for extreme wind conditions.

Front of Body/Headboard (Longer hook this end)

Rear of Body/Tailgate (Shorter Hook this end)



Figure 11: Locking Plate Order

## Universal Locking Brackets (Standard Kit)

*(Universal Locking Brackets are supplied with the Waterproof Long Block tarp system)*

1. If using universal locking brackets, they should be fitted and spaced evenly down the side of the tarp pack.
2. Brackets are mounted using the thread-inserts in the outside of the blocks. Using the 6mm bolts provided, secure the locking bracket to the outside of the block.

***These plates provide an anti-lift feature holding the tarp pack down to the top rail.***

3. The body mounted bracket is secured using m10 bolts fitted to the side of the body at the required height giving 15mm or necessary clearance for the locking tag to run unobstructed.

**Universal anti-lift locking bracket pictured in (Figure 12) below.**

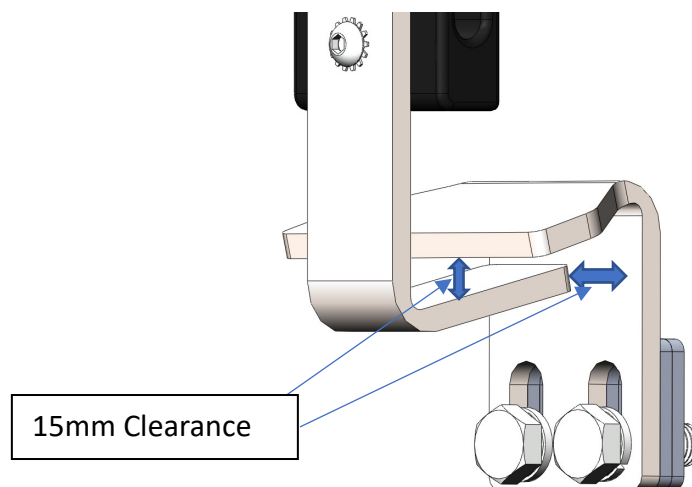
4. Clearance between base plate and universal locking bracket should be set at 15mm as pictured in (Figure 13).

**Locking Brackets are not designed to withstand extreme weather or very high wind situations.**

**It is the responsibility of the operator to secure the tarp. No warranty is given if damage occurs in high wind or weather situations.**



*Figure 12: Universal Locking Bracket*



*Figure 13: Installation Distance Specifications*

### Drive Block Rear Locking Brackets (If Space Allows)

1. The rear locking plate in (Figure 14) is placed under the tarp and secured to the rear (*closest to tailgate*) thread inserts in the drive block using the m6 bolts provided.
2. Then secure the tarp over the top of the plate using the thread inserts in the front (*closest to headboard*) of the block.
3. Once mounted correctly and Tarp is in desired position all the way closed. Then proceed to mount the locking tab to the body as in (Figure 15).

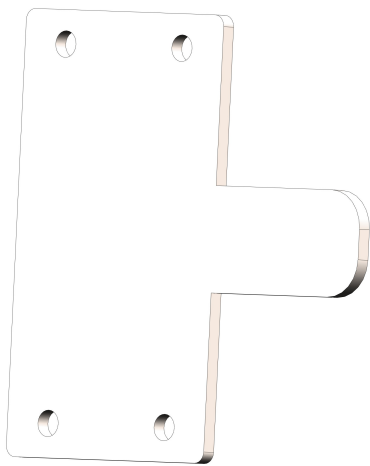


Figure 14: Rear (Drive Block) Locking Plate

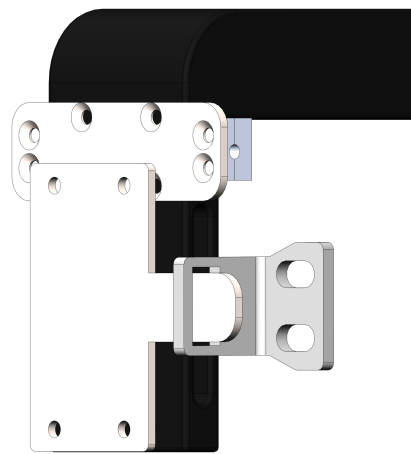
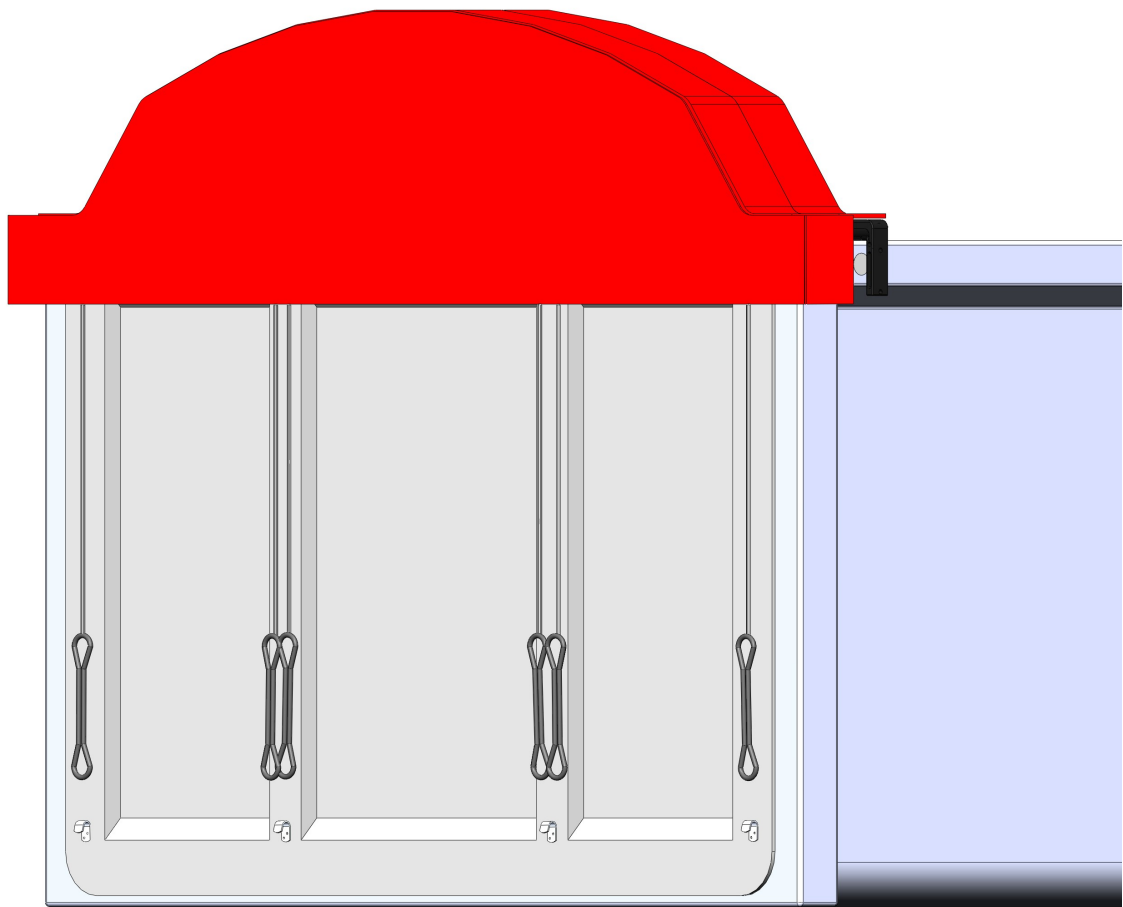


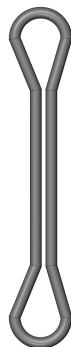
Figure 15: Rear (Drive Block) Body Tab Placement

### Waterproof Rear Flap

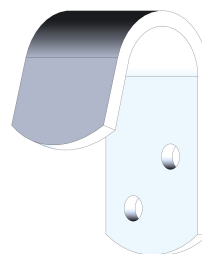
1. Attach J Hooks included in kit (4 x J Hooks) to the lower section of the Tailgate as in (Figure 16). To do this you can use small rivets or screws. (*not provided in kit*)
2. Attach 2 x Rope diverters to the top section of the tailgate for rope guides, use black plastic rope guides included in the kit. Ideally the rope from the side of the rear flap will be diverted under the tarp, around the guide and then down to the centre J hooks as seen in (Figure 21). This creates an envelope type seal at the rear, around the corners of the bin.
3. Attach ring rubbers (*Figure 17*) situated 150mm to 175mm from the J Hook (*Figure 18*) This is shown in (Figure 19). Using the rope crimps provided in the kit, loop rope around and tie a knot to crimp rope together as seen in (Figure 20).



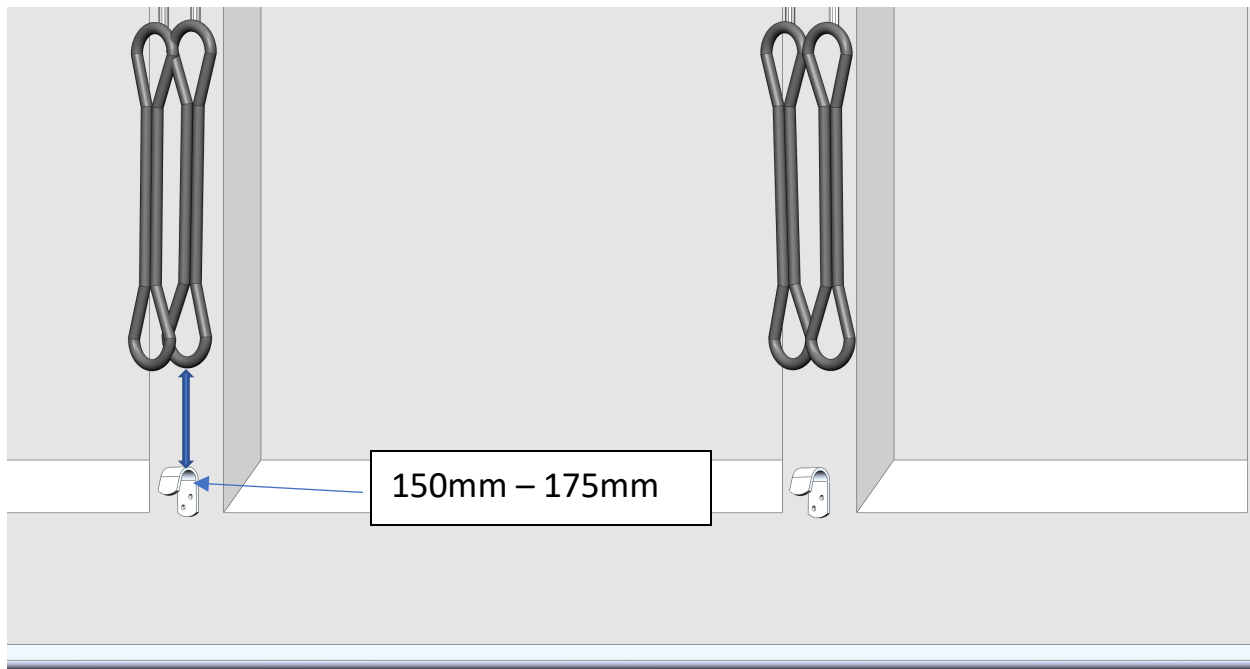
*Figure 16: Rear Flap – Ropes and Rubber Rings Assembly*



*Figure 17: Rubber Ring*



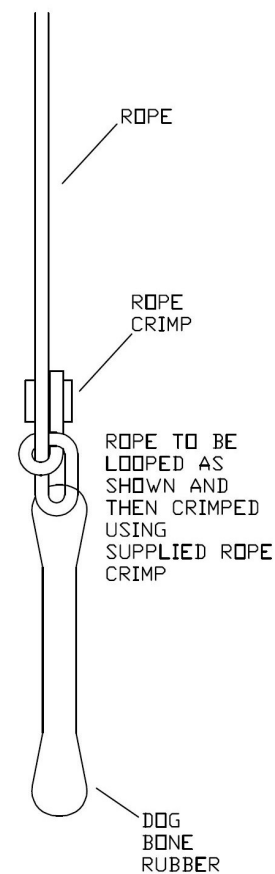
*Figure 18: J-Hook*



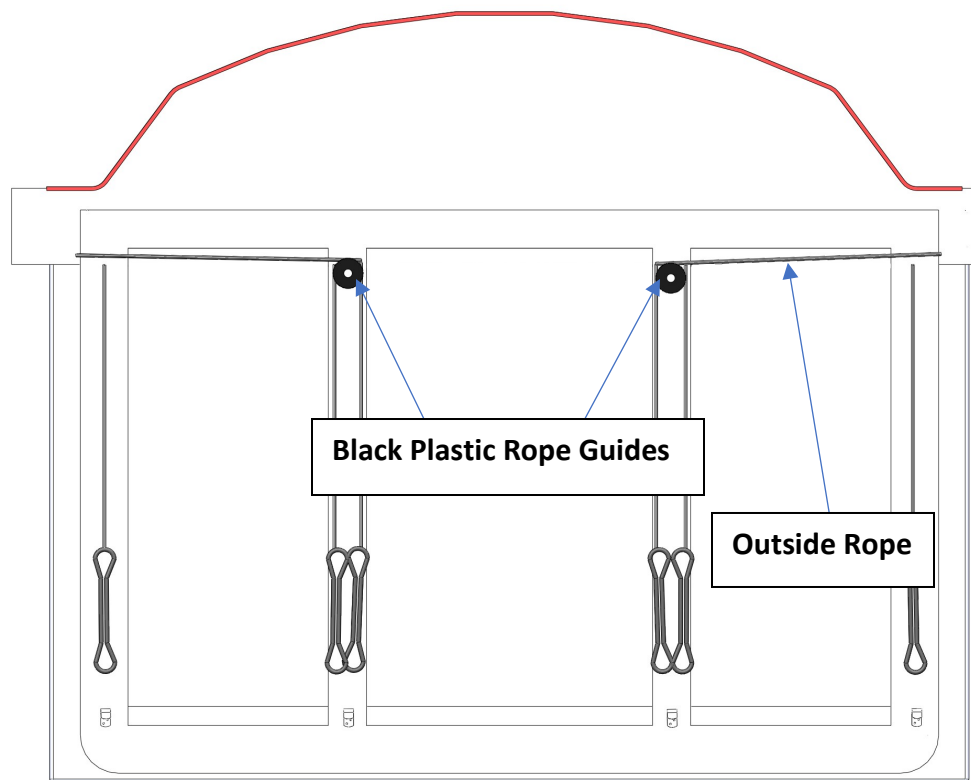
*Figure 19: J-Hook and Rubber Ring Distance*

## **NOTES**

- Rubber Rings attached as per Figure 20.
- Always undo and release rear flap when Tipping.
- Tarp should be completely closed when fitting rear flap and ropes.
- Roll up rear flap when not in use to avoid damage. Lock away using clips attached to the tarp.



*Figure 20: Rubber Ring Loop and Crimp*



*Figure 21: J-Hook and Rope Placement Diagram*

## **ALIGNMENT & ADJUSTMENTS**

### **Realigning Blocks**

A tarp pack will come assembled and aligned to the provided body dimensions. However, in the case of misalignment in the bows, loose blocks, etc. The hood tarp system can be adjusted by the customer.

To Realign a tarp-pack you will first need to know what the outside of blocks measurement should be. Determine this by measuring the cable centres from outside of one shaft pulley to the inside of the other. Then by adding 20mm to the cable centre measurement you have the outside of blocks required measurement.

1. Wind the tarp out 2 metres from the headboard and space the remaining bows evenly between the fixed head bow and rear drive bow. Make sure each bow's blocks are evenly seated flat and the bow is 90° to the combing rail.
2. Before adjusting the bow and block widths, remove the tek screw or screws anchoring the block to the bow.
3. Based on the outside of blocks width, adjust the blocks with a mallet or hammer until you achieve required measurement. Use a tape measure across the body from outside to outside of the blocks to verify measurement.
4. Move to the next bow and repeat the process until all blocks are at a consistent width. Flatten blocks with a mallet or hammer, then proceed to secure the blocks to the bows using tek screws.

## OPERATION OF YOUR TARP SYSTEM

Your system is now ready for use! Be sure to test it multiple times in a controlled environment to check alignment, cable tension and smoothness of operation before regular use. Once satisfied, the following steps can be taken to maximize tarp life.

### MANUAL WATERPROOF OPERATION

To operate a Hood tarp system correctly, the following steps are to be taken: -

- Check the rail and tarp for any debris or obstructions prior to use.
- Release the handle from the bracket and lock into the open winding position.
- Wind out at a steady rate until the unit is fully extended and/or hits the rear stops.
- Rotate the handle back into the locked position to finish the operation.

### ELECTRIC WATERPROOF OPERATION (If using a tarp with a Roll Rite drive system)

**NOTE: Black plastic tarp stops can be purchased at extra cost.**

- Check the rail and tarp for any debris or obstructions prior to use.
- To close the tarp, press close button momentarily and the tarp will automatically extend out to the closed position with no need for holding the button.
- To open the tarp, briefly depress open button in the same fashion to engage the automatic procedure.

### WATERPROOF HOOD TARP SAFETY PRECAUTIONS

When operating the following precautions are required

- Always operate the system from the front of the body.
- Refrain from jerking/sudden movements when winding the tarp to its full extension.
- Only use the manual handle when retracting or extending the tarp, do not grab the chain.
- Stand clear of the sides of the body when unit is retracting.
- Be aware of the bow height with respect to the surroundings.
- Be sure to lock the handle into its closed position when not in use, as to avoid any unwanted movement in the tarp or handle itself.
- If the system is electric, allow adequate cooldown time between each operation.
- Avoid disassembling the controller and gearmotor assemblies as it could cause electrical shock and potentially void the warranty of the component.
- Never touch or grab chain during operation.
- Always secure PVC and Canvas tarp systems with ropes and/or provided locking plates. The tarp system must be secured / tied down according to the conditions. Additional tie down may be required in high wind or extreme weather conditions. **NO WARRANTY** is given to tarps damaged in high wind or extreme weather conditions.
- Do not tip material with the load covered.
- Always store in the front position prior to loading.
- Avoid levelling of loads by using the tarping system.
- When washing do not use acidic detergents.

Failure to comply with these precautions can result in injury and/or damage to the hood tarp assembly.

## REQUIRED MAINTENANCE

Each system is manufactured to a high standard, thus minimising any ongoing maintenance costs. However, lack of basic preventative maintenance may lead to premature wear and improper function of the tarping system and components. To ensure that your system operates correctly, the following basic maintenance is required.

On an average day shift operation, the following procedures are to be performed: -

### MONTHLY TARP HARDWARE CHECK

- Grease front shaft bearings
- Check condition of chain and tension (If connected and/or using)
- Lubricate handle spring and handle bush
- Inspect system for damaged tarp, damaged bows, and blocks
- Check cables for fraying and tension
- Check all cable clamps are fastened

For electric systems, additional maintenance to be performed as per the following: -

### MONTHLY ELECTRICAL CHECK

- Inspect connecting plugs for damage
- Inspect all terminals and lugs for corrosion, tighten and clean accordingly
- Inspect wire condition at high risk areas e.g. draw-bar or turn-table
- Inspect gear motor for oil leaks
- Test system to ensure electronic controller is functioning with the tarp fully extended.
- Test remote control range and replace batteries if required.

### ANNUAL TARP HARDWARE CHECK

- Grease bearings and lubricate all moving parts, i.e. handle winder, chain, etc.
- Check all bolts and fasteners for correct tension
- Inspect front wire pulleys for excessive wear in the wire groove
- Inspect cables for wear and replace as required

### GENERAL WARNINGS FOR ALL SYSTEMS

- Do not tip material with the load covered
- Always store in the front position prior to loading
- Avoid levelling of loads by using the tarping system
- When washing do not use acidic detergents

If under heavy operation, the frequency of the maintenance schedule may have to be adjusted to suit.

### TECHNICAL ASSISTANCE

If you require further technical assistance you can view technical specifications and download information sheets through our website [retractabletarps.com.au](http://retractabletarps.com.au). For further information on operating and installation you can also contact our sales team.

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