C&C Hydraulics Ltd

INSTALLATION INSTRUCTIONS

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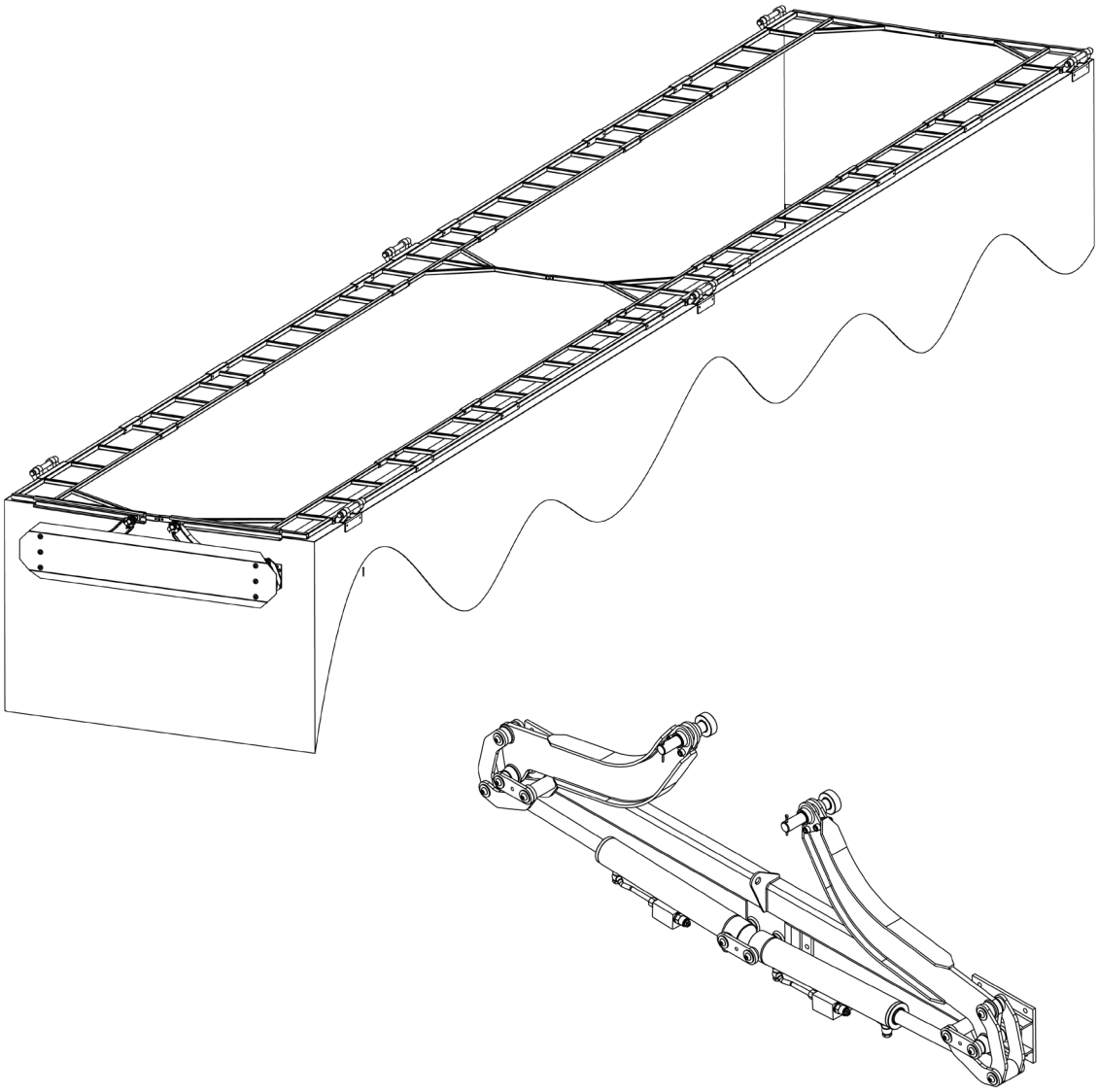
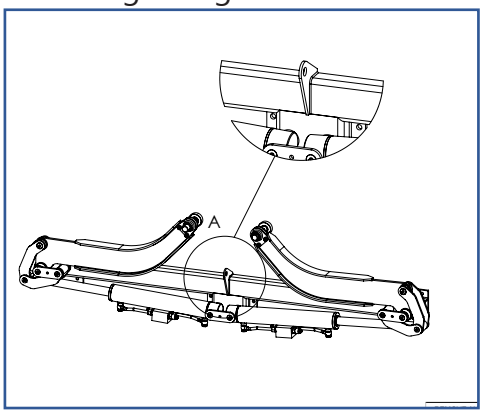
INDRODUCTION

The Hydra Wing sheeting system has been designed to hydraulically open and close the roofs of both walking floor and tipping trailers from ground level so keeping the operator safe. The system comprises of two main assemblies the first is the front mounted fabricated assembly which incorporates the 2 hydraulic arms, the second is the modular roof and hinge system. We can offer 5 different control systems giving the operator the flexibility to select which option is most suitable for their application.
The Hydra Wing has been designed to be as modular as possible so that it can be mounted to many different trailer designs, it also incorporates lubrication free bearings for easy maintenance. The system has also been designed to be a bolt together structure so removing the need for welding and making replacing damaged parts both quick and simple.
Before beginning to mount this product to a trailer please ensure that a risk assessment is done and that the appropriate equipment for working at heights is available and that the appropriate lifting equipment is available.



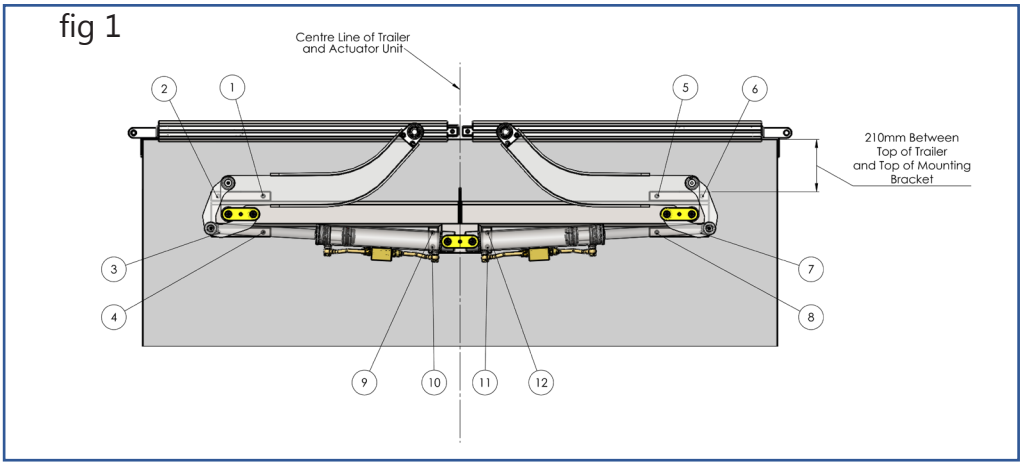
ASSEMBLY INSTRUCTIONS

The front mounted fabricated assembly weights 100kg and has been designed with a central lifting eye see drawing, this is to be used in combination with a D shackle see photo. The lifting point balances the centre of gravity in both plains so allowing the assembly to be lifted into position both safely and accurately. Please note D shackle needs to have a 450kg rating



1- Lift the front actuator into position on the front of the trailer as shown in the drawing fig 1. using the mounting holes as a template mark the hole locations onto the front of the trailer.

fig 1



2- There are 12x mounting holes to be drilled 13.5mm to take an M12 high tensile bolt (not supplied)

3- Depending on the design of the trailer body please ensure that support plates are used to prevent the bolts from pulling into the body, on radius body designs a packer plate maybe required to support the front actuator. Please note any misalignment may cause the fabrication to deform and create friction in the pivot points.

4- Depending on which hydraulic system has been selected please follow the appropriate instructions

a) System 1 2 lever control block with adjustable pressure compensated flow control valve

SEE PAGE 9

b) System 2 Single lever control with sequence valves & pressure compensated flow control.

SEE PAGE 10

ASSEMBLY INSTRUCTIONS

c) System 3 Single lever control with electric solenoids, sequence valves & pressure compensated flow control (for use with remote control system)

SEE PAGE 11

d) System 4 electric manifold with auto flow adjust so walking floor always runs at the optimum level (for use with remote control)

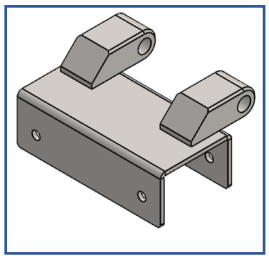
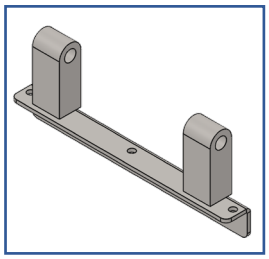
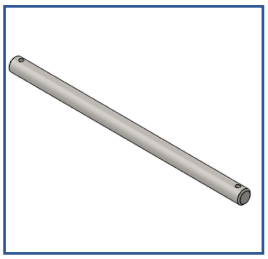
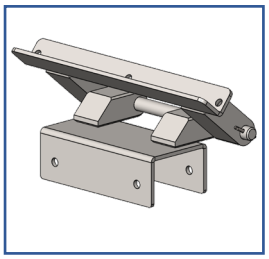
SEE PAGE 12

e) System 5 electric manifold with auto flow adjust & hydraulic bulkhead control for walking floor optimisation (for use with remote control)

SEE PAGE 14

5- Once the hydraulics have been connected to the trailer the front actuator needs to be powered up and operated until the air has been bled from the system and both arms operate smoothly. Please note it is important that this step is completed prior to connecting to the top frame or damage may occur.

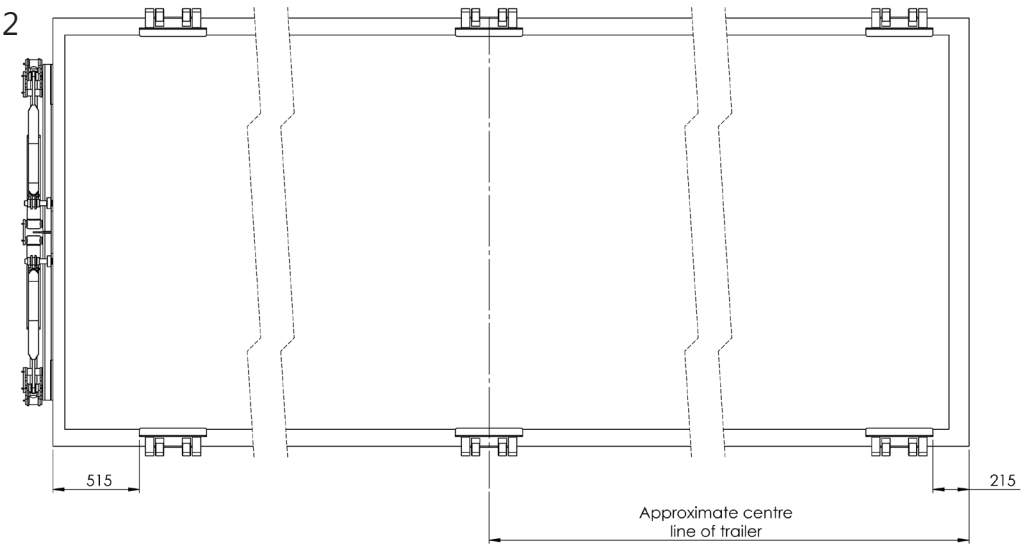
6- The top frame kit consists of 6 hinge assemblies (3 per side) 2 front arms (RH & LH) 2 rear arms (RH & LH) 2 centre frames, 4 long ladder frames, 4 short ladder frames, 12 H frame connectors, 3 arm extensions.

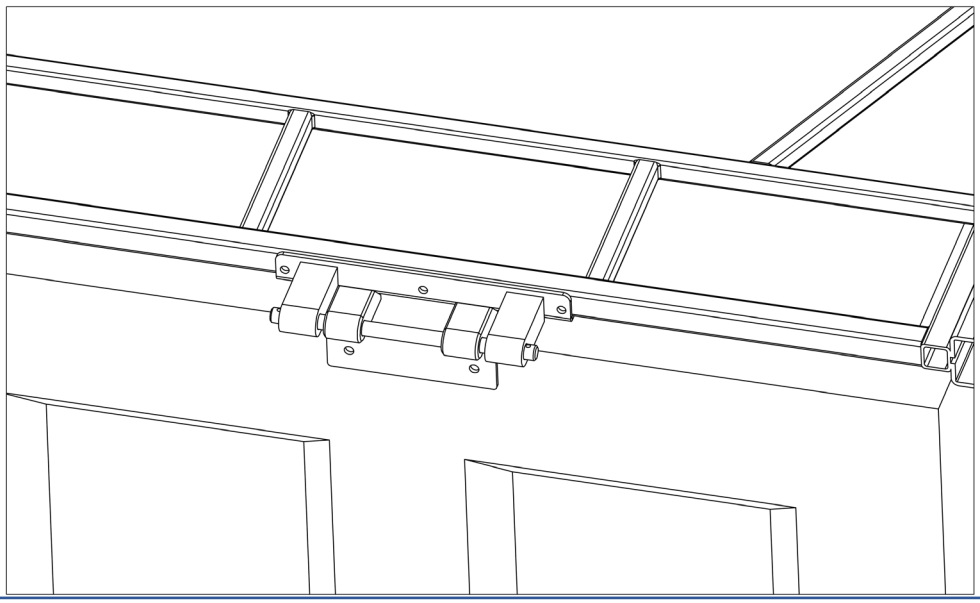
ASSEMBLY INSTRUCTIONS

7- The body hinges need to be mounted in the positions shown see fig 2. Using the holes in the hinges as a template mark thru onto the body then remove the hinge and drill thru 12mm to suit an M10 bolt (not supplied) once completed the tarp frame hinges can be assembled.

fig 2



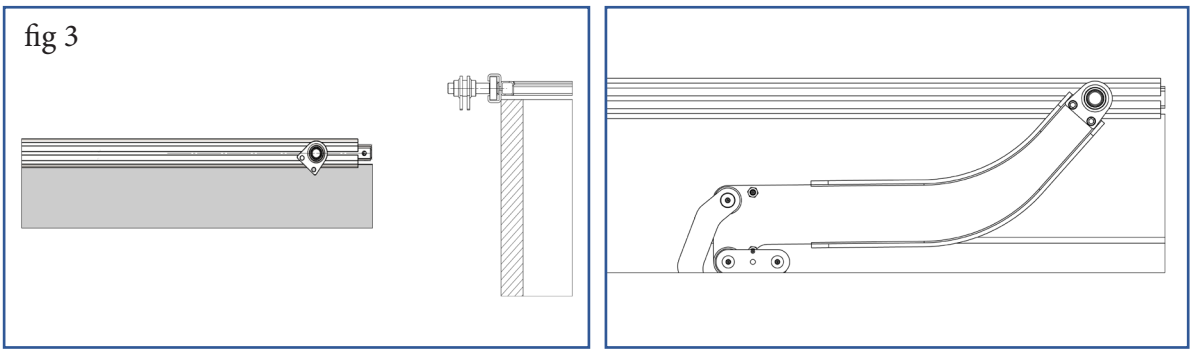
8- Clamp the front arm onto the front hinge and using the holes in the tarp frame hinge drill thru the arm 12mm to allow for an M10 bolt (not supplied) carry out this operation on both sides RH & LH. Once assembled manually move the arms to ensure that they move freely.



ASSEMBLY INSTRUCTIONS

9- Connect the front arms to the front actuator, first remove the roller assembly from the actuator assembly and slide the roller into the track see fig 3 then fasten the roller assembly back onto the actuator assembly. Once this has been completed we recommend operating the system to ensure that both arms move thru the cycle freely and that they fully open and close and that they are square and level with the top of the trailer.

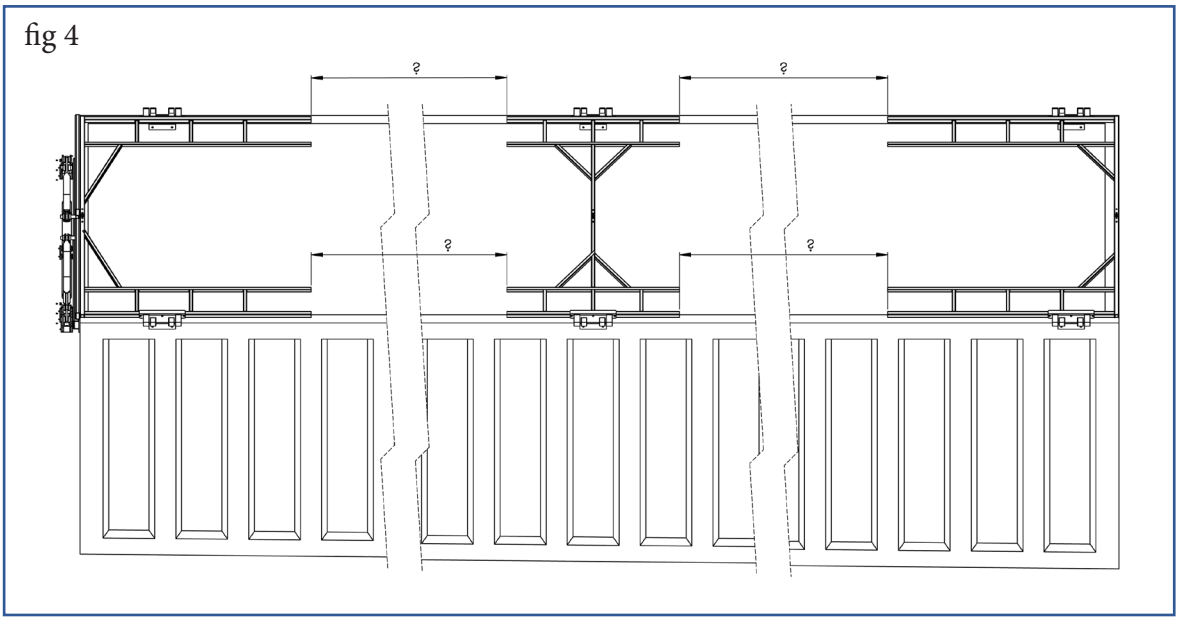
fig 3



10- The centre arms and rear arms can now be mounted to the hinge assemblies repeating instruction 9

11- Then measure the distance between the arm assemblies as shown in fig 4 then working at ground level connect the ladder sections together using the H section to create the desired length this may involve cutting some of the ladder sections to suit, please note you will need to allow and extra 200 mm per length to enable the H sections to connect inside the arm assemblies.

fig 4



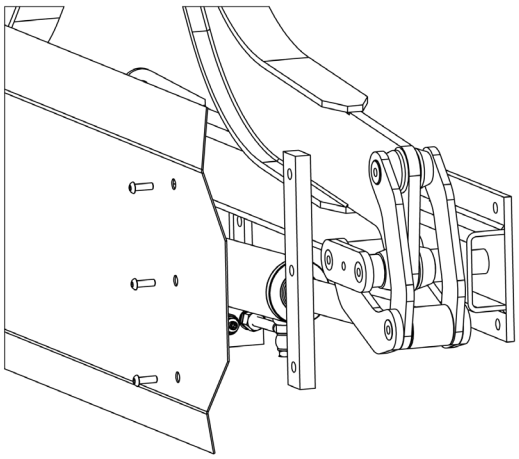
ASSEMBLY INSTRUCTIONS

12- NOTE! Once the ladder assemblies are complete they will weigh more than 25kg so you will need the appropriate lifting equipment with the correct slings, before lifting ensure that the slings have been located to give and even lift.

13- There are 3 arm extensions provided as part of the kit to allow the arms to over-lap, these can be installed on either the nearside or offside depending on the operators requirements.

14- The wind deflector can now be mounted onto the front actuator as shown in fig 5

fig 5



15- Now the system can be operated fully ensuring that the sides are clear and that that there is enough space around the trailer open and close each side to make sure the system is operating correctly.

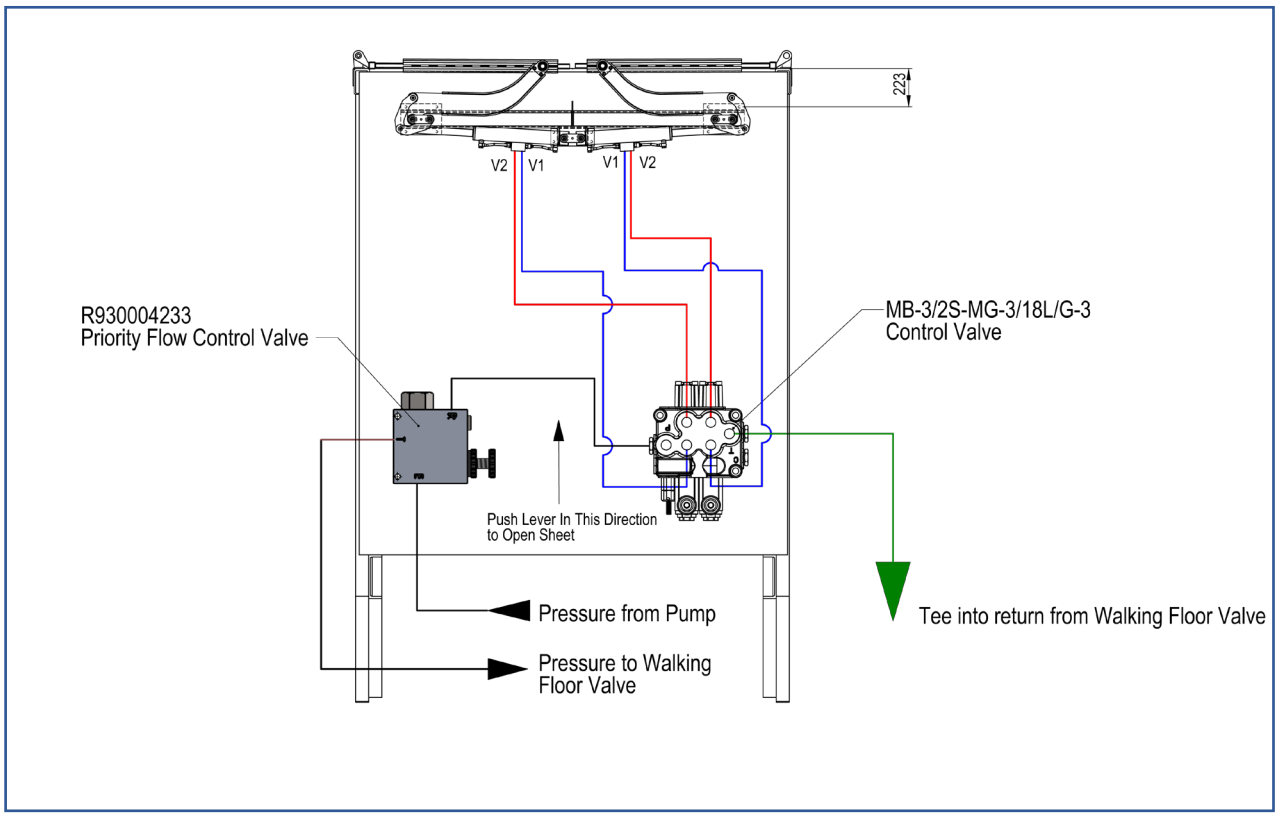
16- The customer can now mount the net or tarpaulin material to the top frames (material not supplied)

HYDRAULIC SYSTEMS

HYDRAWING SYSTEM 1

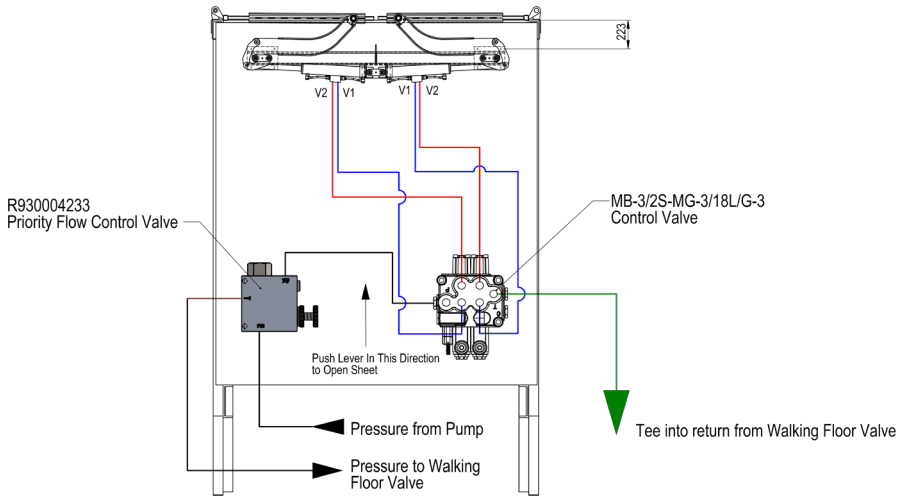
Hydraulic Set Up Hydra Wing 1

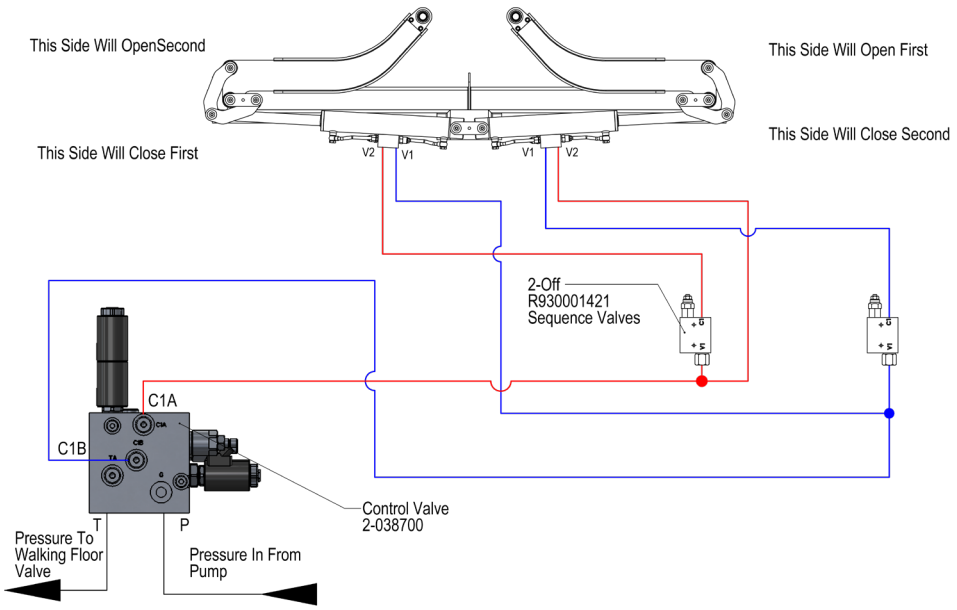
The Hydra Wing 1 is the most simple of the systems offered, it comprises an inline pressure compensated flow control valve and a lever operated two spool monoblock valve, see below the drawings showing how the components are connected.
The mounting position of the valves is at the installers discretion but we would recommend that the lever control is positioned to give the operator the safest location at ground level to enable them to operate the system.
The lever control valve is shown piped so that the LH lever operates the LH side and RH lever the RH side, the actuators are fitted with dual overcentre valves to give the operator more control over the rotational movement and lock down in the closed position.
We recommend that ¼ BSP hose and fittings be used to connect the lever control valve to the actuators (not supplied) and that connections into the flow control valve be made in the same size fittings as being used on the trailer, the pipe from the flow control to the lever control should be made it ¼ BSP.
Please NOTE! before starting up the system please ensure that the adjustable flow control is turned down to allow only a minimal flow thru to the actuators, failure to do this may damage the actuators and top frames.



HYDRAULIC SYSTEMS

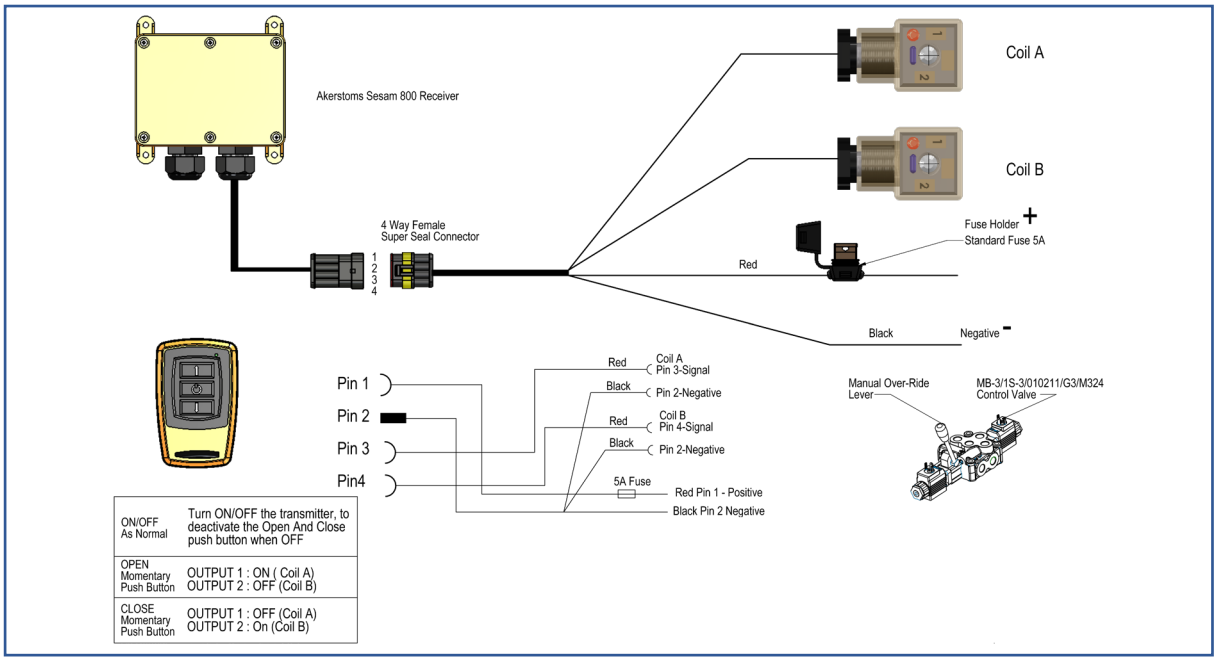
HYDRAWING SYSTEM 2

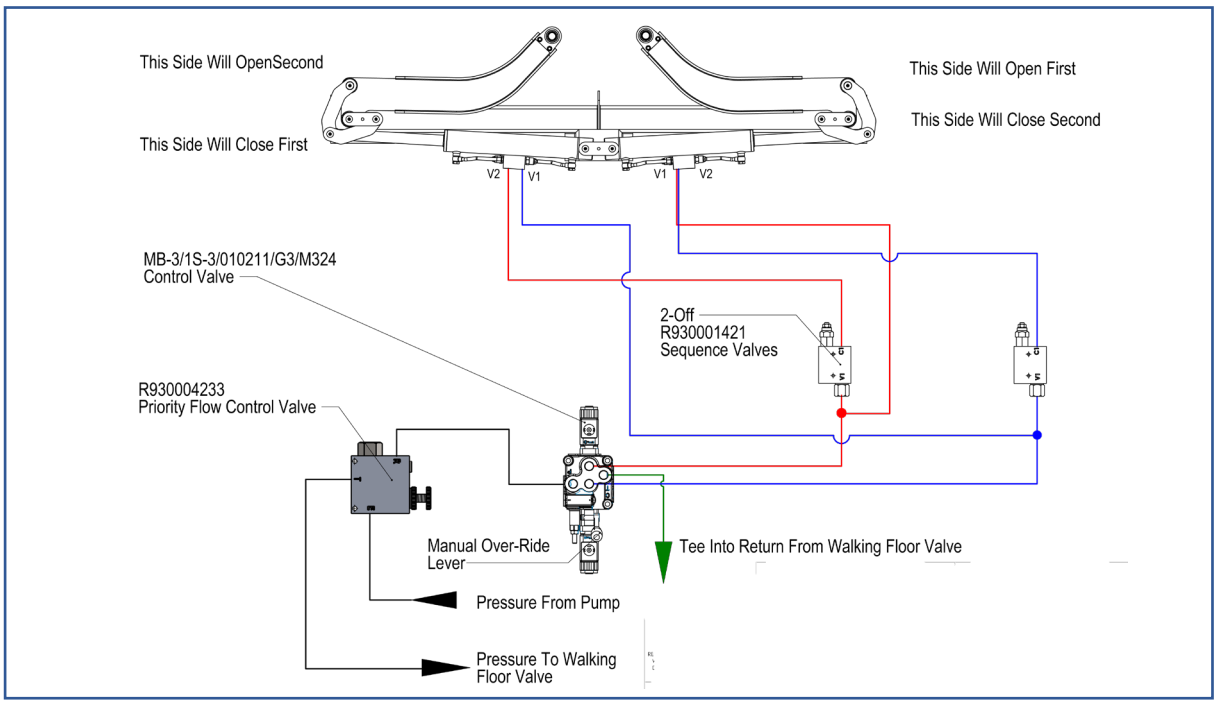




HYDRAULIC SYSTEMS

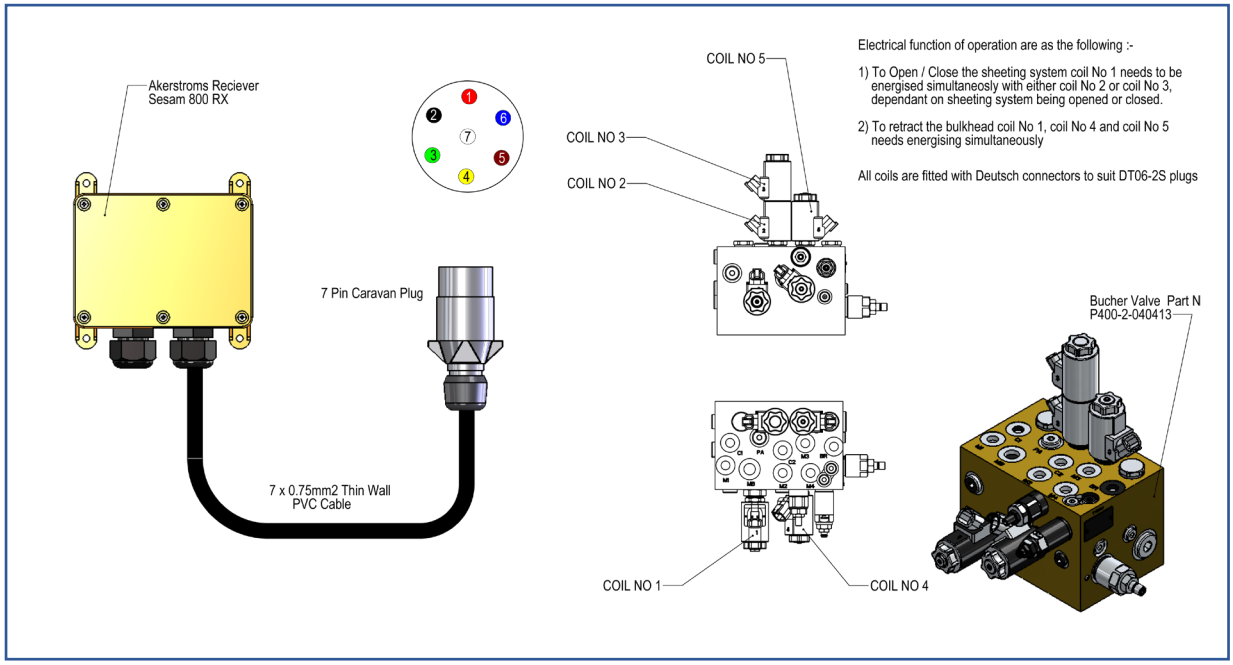
HYDRAWING SYSTEM 3

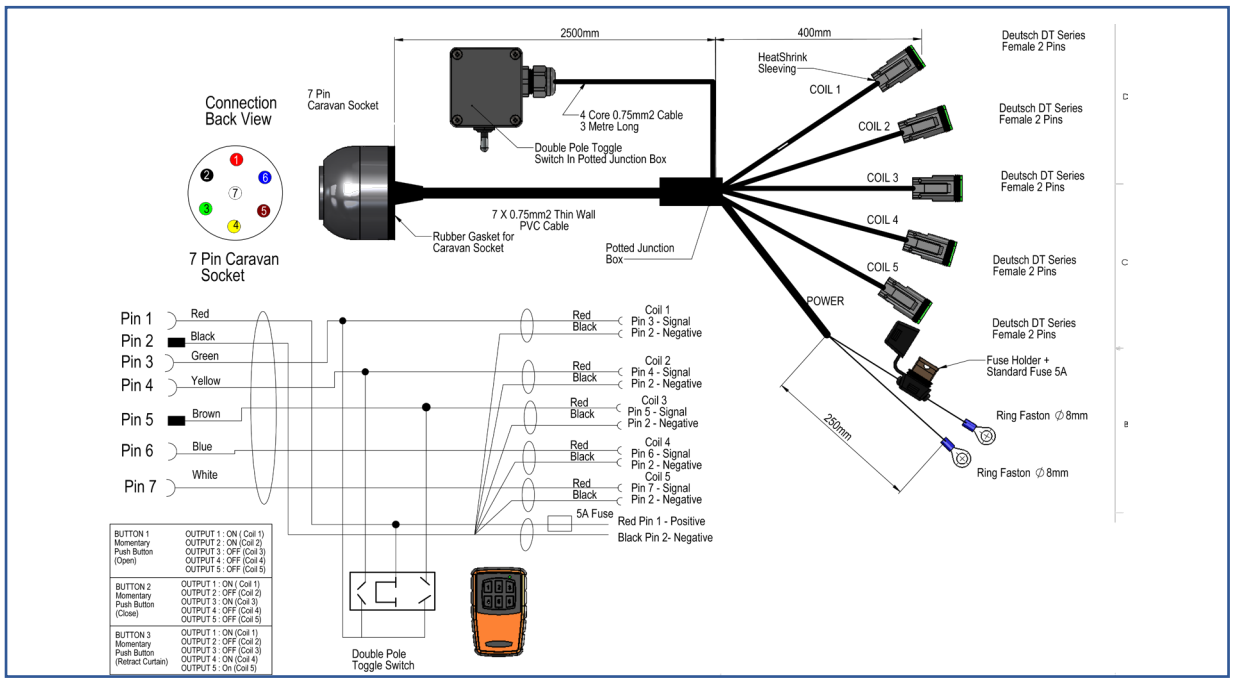




HYDRAULIC SYSTEMS

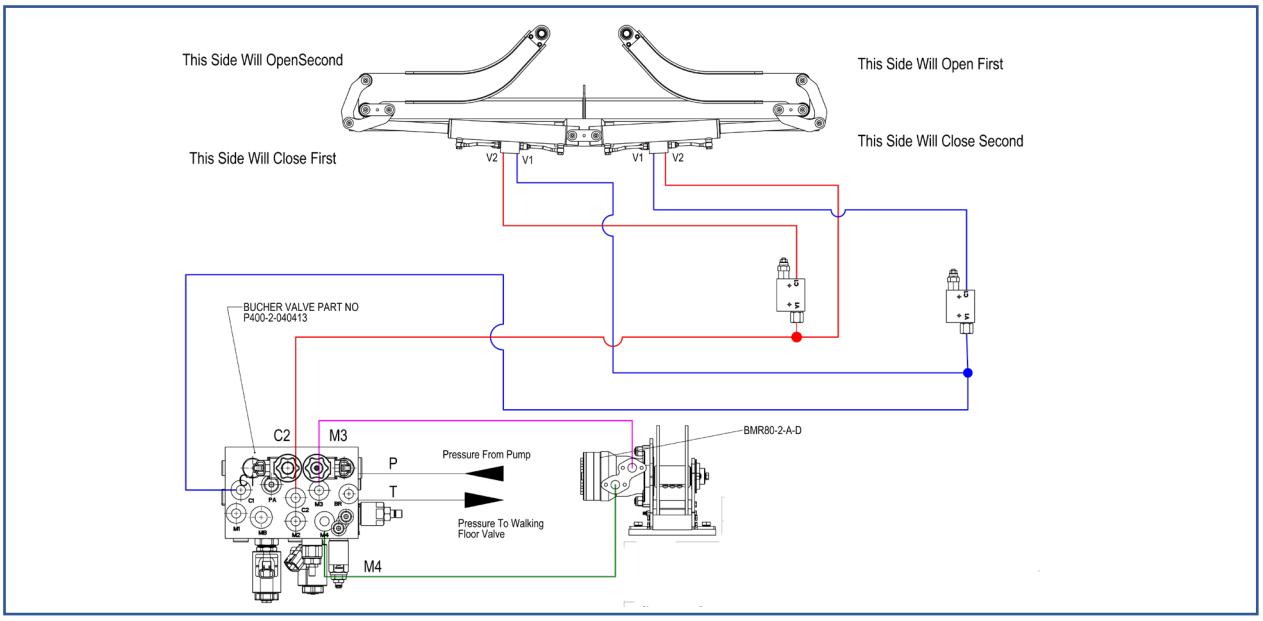
HYDRAWING SYSTEM 4





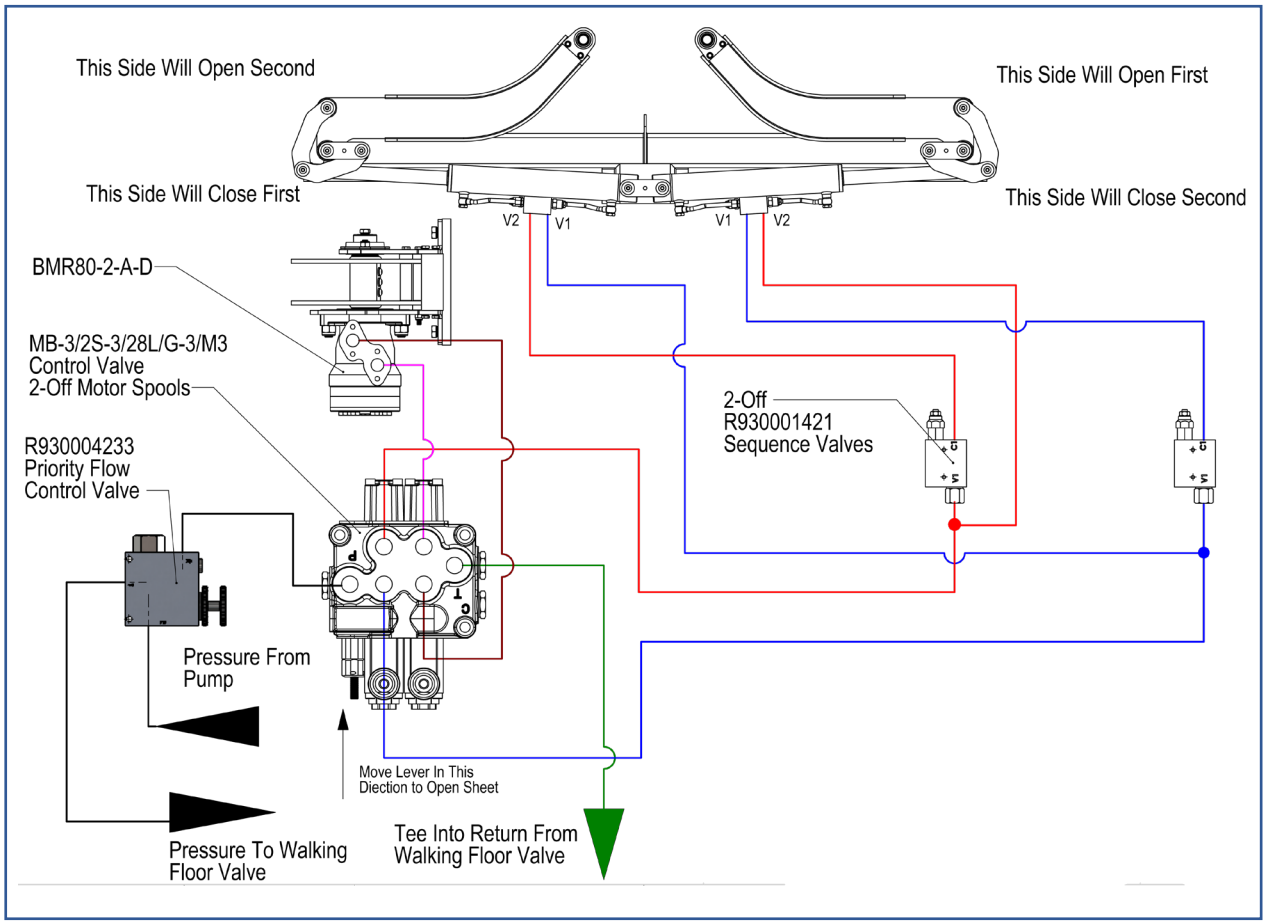
HYDRAULICS SYSTEMS

HYDRAWING SYSTEM 4



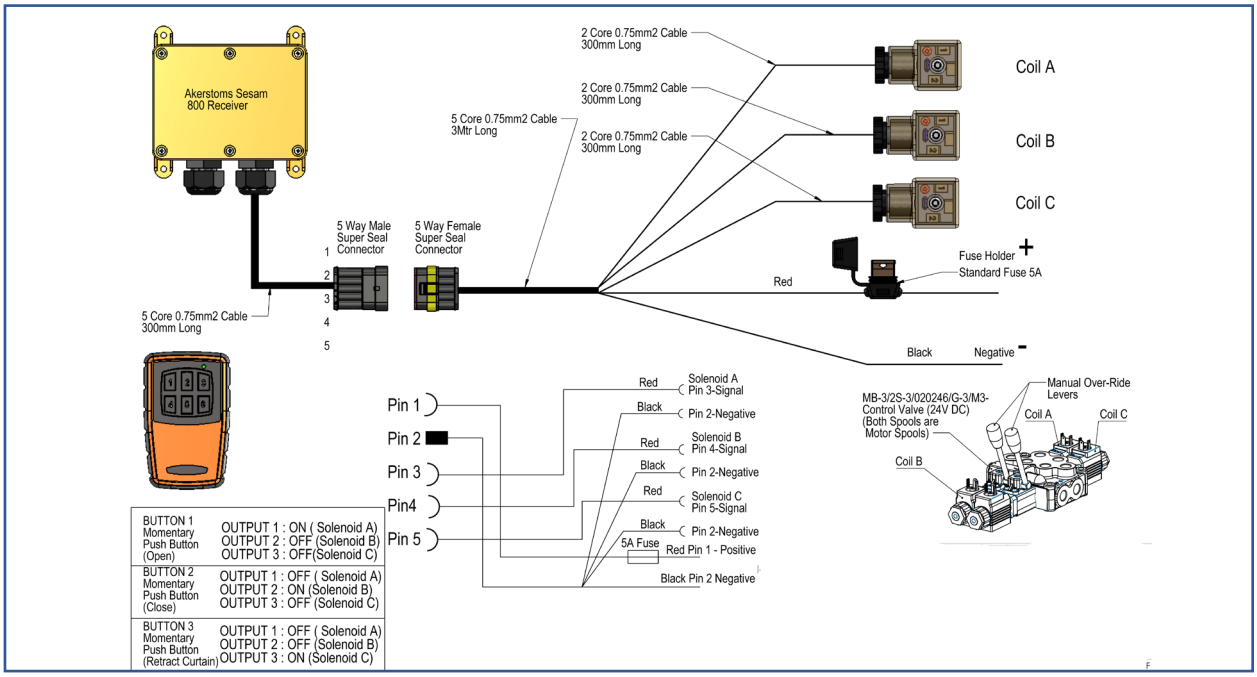
HYDRAULIC SYSTEMS

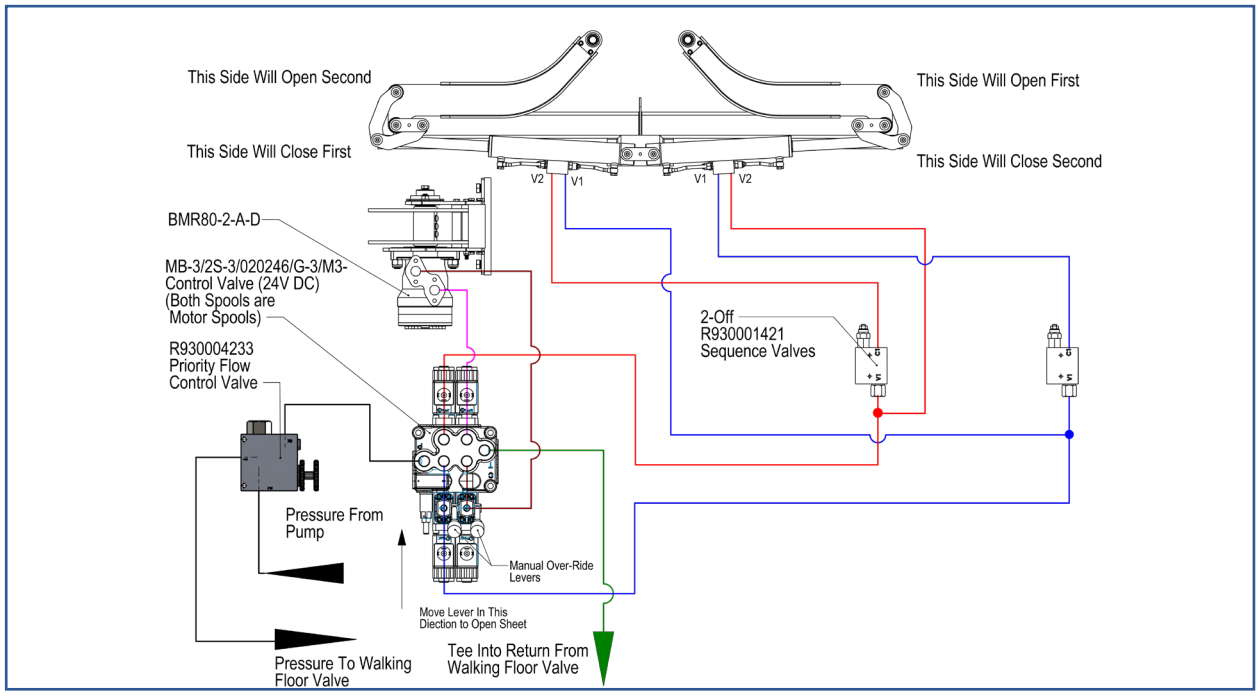
HYDRAWING SYSTEM 5



HYDRAULIC SYSTEMS

HYDRAWING SYSTEM 6





SAFTEY INSTRUCTIONS

!CAUTION!

-BEFORE OPERATING THE HYDRAWING
SYSTEM ENSURE THE AREA ABOVE AND BESIDE THE VEHICLE IS CLEAR OF ELECTRICAL LINES OR ANY OTHER OBSTRUCTIONS

-ENSURE ADEQUATE LIGHTING
WHENEVER OPERITING YOUR SYSTEM

-DO DONT OPERATE SYSTEM WHEN DANGER OF LIGHTNING STRIKE IS PRESENT

-TO PREVENT RISK OF INJURY, KEEP HANDS AWAY FROM MOVING PARTS WHILE SYSTEM IS IN OPERATION

-DO NOT MOVE VEHICLE WITH HYDROWING SYSTEM IN RAISED POSITION

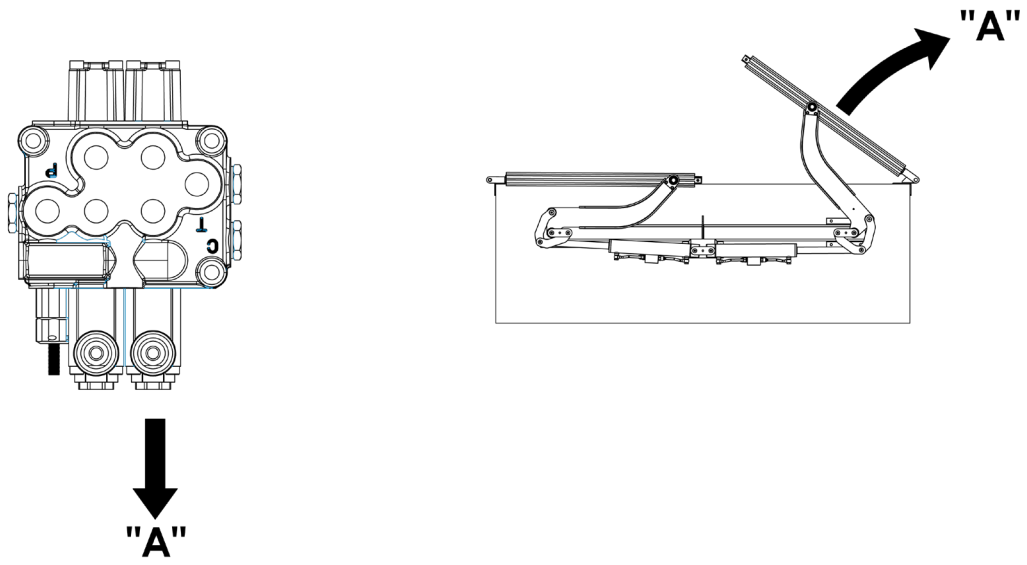
-WHEN SERVICING OR REPAIRING THE HYDRAWING , TURN OFF THE VEHICLES ENGINE, AND DISCONNECT
POWER TO COMPONENTS FROM THE VEHICLES BATTERY

-

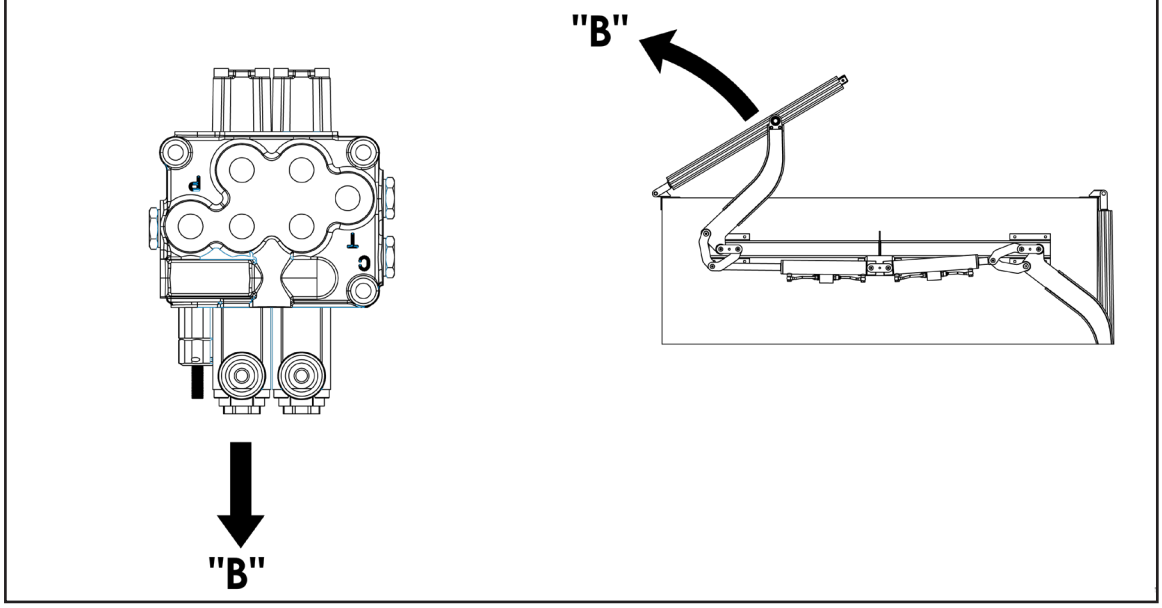
OPERATING INSTRUCTIONS

TO OPEN HYDRAWING SYSTEM

1- PRESS DOWN ON LEVER MARKED 'A' BELOW TO OPEN LID 'A'



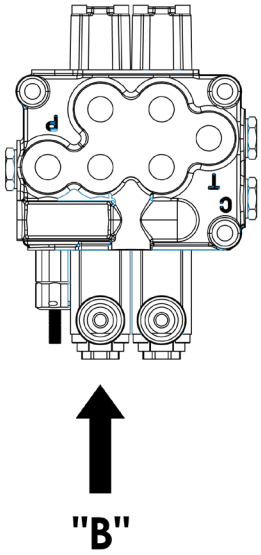
2- PRESS DOWN ON LEVER MARKED 'B' BELOW TO OPEN LID 'B'

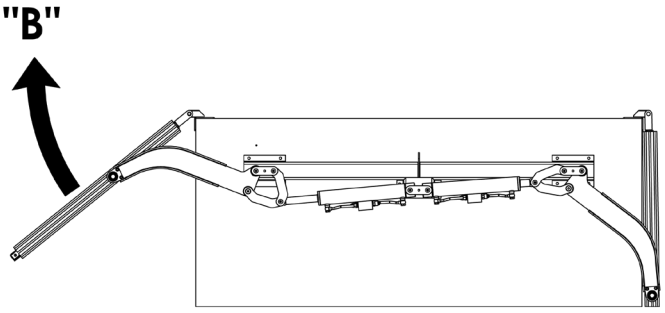


OPERATING INSTRUCTIONS

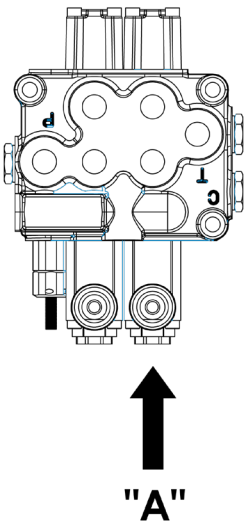
TO CLOSE HYDRAWING SYSTEM

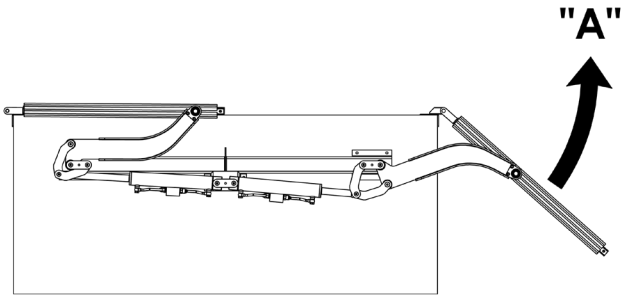
1- LIFT UP LEVER MARKED 'B' BELOW TO CLOSE LID 'B'





2- LIFT UP LEVER MARKED 'A' BELOW TO CLOSE LID 'A'





MAINTENANCE PROCEDURES

PERIODIC MAINTENANCE AND INSPECTION

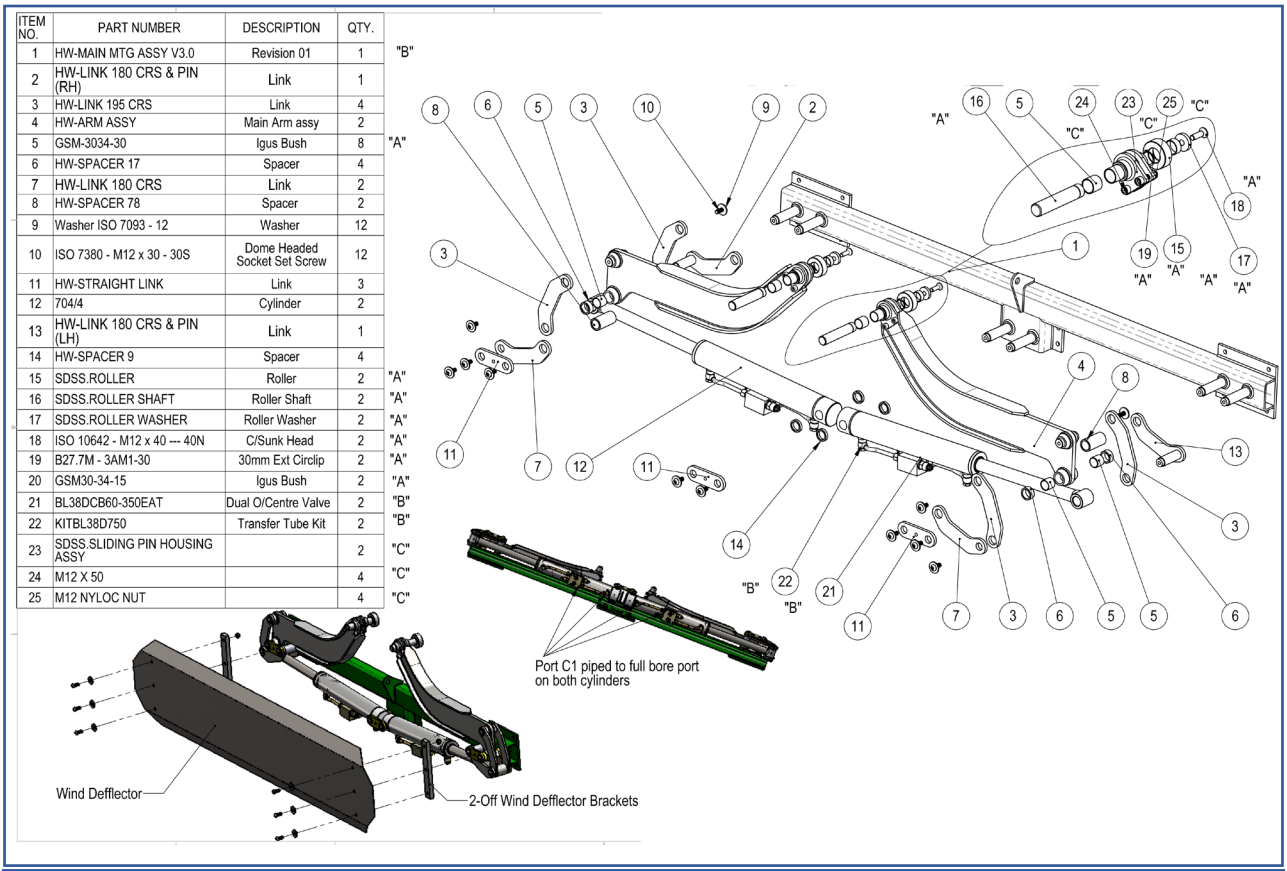
DAILY
-CHECK MECHANISM FOR ANY DAMAGE OR CRACKS
-CHECK TARPAULIN FOR EXCESSIVE WEAR AND TEAR
-IF EQUIPPED CHECK ELECTRICAL CABLES FOR INSULATION DAMAGE
-CHECK HOSES AND FITTINGS FOR CRACKS OR LEAKS
-CHECK TARPAULIN CABLE AND ADJUST IF LOOSE

WEEKLY
- CHECK CYLINDERS FOR LEAKS OR EXCESSIVE WARE
-CHECK TIGHTNESS OF THE FASTENERS
-CHECK HINGES OF EXCESSIVE WARE
-CHECK HYDRAULIC ACTUATOR FOR ANY CRACKS, DAMAGE OR EXCESSIVE WARE

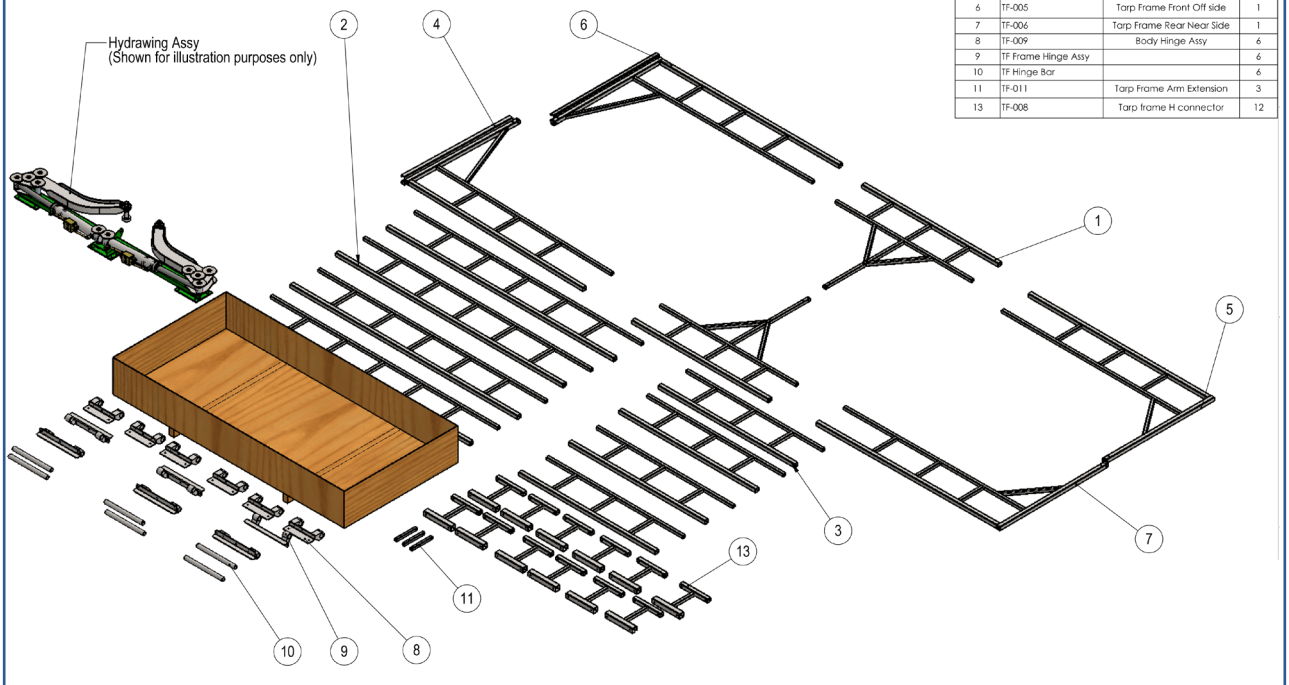
MONTHLY
-OPERATE SYSTEM TO VERIFY PROPER SAFE OPERATION
-CHECK ROLLER TROLLEY AND BEARING FOR DAMAGE IN FRONT LID

SPARE PARTS

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	
1	HW-MAIN MTG ASSY V3.0	Revision 01	1	"B"
2	HW-LINK 180 CRS & PIN (RH)	Link	1	
3	HW-LINK 195 CRS	Link	4	
4	HW-ARM ASSY	Main Arm assy	2	
5	GSM-3034-30	Igus Bush	8	"A"
6	HW-SPACER 17	Spacer	4	
7	HW-LINK 180 CRS	Link	2	
8	HW-SPACER 78	Spacer	2	
9	Washer ISO 7093 - 12	Washer	12	
10	ISO 7380 - M12 x 30 - 30S	Dome Headed Socket Set Screw	12	
11	HW-STRAIGHT LINK	Link	3	
12	704/4	Cylinder	2	
13	HW-LINK 180 CRS & PIN (LH)	Link	1	
14	HW-SPACER 9	Spacer	4	
15	SDSS.ROLLER	Roller	2	"A"
16	SDSS.ROLLER SHAFT	Roller Shaft	2	"A"
17	SDSS.ROLLER WASHER	Roller Washer	2	"A"
18	ISO 10642 - M12 x 40 --- 40N	C/Sunk Head	2	"A"
19	B27.7M - 3AM1-30	30mm Ext Circlip	2	"A"
20	GSM30-34-15	Igus Bush	2	"A"
21	BL38DCB60-350EAT	Dual O/Centre Valve	2	"B"
22	KITBL38D750	Transfer Tube Kit	2	"B"
23	SDSS.SLIDING PIN HOUSING ASSY		2	"C"
24	M12 X 50		4	"C"
25	M12 NYLOC NUT		4	"C"



ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	TF-001	Centre Frame Tarp Support	2
2	TF-003	Long mid frame 2500mm	4
3	TF-002	Short mid frame 1500mm	4
4	TF-004	Tarp Frame Front Near Side	1
5	TF-007	Tarp Frame Rear Off side	1
6	TF-005	Tarp Frame Front Off side	1
7	TF-006	Tarp Frame Rear Near Side	1
8	TF-009	Body Hinge Assy	6
9	TF Frame Hinge Assy		6
10	TF Hinge Bar		6
11	TF-011	Tarp Frame Arm Extension	3
13	TF-008	Tarp frame H connector	12



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