AgriFlip

INSTALLATION MANUAL

SHUR-CO® UK Limited

Instruction version:
2022-A

Failure to READ and FOLLOW instructions could result in failure of your sheeting system and /or personal injury. Incorrect operation of the system or inadequate maintenance can severely impair operation of the system and cause premature wear and damage. Please inspect your sheeting system periodically. Always use genuine Shur-Co® replacement parts, use of after market parts may void warranty of the system.

System operation:

- Operate the system only when vehicle is parked in safe place with parking brake engaged and engine is turned off;
- Before servicing or repairing the sheeting system, disconnect power to the components from vehicle battery;
- Do not operate under or near overhead power lines or other obstructions (bridges, trees, catwalk platforms etc.);
- Keep clear of all moving parts and make sure no person are on or around container when system is in operation;
- If arms stop moving, they have possibly made contact with an obstruction. Return arms to original position and clear any obstructions before reactivating system;

SAFETY INFORMATION

- Suitable PPE (hard hat, safety glasses, etc.) should be worn as per your own risk assessment;
- Before operating check all moving parts of the system - repair/replace broken or worn parts immediately;
- Keep body and clothing clear of moving parts;
- The noise level is less than 72dB, measured at operator position;
- No other use of this system is authorized, except as designed;

CAUTION

Deployment of sheeting system does not constitute a safe load.

It is the Driver/Operators duty to perform their own risk assessment prior to transit and ensure that the load is secured and safe for transport.

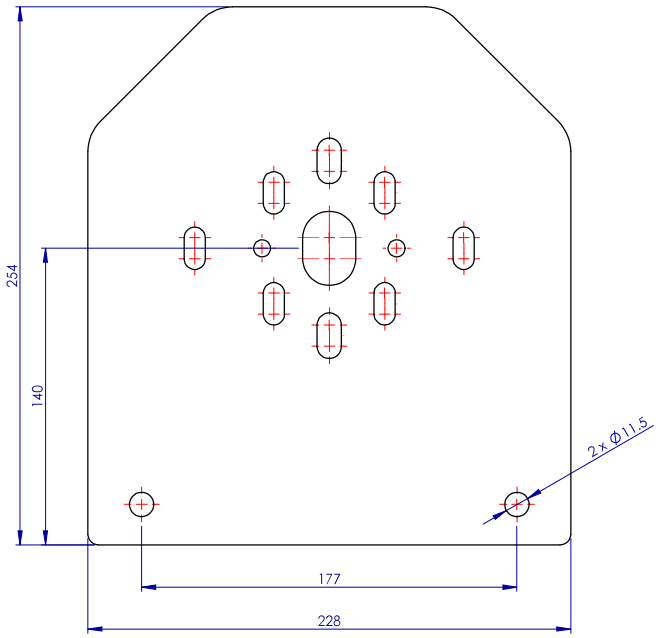
Mounting housing plates

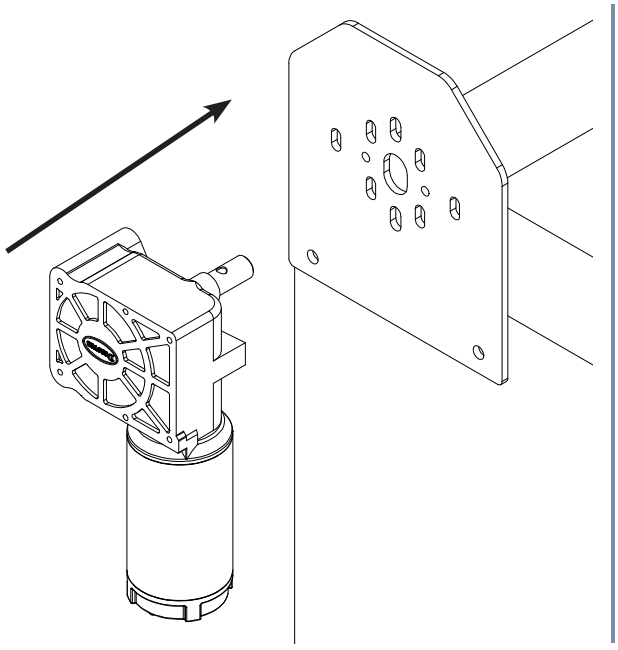
Housing mounting plates for sheeting system roller bar should be mounted on top of the trailer and as far forward as possible so that the direct drive motor and pivot arms will be less likely to be damaged by loaders.

Step 1. Attach housing plates to the top of trailer as far forward as possible either by welding (steel body) or bolting in place.

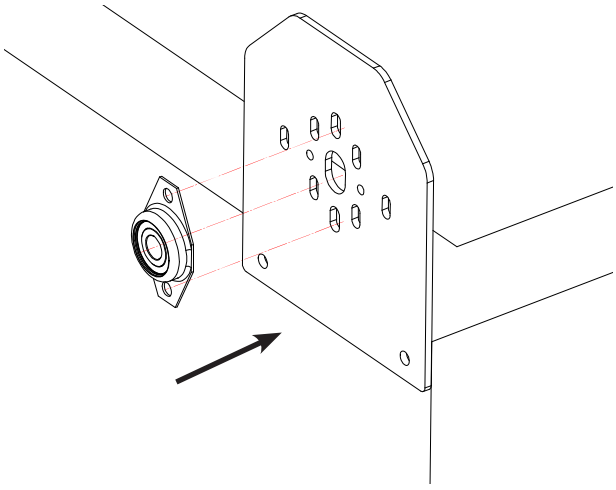
Due to the many variations in trailer configurations, some installers may choose to attach mounting plates using brackets, angle profile, or some other technique that works well with their particular trailer design.

Step 2. Attach the direct drive motor to either side plate using the included 5/16” x ¾” bolts.



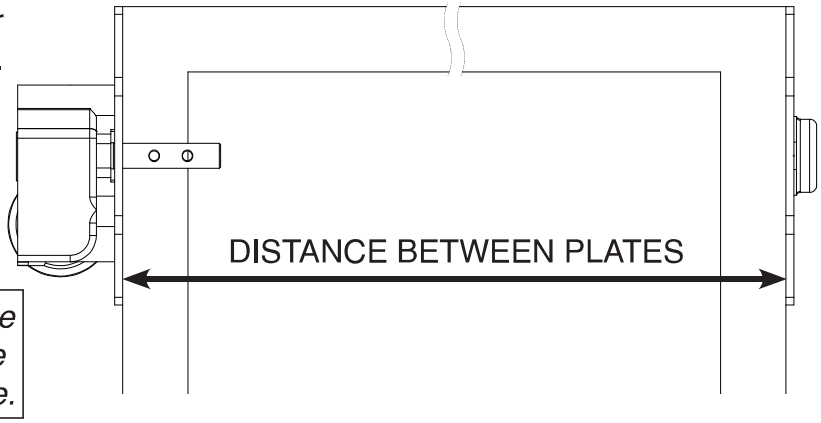


Step 3. Mount the 3/4” bearing onto the other mounting plate using two M10x30 bolts and lock nuts with flat washers.



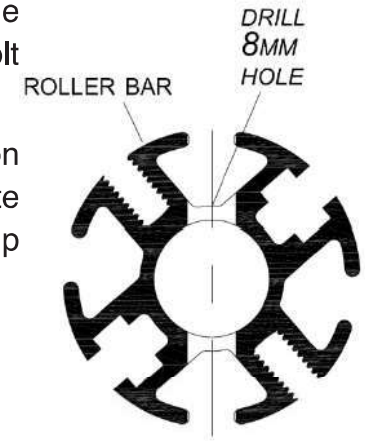
Step 4. Measure distance between mounting plates and cut roller bar 20mm shorter than measured length.

DISTANCE BETWEEN PLATES
- 20MM
ROLLER BAR LENGTH



Note: *Roller bar is pre-drilled on one side, when cutting it down preserve that hole and cut from the other side.*

Step 5. Slide one end of the roller bar (with pre-drilled hole) over the direct drive motor output shaft and secure with M8 x 60 high tensile bolt and lock nut.

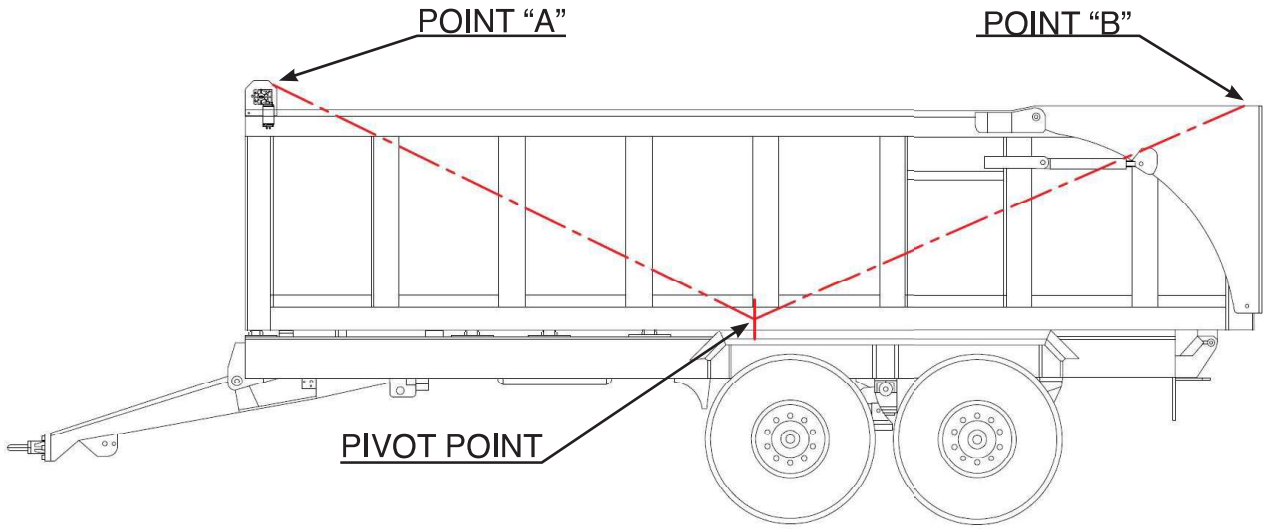


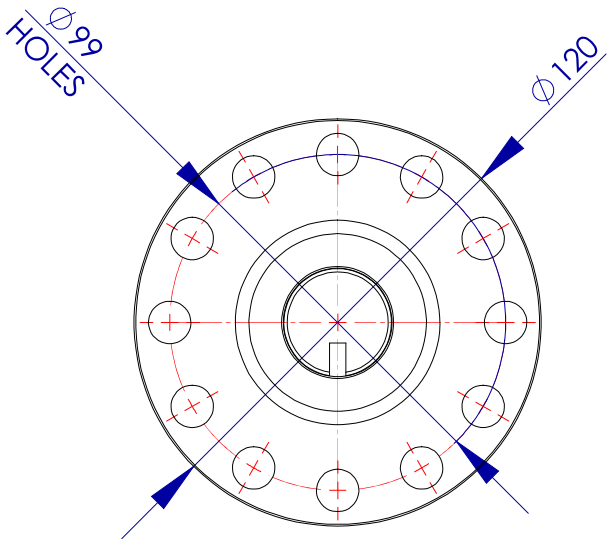
Step 6. Drill a hole on the other side of roller bar to take the extension shaft. Slide the extension shaft (hole end first) through the bearing plate and into the roller bar on the side without the direct drive motor. Line up the holes and secure with bolt, washer, and lock nut.

Note: *When calculating position for drilling roller bar fixing point, remember to allow for 10mm clearance between roller bar and mounting plate at both ends of roller bar.*

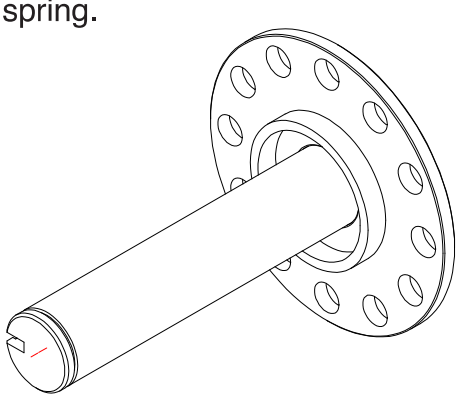
Pivot point & arms

Step 1. To find the pivot point, pull one tape measure from point “A” and a separate tape measure from point “B”. Next cross the tape measures at the bottom-middle of the trailer body where the two measurements are equal – mark the spot beneath where they cross. This is your pivot point.

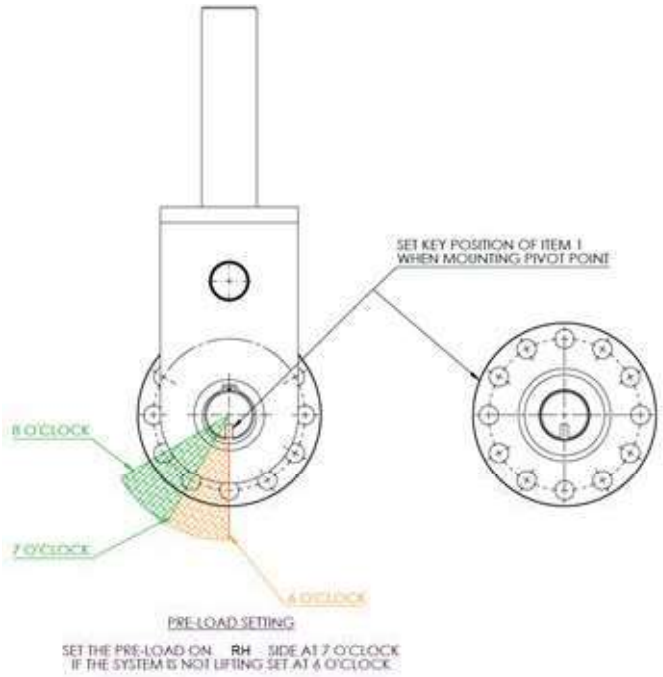


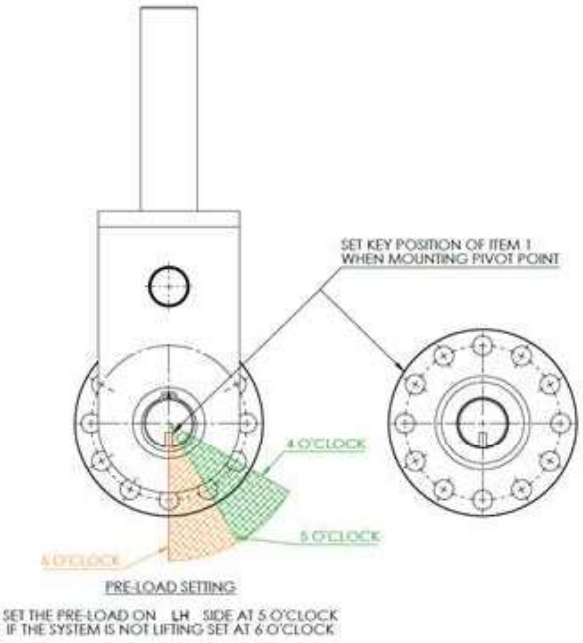


Step 2. In selected pivot point mount the pivot mounting plate (1) when bolting this assembly use minimum of 4 M12 bolts. The mounting plate has 12 holes in circular pattern to adjust the pre-load of clock spring.

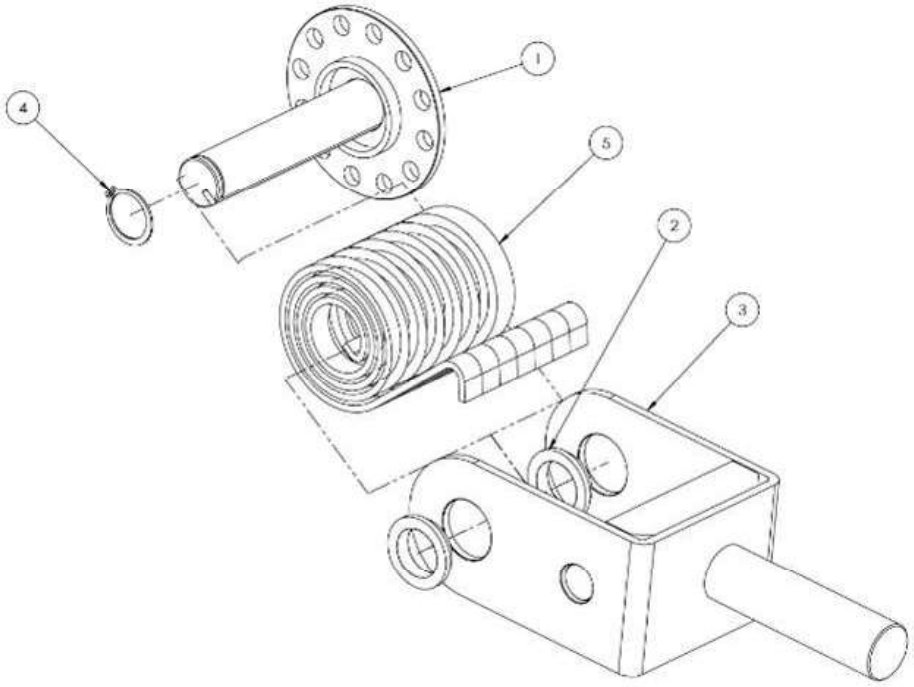


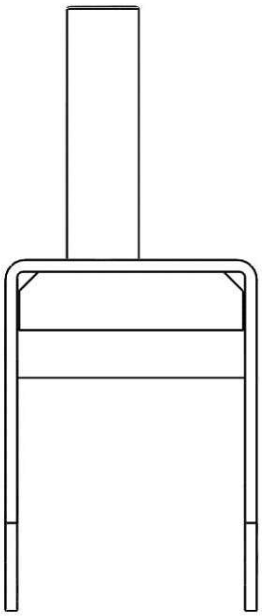
Images below are showing mounting position of the spring bracket depending on pre-load. Remember to set both side mounted brackets on the same pre-load so the arms are operating square. Do not over tension the springs as that will reduce lifetime of product.





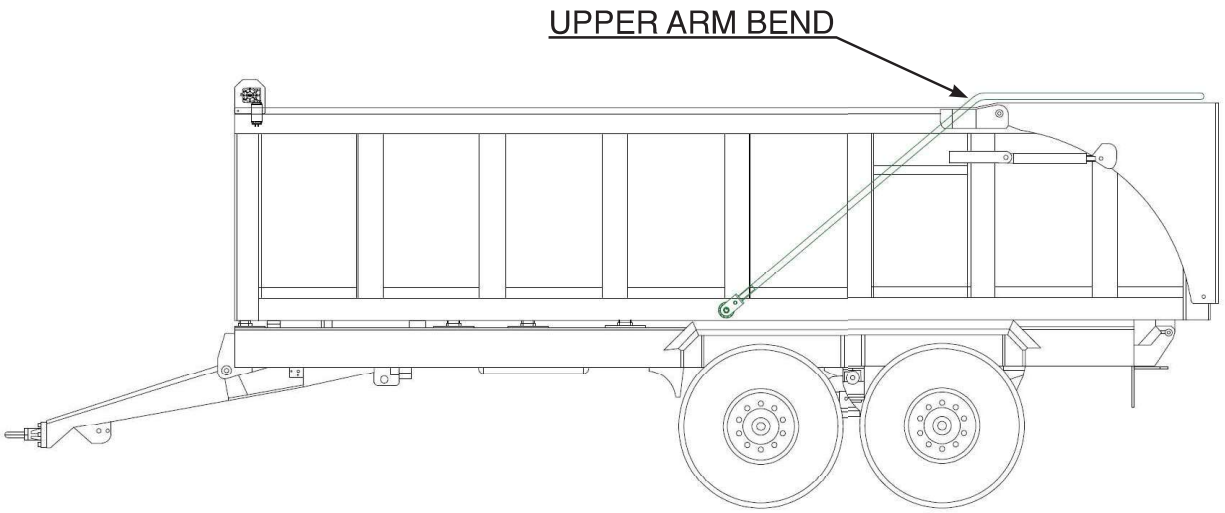
Step 3. Side mounted 7 spring assembly has the main arm pin offset from centre of the “U” bracket. Bracket is universal for both driver and passenger side. The offset can be used to mount the spring assembly in recess on side of the trailer to reduce overall width of the system. Mount the U bracket on to pivot mounting bracket with 7 springs on each side.



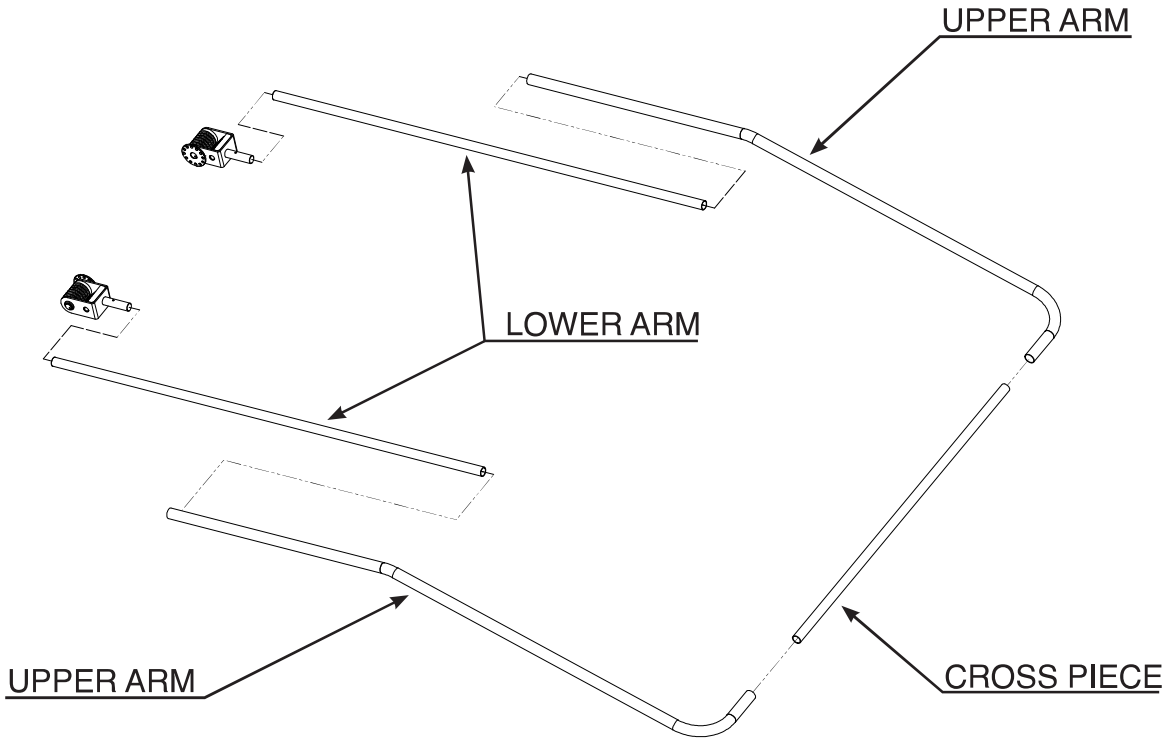


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
5	1800763	SPRING FLAT COIL TORSION	7
4	1800978	29mm EXT RETAINING RING	1
3	1809226	1 1/4" ID x 10mm BUSHING FLANGED	2
2	1809290	PIVOT BRKT WLDMT 7 SPRING 9000	1
1	1809289	PIVOT MTG PLATE WLDMT&SPRING	1

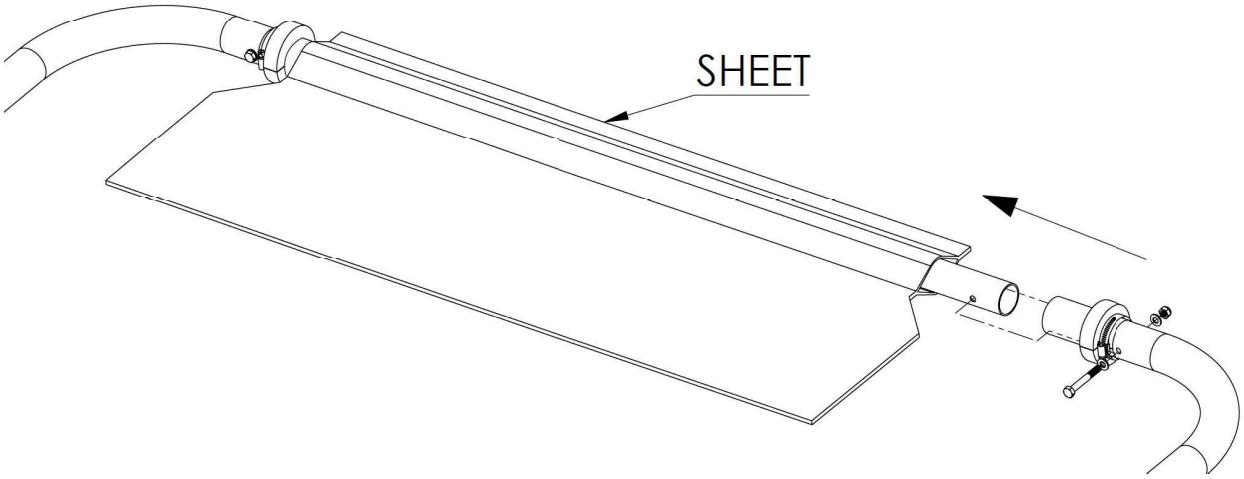
Step 4. Insert lower arm onto the driver's side spring assembly by sliding it onto the U bracket and then slide the upper arm onto it and lift it to rest on to top rail. Please note that the arm may be supplied longer that required for install. If the arm is to long and doesn't land in desired place cut it to length. Secure the arm to pivot bracket by drilling 8mm hole 50mm from the bracket. Repeat this process for curb side. Diagram below is showing orientation of bend in the arm.



Step 5. Insert crosspiece fully into one upper arm and rest it on top rail. Measure and cut the crosspiece to length if necessary so it can be fully inserted into second upper arm. Make sure that the system is square and both are equal length.

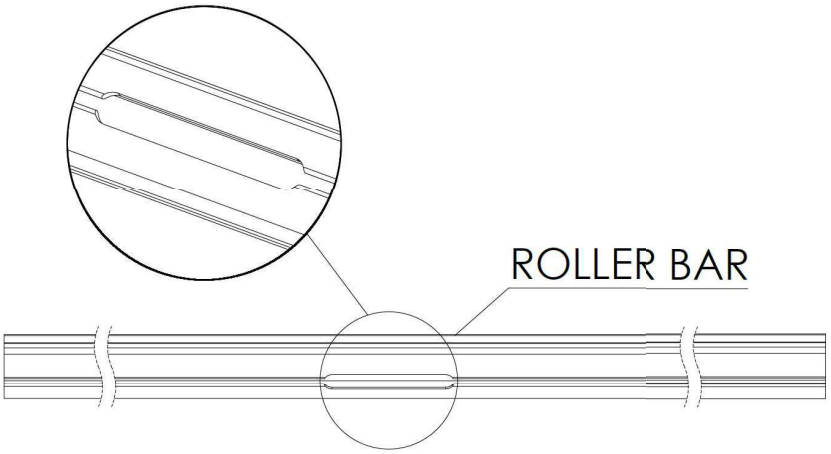


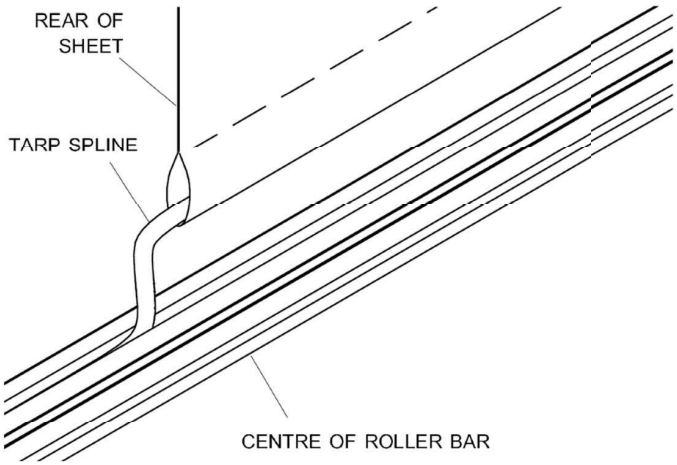
Step 6. Separate the crosspiece on one side from the arm and slide the sheet pocket onto cross-piece.



Step 7. Secure upper arm and crosspiece with M8 bolt and locking nut. Push rubber tarp stops far into ends on rear crosspiece as possible and tighten jubilee clip to keep them in position.

Step 8. Slide main tarp spline at rear of sheet into extruded aluminium roller bar groove. Start at centre of roller bar and feed left and right as needed. Make sure that the sheet is located evenly on roller bar.



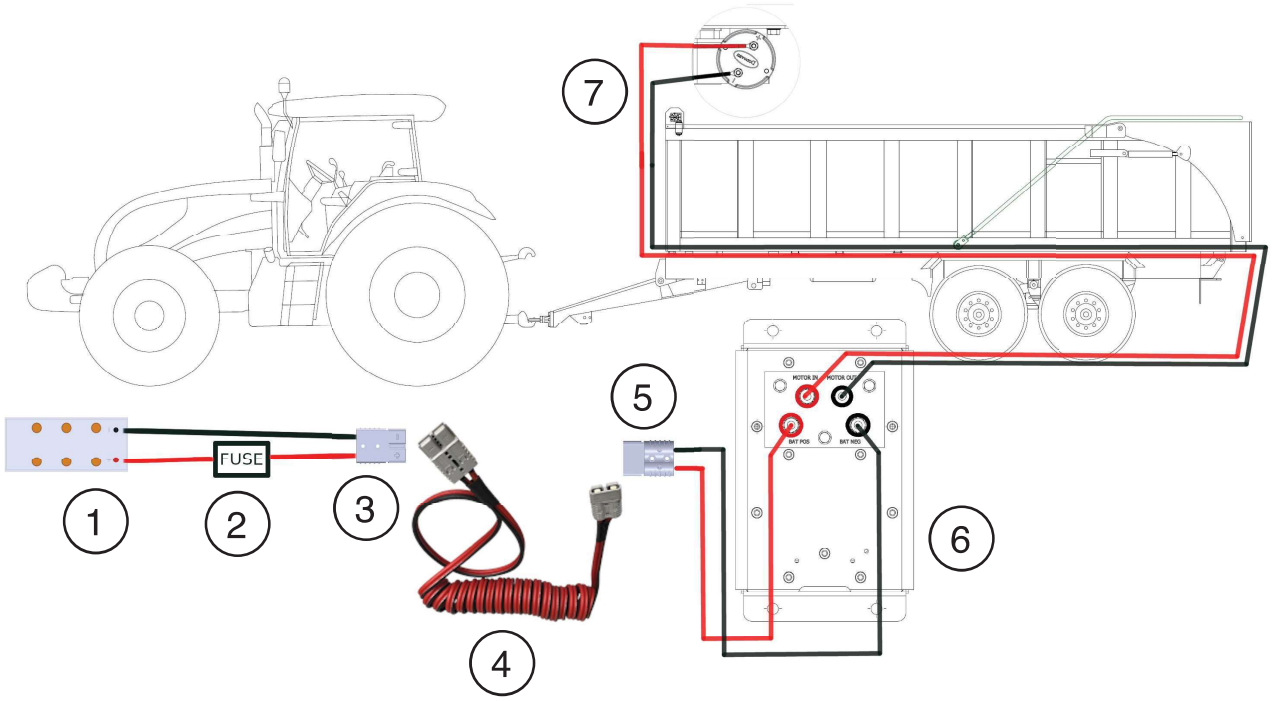


Note: *Tutorial video is available on YouTube at following link:*

https://www.youtube.com/watch?v=go0sYYx0PWE

Electric circuit

Always check the voltage rating of electrical components. Our electric motor and control box (relay box) are rated 12VDC or 24VDC. On point of order you can specify which one is compatible with you vehicle.



Connect the power cable on tractor directly to battery (1). Include an in-line fuse(2) on positive line from battery and run the cable to the back of tractor where you can locate and fix Anderson plug(3). Remember to connect the fuse as close to the battery as possible.

The trailer will be connected to tractor via coiled (suzi) cable (4) with two Anderson plug on each end.

On the trailer fit second Anderson plug (5) and run the cable to Smart3 control box (6). Connect the power input cable to two bottom terminals designated as “BAT POS” & “BAT NEG”. Red core should be connected to “BAT POS” and black core to “BAT NEG”.

Now you can run the cable to the electric motor (7) from the control box. Start by connecting the two core cable to two upper terminals in control box noted as “MOTOR IN” & “MOTOR OUT”.

Route the cable to electric motor down the trailer chassis rail to the tipping pivot point and then up the body to the electric motor. Cable must be mounted this way to allow the trailer to tip safely without damaging any cables.

Hint: *Use appropriate electrical conduit (not supplied in kit) for exposed electrical cable, providing extra protection as well as giving clean, finished look to installation.*

Hint: *It is recommended that power cable from battery (1) cable to Anderson plug (3) is bigger gauge (6GA or 8GA) as this connection can be used by other auxiliary equipment beside sheeting system.*

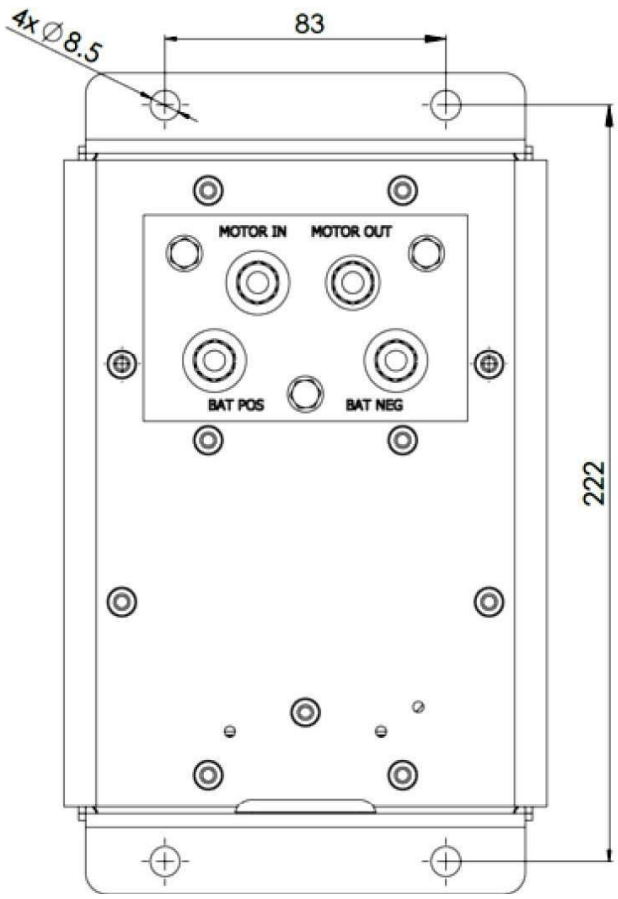
When selecting mounting position for Smart3 control unit, select convenient location protected from heavy road spray with good access to open/close buttons on control box lid.

Ensure that Smart3 is mounted on flat surface, using at least three of four mounting points.

Do not connect battery until installation is complete.

Always check voltage rating on front of Smart 3 control box cover to make sure that it is correct for your vehicle.

Part #	Description
1127288	Smart 3 Control box kit 12VDC
1127921	Smart 3 Control box kit 24VDC
1802061	Durabuilt motor 12VDC
1801965	Durabuilt motor 24VDC



Hole patters for Smart 3 control box

Testing & commissioning system

To test the system connect it to correct power source and operate it using the open/close buttons on the front of Smart 3 control box lid or using the hand held remote. During the first operation roller bar press the open button that will have to roll excess of sheet on itself before lifting the arms.

When the sheet is rolled all the way on to roller bar and the sheet is in open position, visually check the metalwork for any issues and make sure that the arms are resting in desired location. If not adjust the metal work.

To close the sheet and cover the body press close button and allow arms to travel to the back of vehicle. If the arms don't want to lift from the body, increase the pre-load of side mounted spring assemblies, by unbolting them and rotating them by one hole position.

Cover and uncover the body five to ten times to check that the system is operating smoothly.

If the open and close buttons are working in reverse way, change the polarity of cables on electric motor.

SHUR-CO® UK Limited

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