



**RETRACTABLE TARPS P/L**

# ROLL OVER SYSTEMS QUICK START GUIDE

(SINGLE & DUAL, HYDRAULIC & ELECTRIC DRIVE ARM SYSTEMS)



**Automated Covering Systems**

*...Innovative Technology for Transportation.*

**28-30 Terrence Road Brendale QLD 4500**

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# TOUGH JUST GOT TOUGHER

Retractable Tarps and Roll-Rite are proud to present our new Black Edition gearboxes. These new units will supersede our current chrome line.

- ✓ **New** Heavy-Duty Gearboxes designed for the Aussie Market
- ✓ Updated high strength composite casing
- ✓ Up to **330 Nm** of torque, keeping operation smooth and your tarp tight
- ✓ Easy to install and operate with Retractable Tarp's one touch tarp controllers.
- ✓ Hardwired and wireless control options available
- ✓ Get yourself covered today!



**Automated Covering Systems**

*...Innovative Technology for Transportation.*



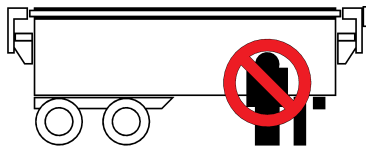
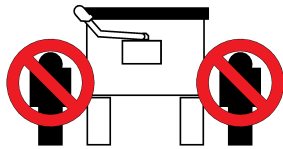
AUSTRALIA'S  
#1 TARP  
SPECIALISTS



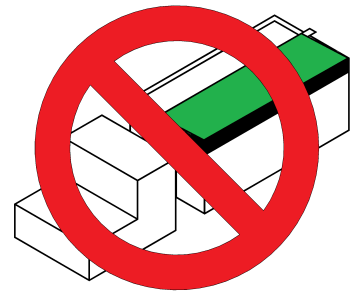
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# CAUTION

**DO NOT STAND ON ARMS OR IN THE  
PATH OF ARMS, INJURY COULD OCCUR**

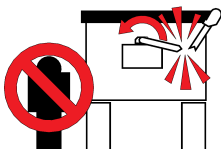


**TARP MUST BE FULLY  
COVERED OR UNCOVERED  
BEFORE DRIVING.**

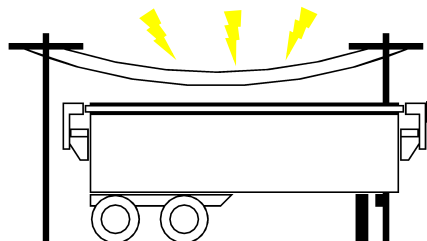


# WARNING

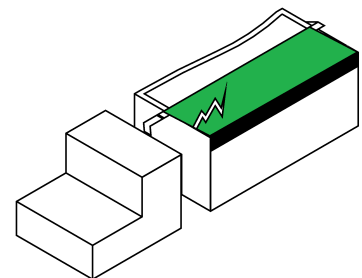
**SPRINGS AND ARMS ARE UNDER EXTREME TENSION,  
BROKEN OR DAMAGED COMPONENTS COULD CAUSE  
DEATH OR SERIOUS INJURY.**



**NEVER STAND NEAR  
DAMAGED  
ARMS/TARP**



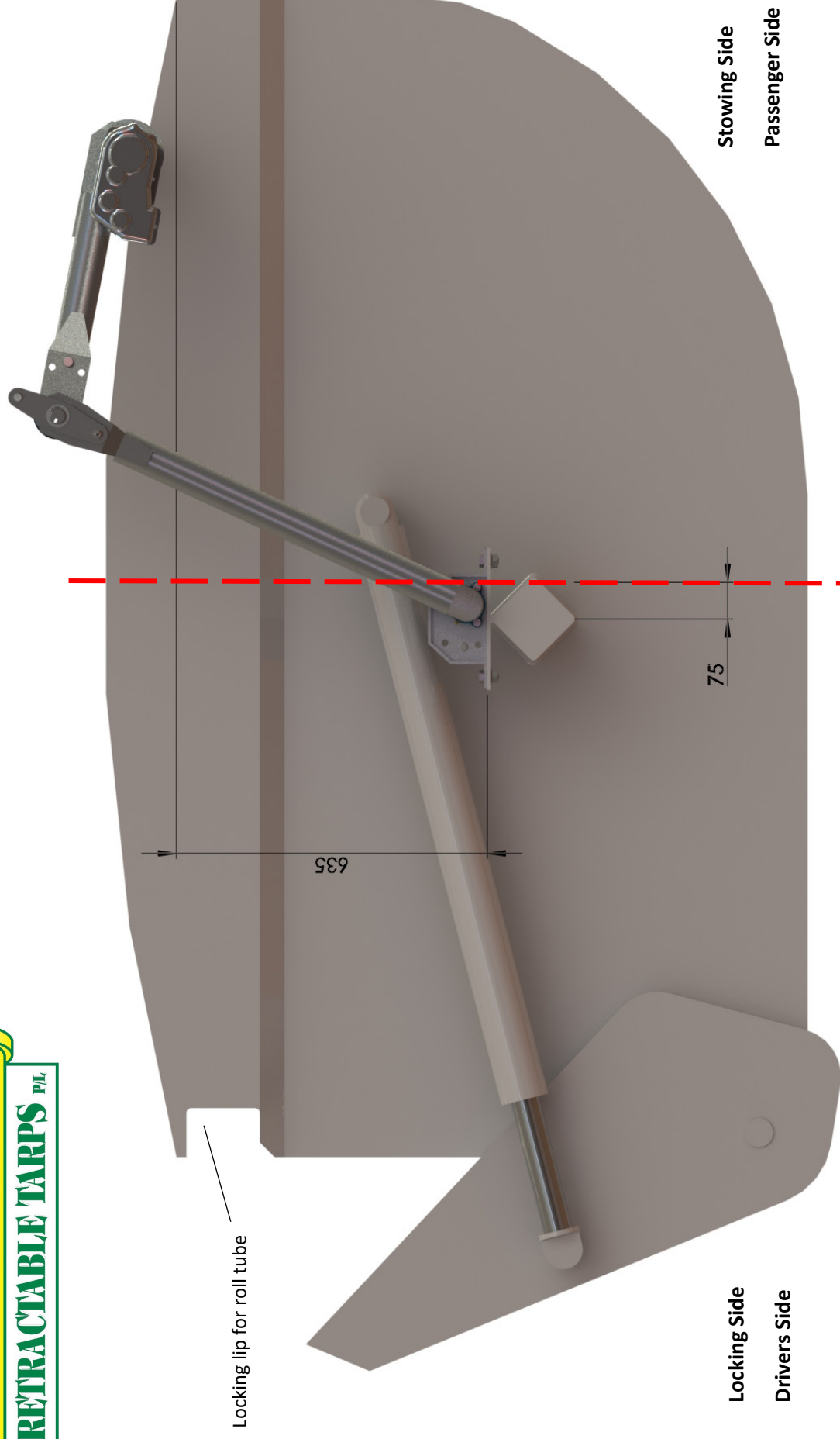
**CHECK FOR  
OVERHEAD  
POWER LINES**



**DO NOT OPERATE WHEN  
SYSTEM IS DAMAGED**



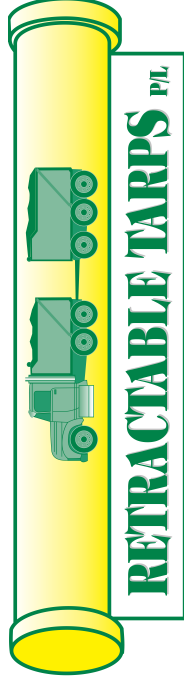
## ROLL RITE ELECTRIC/HYDRAULIC FRONT ARM MOUNTING POSITION



### SPRING BOX MOUNTING POSITION

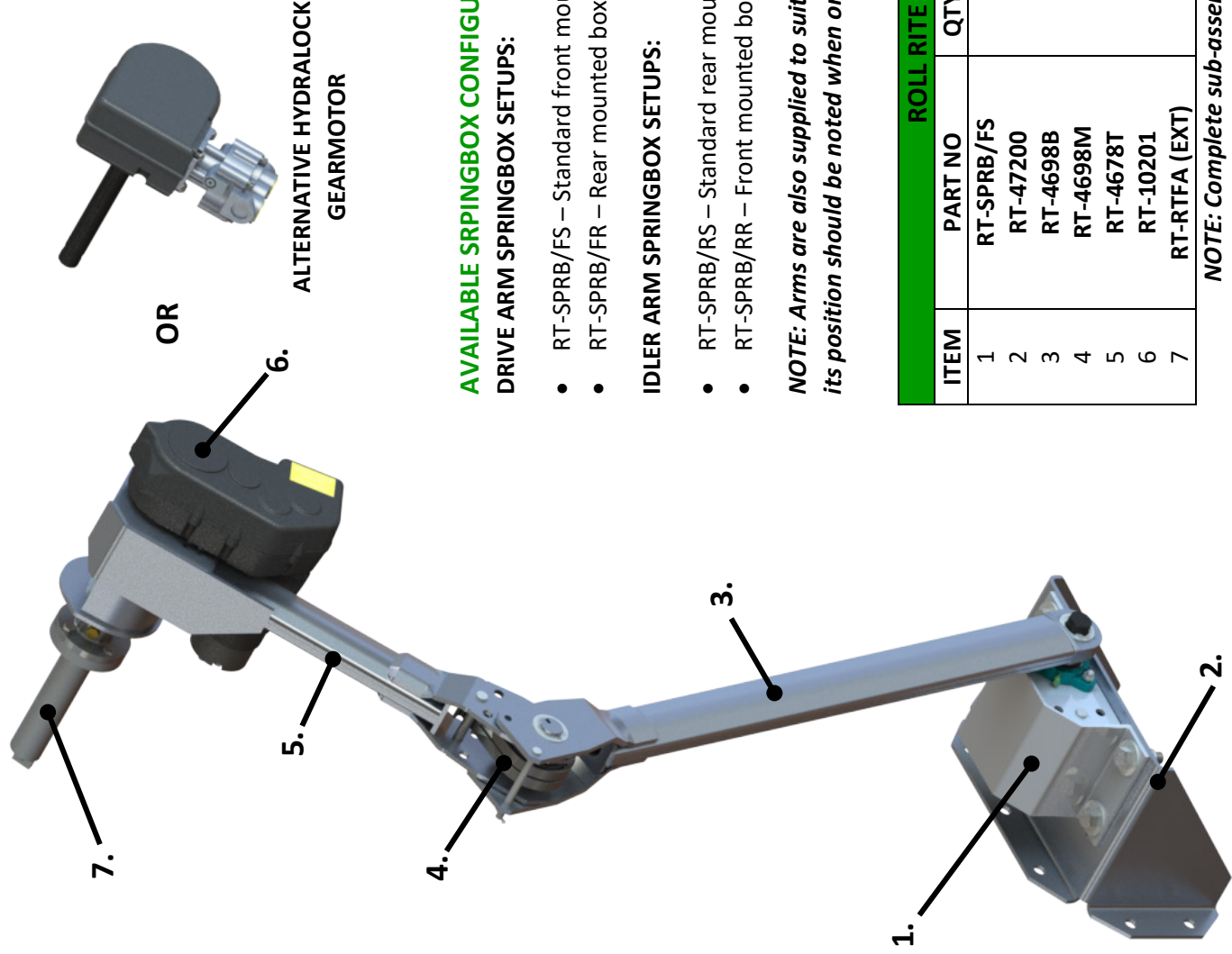
- Base of spring box to be 635 mm below top (combing) rails
- Spring box is to be offset to the locking side (Typically the drivers side)
- Base of spring box can be mounted higher up to 550 mm for greater arm lift/body clearance
- This position also applies to the Retractable Right-angle drive arm range.

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## ROLL RITE STANDARD FRONT ARM ASSEMBLY OVERVIEW

Roll Rite's Standard Roll over arm kit can be provided in either Electric (RT-SAE1 Shown right) **OR** Hydraulic (RT-SHYD) configurations. The system is available in single arm form for end tipper and walking floor applications, or dual arm if the system is being utilised by a side tipper.



## AVAILABLE SPRINGBOX CONFIGURATIONS

### DRIVE ARM SPRINGBOX SETUPS:

- RT-SPRB/FS – Standard front mounted box C/W 6 springs
- RT-SPRB/FR – Rear mounted box C/W 6 springs

### IDLER ARM SPRINGBOX SETUPS:

- RT-SPRB/RS – Standard rear mounted box C/W 5 springs
- RT-SPRB/RR – Front mounted box C/W 5 springs

**NOTE: Arms are also supplied to suit front and rear configurations and its position should be noted when ordering replacement or new arms.**

| ROLL RITE FRONT DRIVE ARM ASSEMBLY (RT-SAE1/SHYD) |               |               |   |
|---|---------------|---------------|---|
| ITEM  | PART NO       | QTY (PER ARM) | DESCRIPTION                                       |
| 1   | RT-SPRB/FS    | 1             | 6 SPRING SPRINGBOX ASSEMBLY (FRONT MOUNTED)       |
| 2   | RT-47200      | 1             | UNIVERSAL FOLDED ALUMINIUM SPRINGBOX SHELF        |
| 3   | RT-4698B      | 1             | LOWER ARM ONLY (NO PIVOT PIN INCLUDED)            |
| 4   | RT-4698M      | 1             | CENTRE PIVOT PIN (INCLUDES 2 SPRINGS)             |
| 5   | RT-4678T      | 1             | TOP ARM ONLY (BARE ARM WITH NO BEARINGS OR MOTOR) |
| 6   | RT-10201      | 1             | 12 V TARP STRETCHER GEARMOTOR (166:1 REDUCTION)   |
| 7   | RT-RTFA (EXT) | 1             | DRIVE END TWO-PIECE FLANGE ADAPTER                |

**NOTE: Complete sub-assemblies and/or individual components are available on our website**



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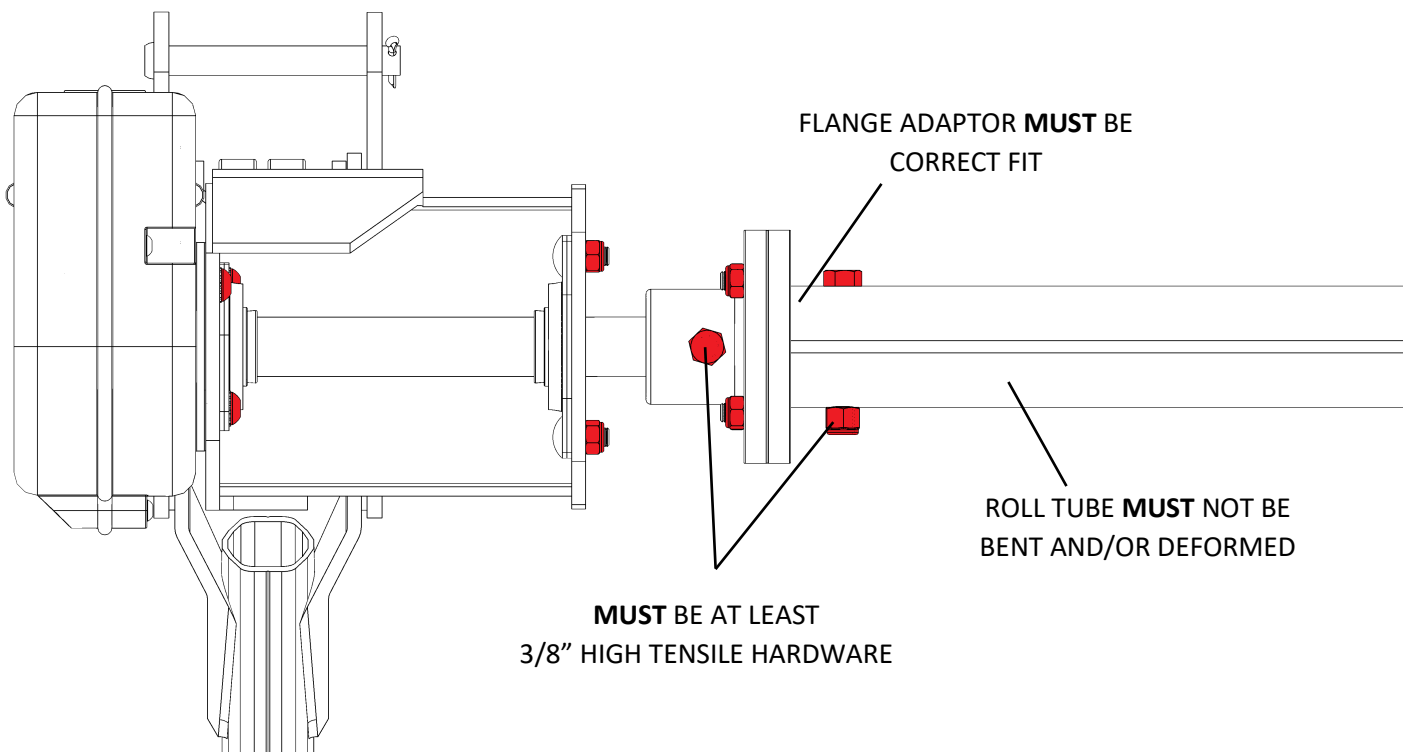
## ROLL OVER MAINTENANCE GUIDE

A standard Retractable Tarps supplied roll over system is comprised of 3 main elements. All of which require periodic inspection and maintenance as follows:

### 1. ROLL RITE ARM ASSEMBLY

The hydraulic/electric roll over kit comes with single or dual arms, gearmotor and tube adaptors. The following maintenance must be performed.

- i. The system should be periodically inspected for fatigue and/or damage. Key areas to check during this inspection include the aluminum arm(s), tube adaptors and roll tube as per the attached arm inspection guide and figure 1 below. Before inspecting the arm(s) or any part of the tarp system, it must be at the point of lowest tension. This position can be found in the attached arm detensioning guide.
- ii. While performing this inspection, ensure that all bolts are correctly fastened and that the connection between the roll tube and the Roll Rite arm is secure. The roll tube flanged adaptor must be the correct size for the roll tube in use. This adaptor must be secured with at least a 3/8" high tensile fastener or equivalent. When inspecting the tube adaptor, ensure that the roll tube is not deformed (Refer to figure 1 below).
- iii. These inspections should be undertaken every 3 months. Expected life of the arm(s) is 5 + years of standard operation, not including external damage or extreme use cases.



ALL BOLTS (HIGHLIGHTED IN RED) TO BE INSPECTED/TIGHTENED DURING PERIODIC MAINTENANCE

Figure 1: Inspection points on top of Hydralock Arm





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## 2. TARP MATERIAL

**RT-ROMES (MESH)/RT-ROPVC (PVC)** – Reinforced Mesh or PVC tarp material custom made to suit the body.

- i. The only required maintenance is periodic inspection of the tarp for damage and/or excessive wear. The tarp needs to be repaired or replaced immediately if any significant tears are observed.
- ii. Tarp should be checked for even pressure under the driver's side locking lip. The tarp should be tight along its full length up against a full-length locking lip with no loose or hanging roll tube.
- iii. Expected life of a tarp is 5 + years of standard operation, not including external damage or extreme use cases.

## 3. HYDRAULIC FITTINGS AND ELECTRICAL CONNECTIONS

Hydraulic Lines fitted to the Hydralock Gearmotor (not supplied by Retractable Tarps) and/or electrical system including a DMC and Tarpstretcher gearmotor.

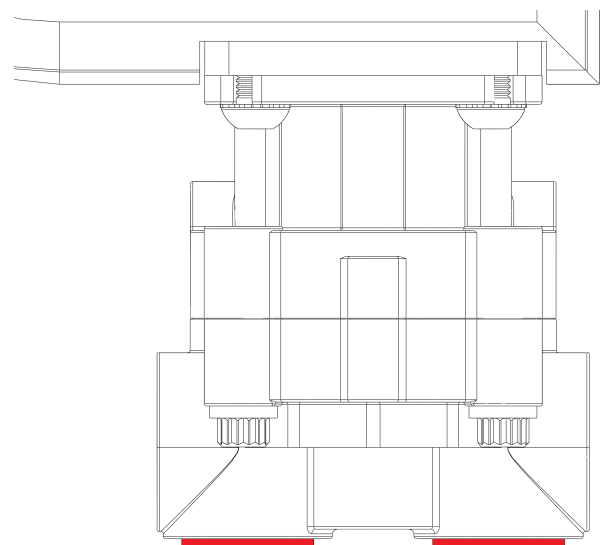
- i. Key points of maintenance are inspect, clean and tighten all fittings and lines/ electrical connections.
- ii. Hydraulic motor can be tested for operating pressure, please see below pressure check point and following system schematic.
- iii. These inspections should be undertaken during regular vehicle servicing.

The whole system is expected to last in the vicinity of 5 years based on normal operation. Damage to one component may result in the rapid deterioration of the entire system. It is essential that any observed issues are rectified immediately.

### SYSTEM PRESSURE CHECK POINT

A pressure gauge can be attached to either inlet on the Hydralock Motor (Highlighted in red). The system should then be run in both directions. Maximum pressure should not exceed 1250 PSI in the opening direction, remaining around 1000 PSI. Then remain under 100 psi (as close to zero as possible) in the opposing switch direction. A complete system schematic can be found on the following page.

As mentioned previously Retractable tarps only supplies the arm and tarp hardware. All fittings, control and spool valves are supplied and/or fitted by a 3<sup>rd</sup> party. If any tarp specific parts are required, a full Roll Rite arm parts catalogue is available on our website.



*Figure 2: Hydralock Motor Inlet and Outlet points*



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## HYDRAULIC SCHEMATIC

### FOR IDEAL OPERATING EFFICIENCY

- MAXIMUM FLOWRATE: 20 L/min
- MAXIMUM OPERATING PRESSURE: 1250 PSI
- MINIMUM HOSE DIAMETER: ½"

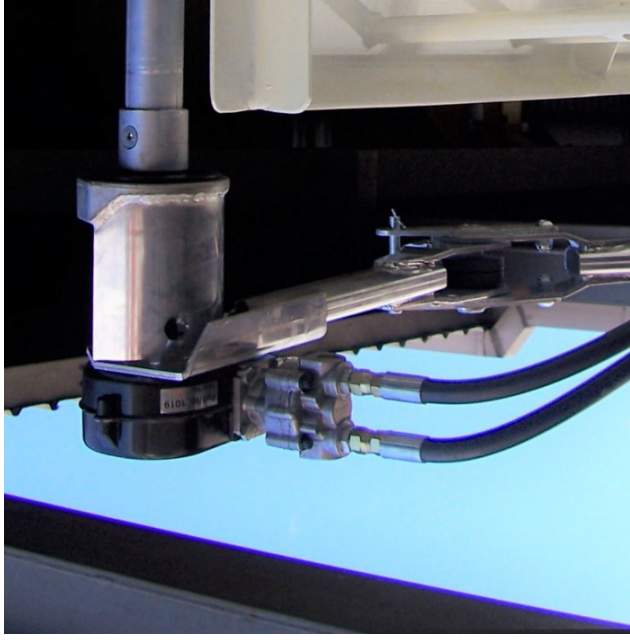


Figure 3: Example of system plumbing

**NOTE:** we do not supply hydraulic lines, fittings or control/spool valves. It is important to ensure that the hydraulic motors are operated at the correct specification noted above.

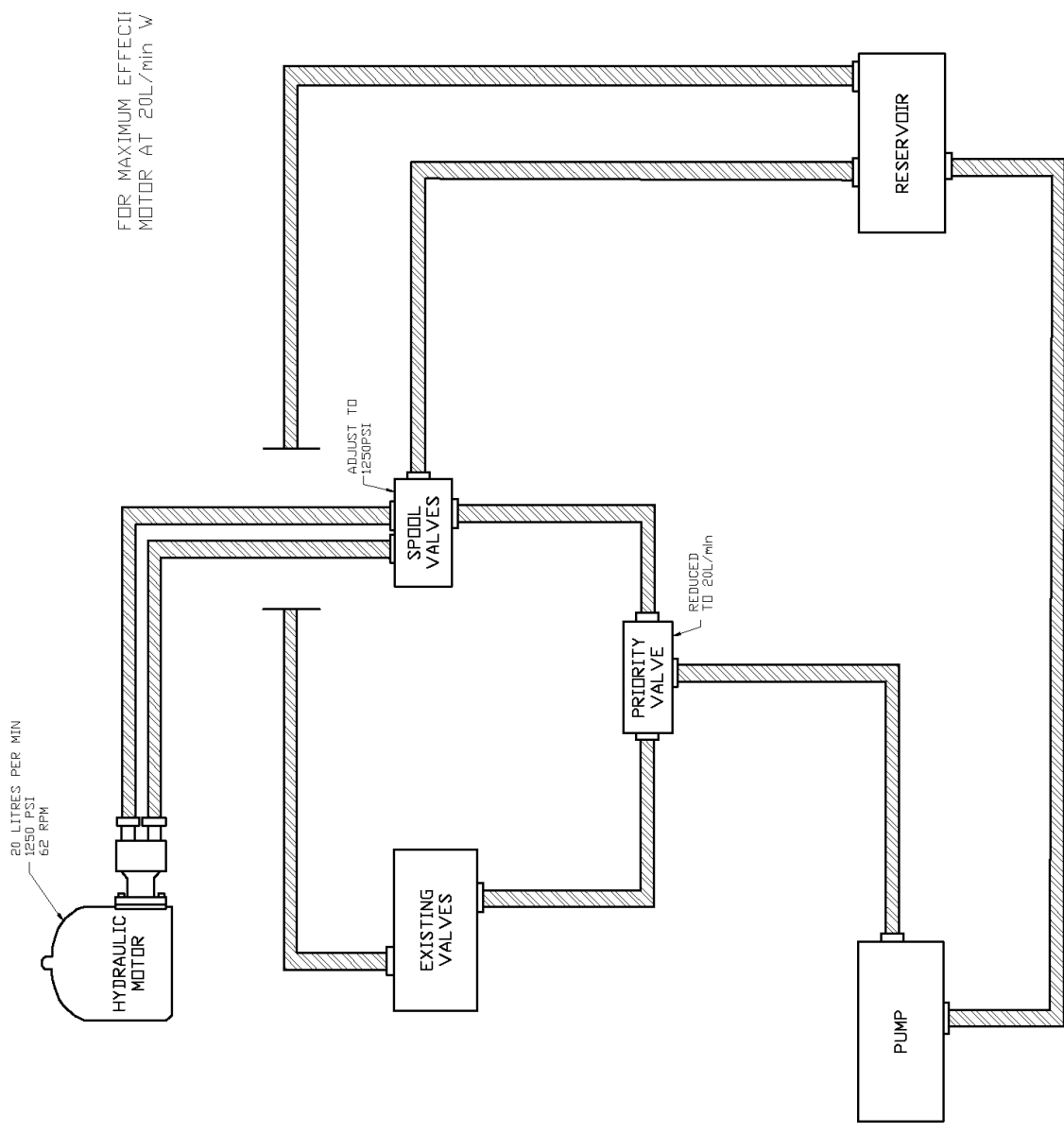


Figure 4: Standard configuration for hydraulic arm system



## ROLL RITE ARM INSPECTION GUIDE

### WHERE TO LOOK

During the regular inspection period, the front and rear Roll Rite arms must be checked for fatigue and/or failure. Issues may occur at the joint or knuckle in the centre of the arm. Specifically, around the welds connecting the knuckle to the upper and lower arm tube(s) (See figure 1). All welds in and around this area should be checked, along with the brackets themselves.

### WHAT TO LOOK FOR

Welds should be checked for hairline cracking and separation from the arm tube. The knuckle brackets should be straight and free of any visible damage or cracking. Arm(s) should travel backward and forward smoothly with little to no resistance or notchiness. The complete arm assembly should be parallel to the body and should not be bending/pulling in towards the head/back board.

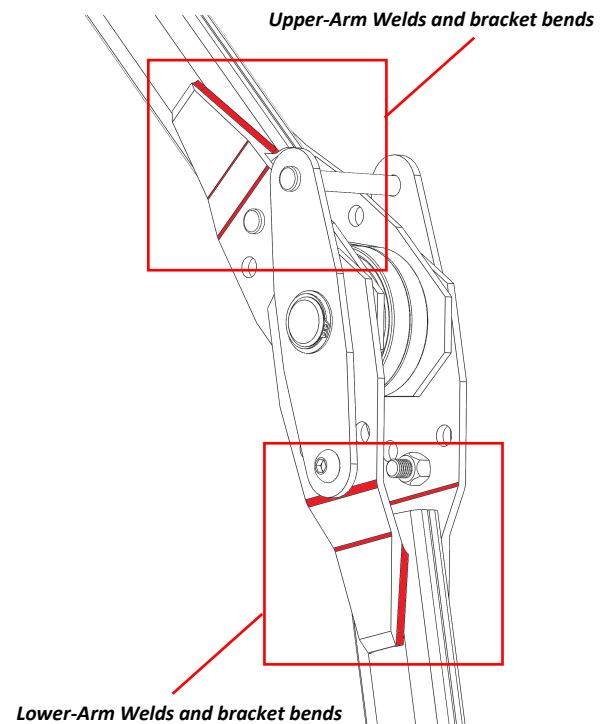


Figure 5: Inspection areas on standard Roll Rite arms



Figure 6: Examples of unchecked arm fatigue

### WHAT TO DO

If any of the above symptoms are present, note the details of the vehicle and age of the tarp system then organise to have the relevant replacement parts ordered. The replacement components are reinforced and specific to the given application and load scenarios. Use the following part numbers when generating an order:

- Complete arm only: RT-RARMHD – Specify: drive or idler arm, at front or rear of body
- Bottom Arm Only: RT-4698BHD
- Upper Arm Only: RT-4698THD

For any additional parts, refer to our Roll Rite arm parts catalogue on our website.

## ROLL RITE ARM PRESERVING INFORMATION

### RELEASE OF STORED ENERGY PRIOR TO MAINTENANCE

The aim of this document is to provide a succinct guide to the safe dissipation of internal spring tension in all Roll Rite arm systems. This stored energy can be **hazardous** if not correctly isolated and removed prior to servicing and maintenance. Failure to follow the attached procedure could result in an uncontrolled release of spring energy and **severe injury**.

### ENERGY STORAGE IN STANDARD OPERATION

In the standard orientation, the Roll Rite arm setup rolls from the passenger side (**open position**) to the driver's side (**closed position**). As shown in **Figures 1 and 2**, the point of highest tension is in the fully **open position** when the tarp is completely spooled up on the passenger side. Prior to any maintenance or disassembly, the arm or arms **MUST** be in the **closed position**, with the roll tube hanging over the driver's side at its lowest position.

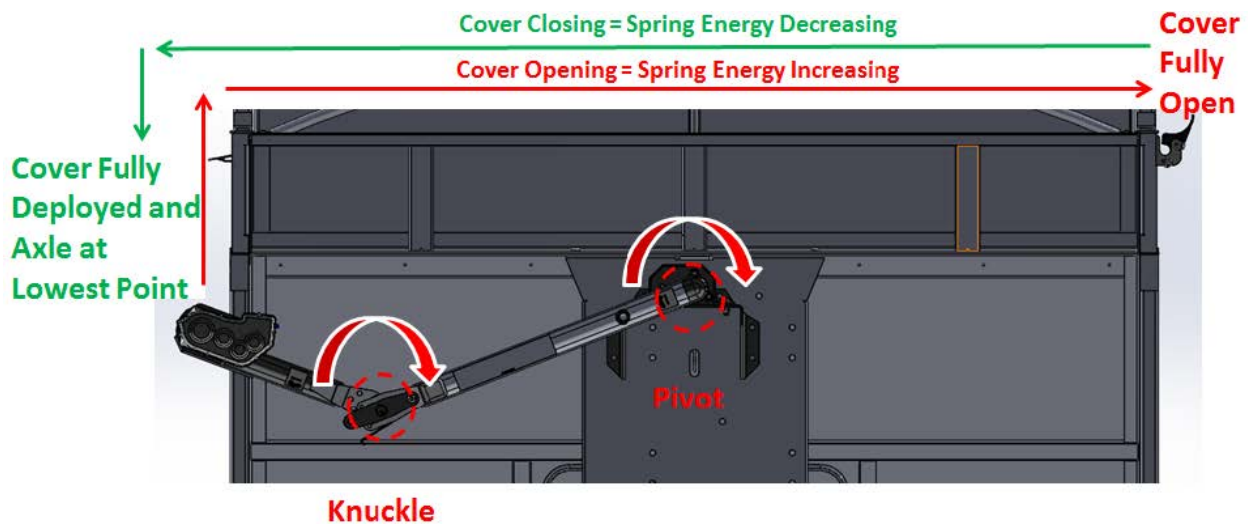


Figure 7: Arm orientation on front of body.

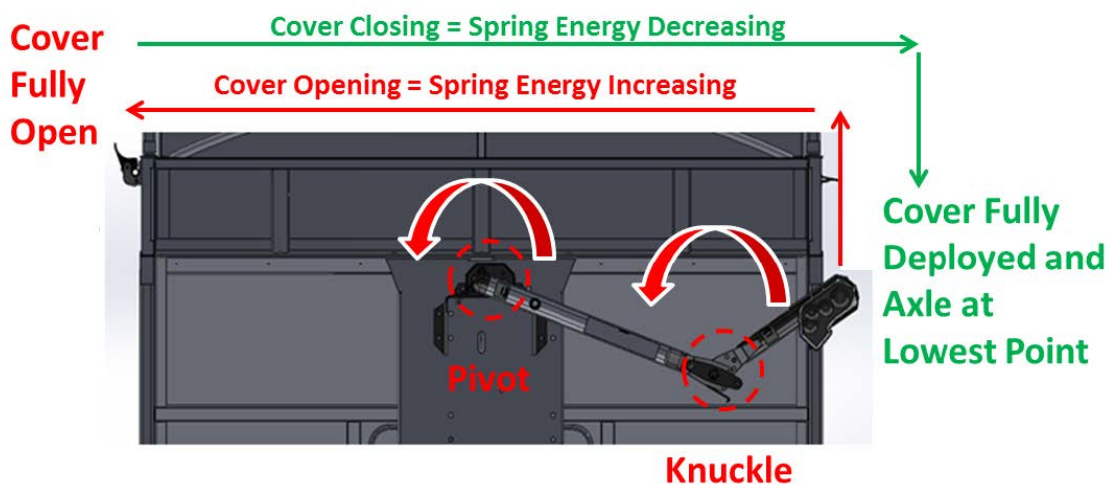


Figure 8: Arm orientation of rear of body.



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## ISOLATION AND REMOVAL OF STORED ENERGY

# WARNING

*Failure to complete all actions stated in this section may generate hazardous conditions resulting in bodily injury and/or property damage*

### ENERGY DISSIPATION

**NOTE:** Some roll over systems will operate in the opposite direction to the standard setup shown (driver to passenger side). The tension relief procedure remains the same in the opposite orientation. Please confirm the running direction of the tarp setup before proceeding.

1. Test that the system is operating normally by opening and closing it using the accompanying switch and/or wireless remote.
2. If system is operable, roll the tarp towards the **closed position** and stop it at its lowest point on the driver's side (this occurs when the tarp is fully unspooled, and is hanging at the lowest point in its travel).
3. If the arm is unresponsive to controls due to physical damage or other issues. The system will need to be physically moved as close as possible to the **closed position**, in order to relieve as much preload as possible on the arm(s). The utmost safety should be taken when attempting this.
4. If the arm cannot be moved to the lowest point in its travel. A 50 mm (2") Ratchet strap should be used to pull the upper section of the arm downwards towards the ground as shown in **Figure 3**. This should then be anchored to the chassis or rigid hard point. **NOTE: The ratchet mechanism MUST be accessible from ground level while standing on the open position side of the body/vehicle.**
5. Now that the arm is secured with a strap. The gearmotor to roll tube adaptor should be located and separated (*Standard roll over kits supplied by Retractable Tarps will be secured with a two-piece flange adaptor*). Taking care to stand clear of the top arm and gearmotor. The system is now ready for tension dissipation.
6. Return to ground level on the **open position** side of the body and slowly release/feed out the ratchet strap. The act of releasing the strap will allow the arm to rotate in a controlled fashion, releasing the spring tension from the lower pivot point. Keep feeding the strap until the arm finishes its arc and comes to a rest.
7. The energy has now been dissipated from the arm system and is safe to work on/disassemble.

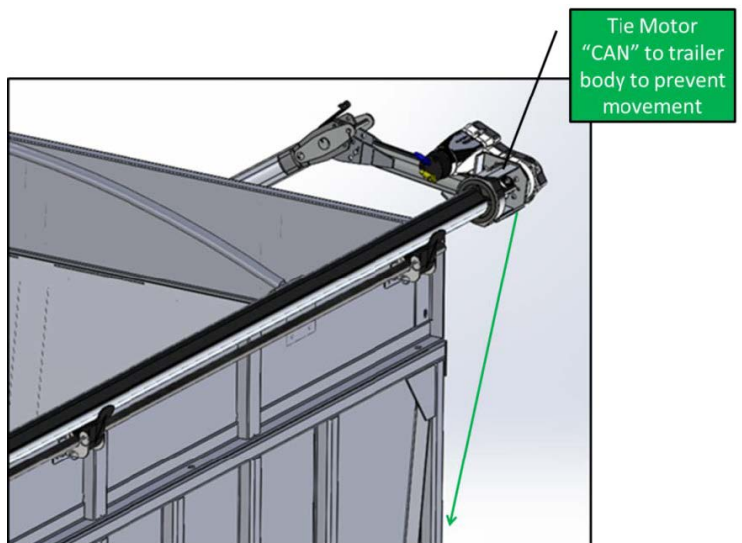


Figure 9: Securing the upper arm to prevent movement when disconnecting the roll tube



# ROLL OVER REPLACEMENT TARP ORDER FORM

Customer:

Date:

Address:

Phone:

Contact:

Fax:

Email:

## REQUIRED DIMENSIONS

A. Total Body Length

B. Inside Gusset Width

C. Total Body Width

D. Side Height

E. Pelmet (Arch) Height

## MATERIAL SELECTION

Mesh ☐

PVC ☐

Colour

## BASIC HARDWARE REQUIREMENTS

### Roll Tube Style

Retractable Extrusion ☐

50NB Med Wall Steel Pipe ☐ (Recommended for Side Tippers)

40NB XLGT Wall Steel Pipe ☐ (Recommended for End Tippers)

### Tarp Anchor Style

Sail Track ☐

Flat Bar ☐

Anchor Tube (1" OD) ☐

### Tarp Stops

Aluminium ☐

Steel ☐

Quick Release Stops ☐ (Requires Anchor Tube)

### Tarp Supports

Flex Bows ☐ (Provide Bow Spacing)

Ridgepole (1" OD) ☐

## ARM KITS (If no arm option is selected, a basic roll over kit will be supplied)

| Options   | Single Arm               | Dual Arm                 | Hardwired                | Remote                   | Standalone               |
|-----------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Manual    | <input type="checkbox"/> | <input type="checkbox"/> | N/A                      | N/A                      | N/A                      |
| Electric  | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| Hydraulic | <input type="checkbox"/> | <input type="checkbox"/> | N/A                      | N/A                      | N/A                      |

\*Note all tarps are custom made to fit the provided measurements, therefore their accuracy is your responsibility. If you have any questions regarding this form, please contact our head office.

