9000
OWNER`S MANUAL

Shur-Co®, LLC DONOVAN of the UK

"One Company, Two Brands, Infinite Possibilities"

Instruction version:

2024-09

Shur-Co® UK Limited

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WARRANTY. We warrant all new products are free of defects in materials and workmanship. *This warranty is effective if products are properly installed and used for the purpose for which they were intended and applies to the original buyer only. Except as set forth above or in any product specific warranty documentation, we make no other warranties, express or implied, including but not limited to warranties of merchantability of fitness for a particular use. Standard warranty is limited to 12 months from point of purchase, parts only.

Returns of a product for warranty must be accompanied by a Return Merchandise Authorization number (RMA#), obtained by calling Customer Service at +44 (0)1634 862363, and sent to Shur-Co® UK, Unit 41, Donovan House, Rochester Airport Industrial Estate, Laker Rd, Chatham, Rochester ME1 3QX. All products returned without an RMA# will be refused. When we issue the RMA#, we will also issue a call tag to have U.P.S. (or other freight company) pick up the product. C.O.D. returns not accepted.

CAUTION

Reading this instruction, you agree that it is only used as a guideline for installation of the system. Shur-Co® is not responsible for the final assembly of the system, damages, and injuries that may occur during the installation.
Installation is undertaken at your own risk, and subject to your own risk assessment. If you have trouble understanding the installation manual or assembling the system, you should contact us or one of our authorised agents.

CAUTION

It is the installers duty to check local regulations for fitting the sheeting system, such as width restrictions and ensure the finished installation is compliant with them.
Installation, repair and troubleshooting should only be completed by competent persons.

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For more information, log on to our website: **www.shurco.co.uk**

Failure to READ and FOLLOW instructions could result in failure of your sheeting system and /or 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;
- 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 people are on or around vehicle when system is in operation;
- Do not stop the arms in mid-open position;
- If arms stop moving, they have possibly made contact with an obstruction. Return arms to original position and clear any obstructions before reactivating system;
- Always return the system to closed position prior to moving the vehicle.

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;
- It is recommended that the sheeting system is interlocked with the vehicle parking brake;
- Ensure area around vehicle is clear of personnel and overhead obstructions before operating.

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.

MESSAGE TO OWNERS

Thank you for buying this sheeting system from Shur-Co®. We appreciate your confidence in our products. Please read and thoroughly understand this manual before installing and/or operating this system.

Pay particular attention to important safety and operating instructions, as well as warnings and cautions. The hazard symbol ⚠ is used to alert users to potentially hazardous conditions and is followed by caution, warning or danger messages.

Please inspect your sheeting system periodically. Repair or replace worn or damaged parts to your system with approved SHUR-CO® product only.

⚠ WARNING ⚠

Shur-Co® always put the user's safety first, so all of our tarpaulins are specifically designed and manufactured to withstand the tolerances of our sheeting equipment and are integral part of overall safety of the system. Shur-Co® tarps are subject to stringent safety and reliability testing and therefore only using genuine Shur-Co® replacement tarps will guarantee the safe operation of your equipment.

We at Shur-Co® are concerned with your safety and the safety of all those operating this system. Therefore, we have provided safety decals for display at various locations on your sheeting system. Keep decals as clean as possible at all times. Replace any decal that has become worn, damaged, or otherwise difficult to read.

RUST PREVENTION

To prevent rust, paint all exposed metal, such as weld seams and/or metal exposed by grinding or cutting, with corrosion-resistant paint.

TABLE OF CONTENTS

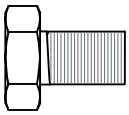
1. Hardware Identification 5
2. Mounting Rollerbar Housing 6
3. Electric Motor Hole Pattern 8
4. Electric Components Layout 9
5. Installing Relay Box 10
6. Wiring External Switch 14
7. Installing Smart 3 - Optional 15
8. Pairing Handheld Remote to Smart 3 17
9. Finding the Pivot Point 18
10. Mounting Underbody Spring Assemblies 19
11. Fix Arm System to Pivot Casts 22
12. Mounting Tarp 24
13. Decals & Serial Numbers 26
14. Testing & Commissioning System 27
15. Operating Instructions 28
16. Maintenance Schedule 29
17. Troubleshooting 30
18. Spare Parts 43

SPECIFICATION TABLE

General	
Motive	Electrically powered sheeting system
Actuators	Single bidirectional electric motor
Technical	
Electrical supply	24VDC
Max Power	900W
Fuses	10A – Control circuit – Relay box
	80A – Main power supply – Relay box
	25A – Thermal circuit breaker – Relay box
Ingress Protection	IP68 – Relay box enclosure
Motor type	24VDC
Noise	72dbA peak @ 1.0 m
Physical	
Approximate Weight	90kg

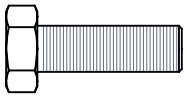
1. HARDWARE IDENTIFICATION

A



VMI SELF-TAPPING 3/8-16

B



M8x25mm HEX BOLT

C

M8 FORM A FLAT WASHER

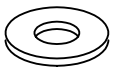
D

M10 NYLON LOCKING NUT

E

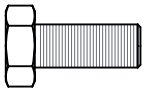
M8 NYLON LOCKING NUT

F



M10 FORM A FLAT WASHER

G



M10x30mm HEX BOLT

H

M8x60 HIGH TENSILE HEX BOLT

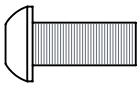
J

M8x65mm HEX BOLT

L

M10x25mm HEX BOLT

M



DOME HEAD 5/16” - 18UNC X 3/4”

N

M10x20mm SET SCREW

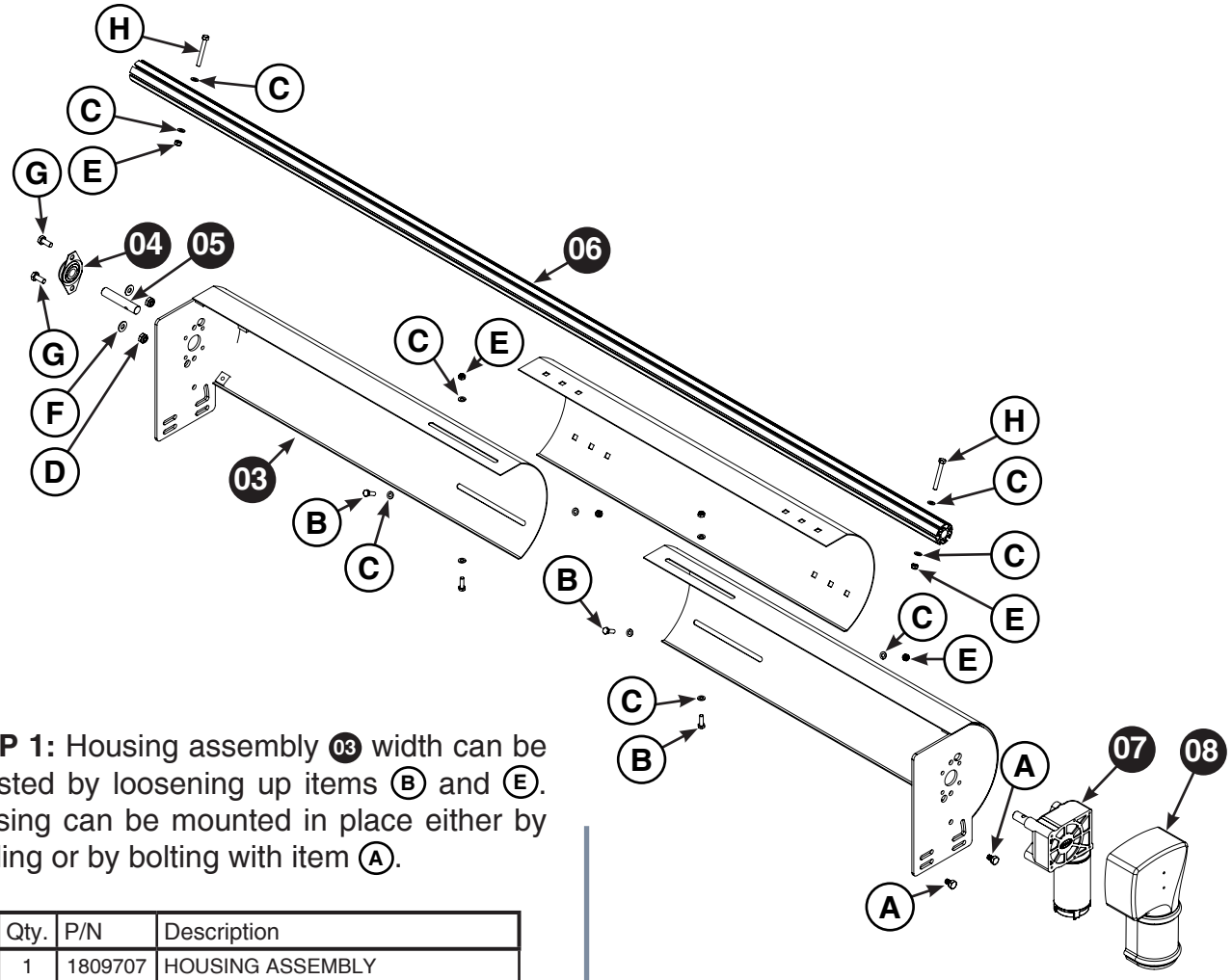
QUESTIONS? CALL OUR HELP LINE:

+44 (0)1634 862 363

MON-FRI 8 AM-5 PM

OR EMAIL US: SALES@SHURCO.CO.UK

2. MOUNTING ROLLERBAR HOUSING



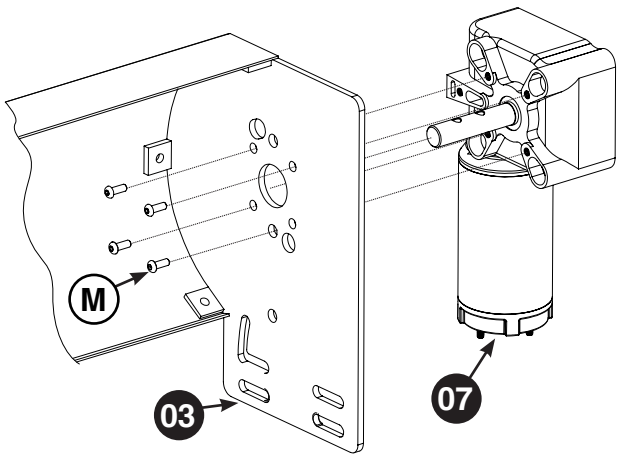
STEP 1: Housing assembly 03 width can be adjusted by loosening up items B and E. Housing can be mounted in place either by welding or by bolting with item A.

Item	Qty.	P/N	Description
03	1	1809707	HOUSING ASSEMBLY
04	1	1800042	3/4" BEARING (145)
05	1	1809639	3/4IN SHAFT 4IN LONG
06	1	1800737	ALUMINIUM ROLLERBAR
07	1	1801965	DURABUILT MOTOR 24V
08	1	1808998	MOTOR COVER BLACK
A	4	-	VMI SELF-TAPP 3/8-16
B	4	-	M8x25mm HEX BOLT
C	12	-	M8 FORM A FLAT WASHER
D	2	1800699	M10 NYLON LOCKING NUT
E	2	1800995	M8 NYLON LOCKING NUT
F	4	1800784	M10 FORM A FLAT WASHER
G	2	-	M10x30mm HEX BOLT
H	2	-	M8x60 HIGH TENSILE HEX BOLT
M	4	-	DOME HEAD 5/16" - 18UNC X 3/4"

NOTE: *Overall width should not be below width of sheet typically 1981mm.*

NOTE: *It is important that housing is level and square, if body is damaged/twisted, this must be accounted for when installing to ensure rollerbar housing is square.*

STEP 2: Once the housing has been sized to suit and installed in place. Mount Durabuilt motor 07 on the same side of vehicle as relay box and electric cable. Motor is bolted to outer housing plate with shaft inserted through centre hole, fixings and cover are supplied with motor.



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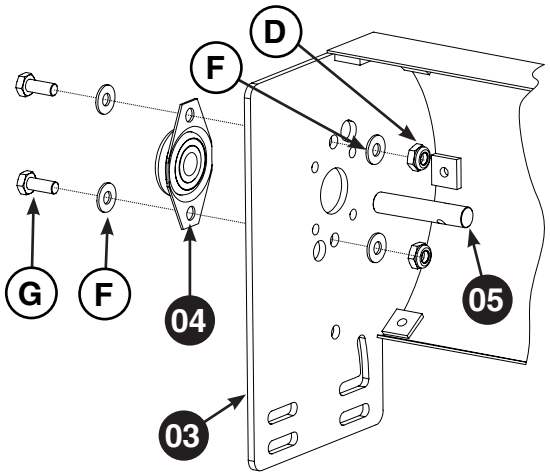
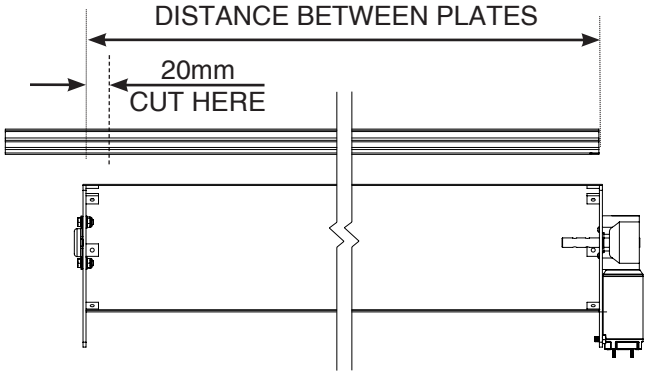
STEP 3: On opposite side of housing, bolt 3/4" bearing 04 using bolt G and nut D.

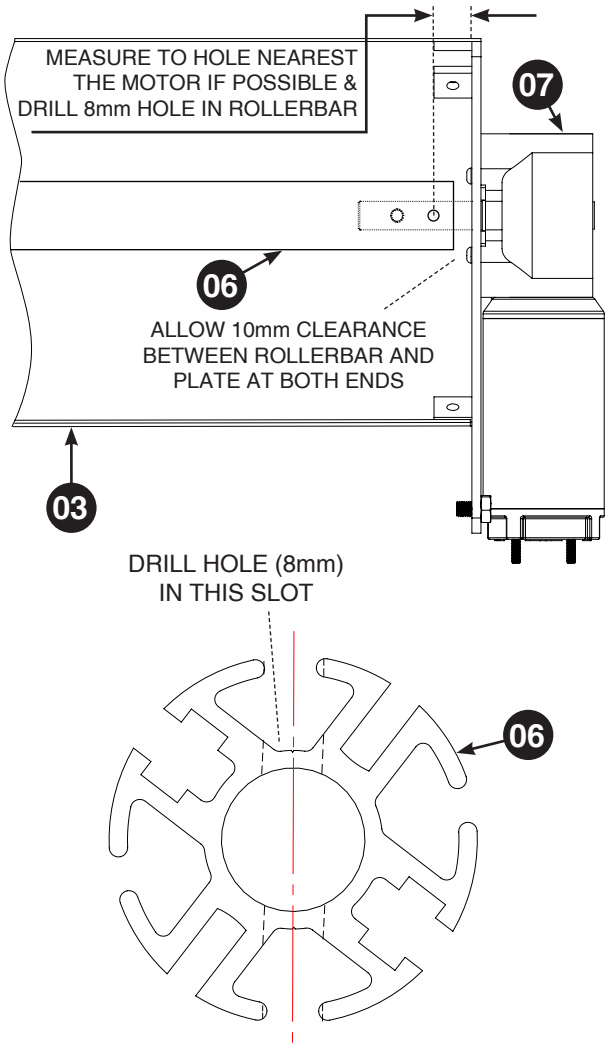


STEP 4: Measure distance between housing plates and cut rollerbar 06 20mm shorter than measured length.

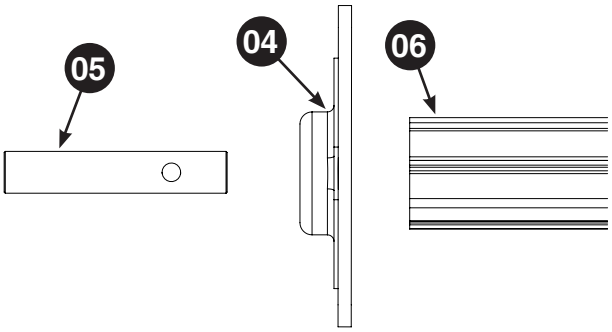


NOTE: *Aluminium rollerbar has a predrilled hole on one end. Always cut on side not predrilled.*

STEP 5: Notice that both motor 07 and 3/4" shaft 05 are predrilled. Measure distance from housing plate to hole on motor shaft and drill 8mm hole in one end of rollerbar to align with pre-drilled hole on motor shaft. Fix motor and rollerbar using C E and H.

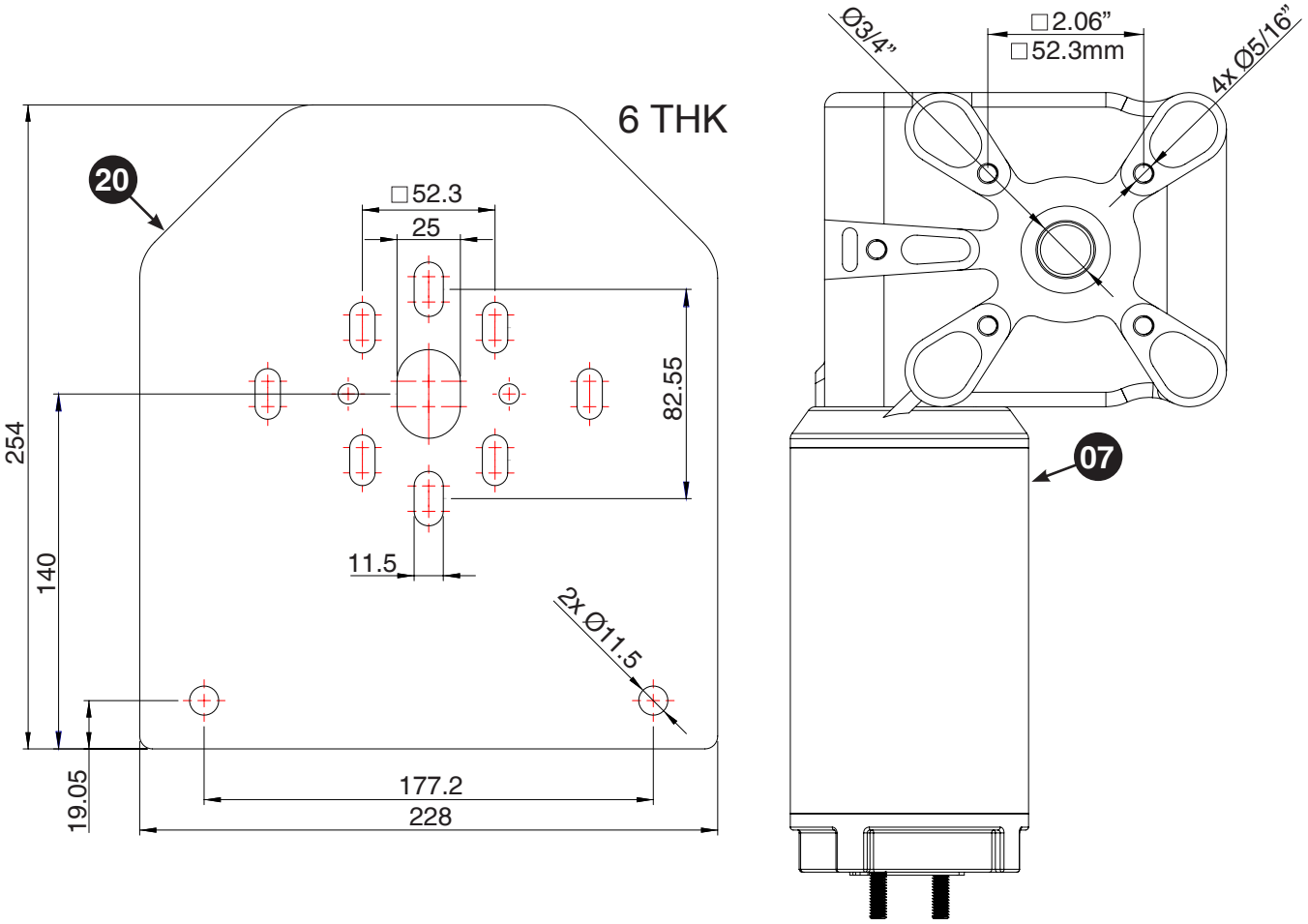


STEP 6: Repeat the process for shaft 05 at the other end of rollerbar 06. Insert the shaft through bearing 04 and into rollerbar. Fix with C, E and H.



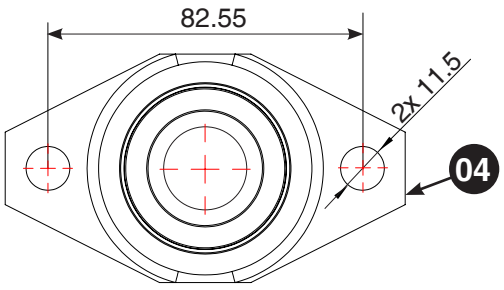
3. ELECTRIC MOTOR HOLE PATTERN

Shown below is the universal motor mounting plate 20 for the Durabuilt motor 24V 07 and rollerbar 3/4" bearing 04. This plate can be supplied with each kit that does not contain the housing assembly. Mounting plates are typically supplied in steel, but can be made from aluminium upon request. These plates can be manufactured by the body builder to allow easy mounting for the electric motor and the rollerbar bearing, as long as the hole pattern is maintained and adequate clearance is ensured.



NOTE: *Ensure minimum clearance Ø25mm for the motor shaft.*

Item	Qty.	P/N	Description
04	1	1800042	3/4" BEARING (145)
07	1	1801965	DURABUILT MOTOR 24V
20	2	1805570	MOTOR MOUNTING PLATE



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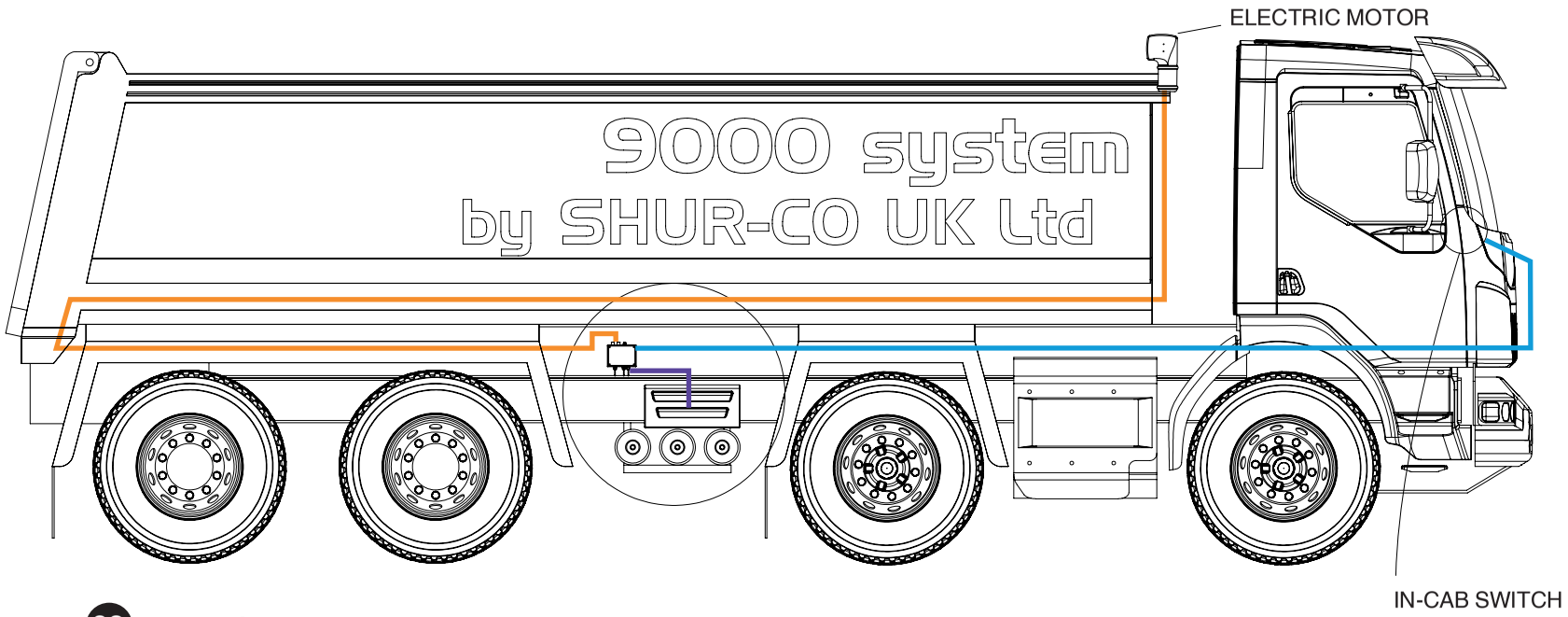

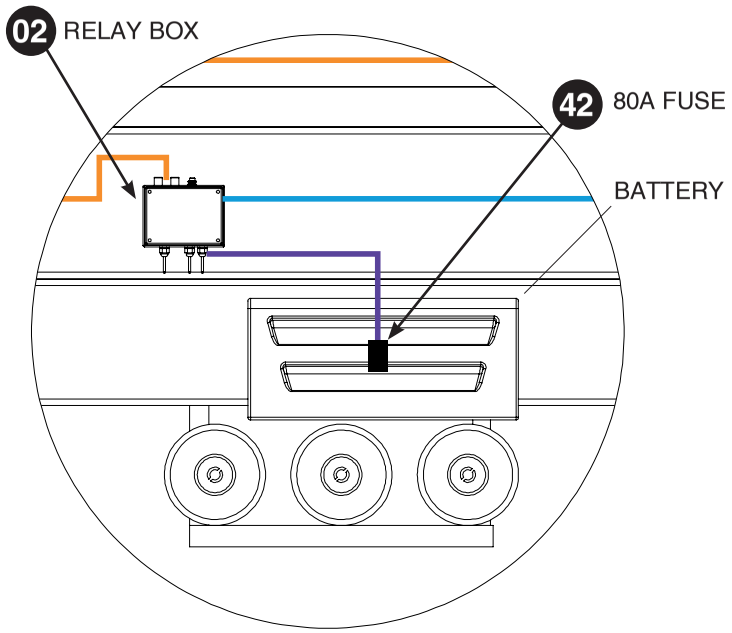

LEGEND

BATTERY TO RELAY BOX (MAX 5M)

ELECTRIC MOTOR TO RELAY BOX (MAX 30M)

IN-CAB SWITCH TO RELAY BOX (MAX 9M)

Item	Qty.	P/N	Description
02	1	1805480	RELAY BOX 24V
42	1	1811426	80A FUSE

NOTE: *Do not exceed the maximum wire length shown in the diagram for each component.*

NOTE: *It is recommended that 80A in-line fuse is fitted on the battery positive terminal, protecting the battery cable.*

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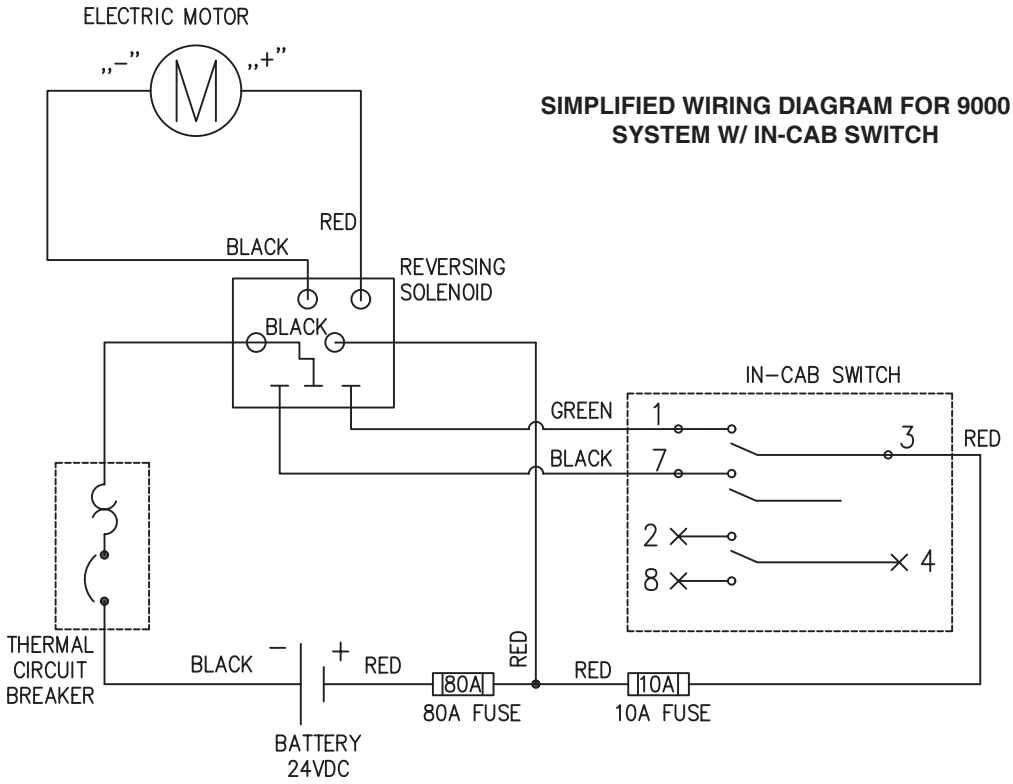
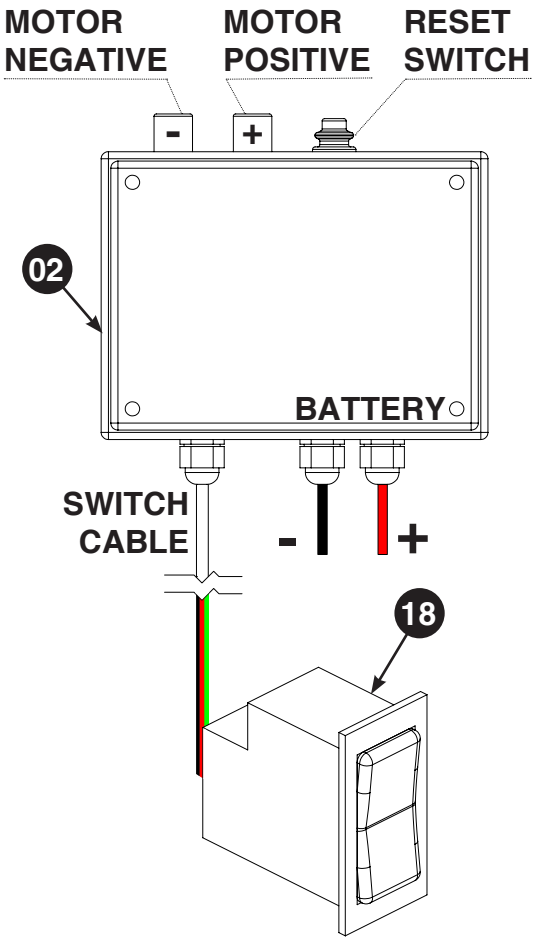
5. INSTALLING RELAY BOX

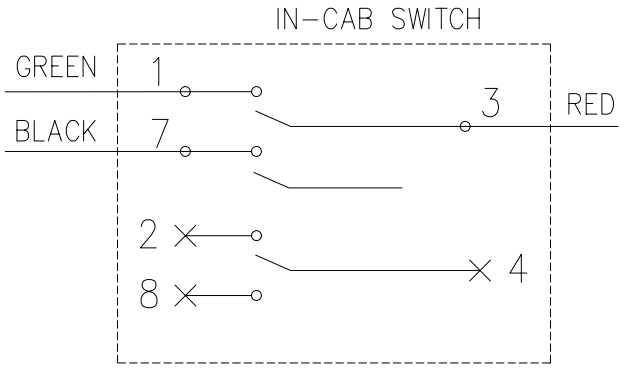


SIMPLIFIED WIRING DIAGRAM FOR 9000 SYSTEM W/ IN-CAB SWITCH

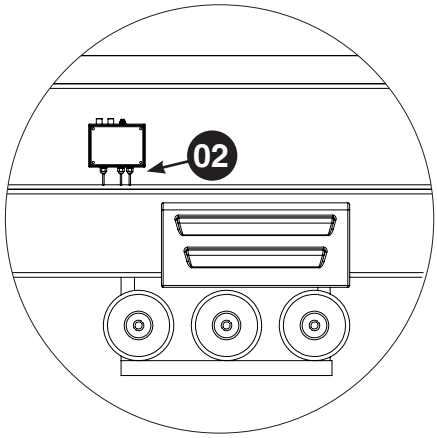


Item	Qty.	P/N	Description
02	1	1805480	RELAY BOX 24V
18	1	1805521	ROCKER IN-CAB SWITCH

WIRING OF IN-CAB SWITCH TO RELAY BOX

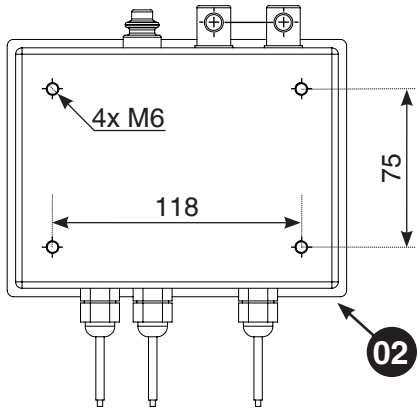


STEP 1: When selecting the mounting position for the relay box 24V (02), select a convenient location close to vehicle batteries (do not exceed 5 meters). Select location protected from heavy road spray with good access to reset switch.



NOTE: *Maximum length of cable between battery and relay box is 5 meters. Exceeding that length may cause the system to not operate.*

STEP 2: Ensure relay box is mounted on a flat surface, using at least three of four mounting points.



STEP 3: Run the battery cable from relay box to vehicle battery, securing it in place and ensuring that cable is not in contact with any moving parts of the vehicle.

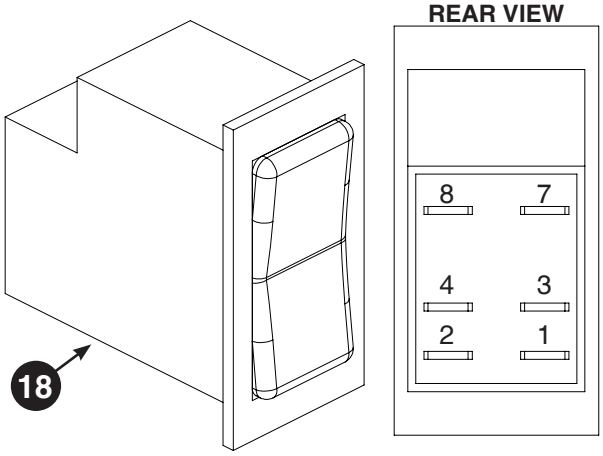
NOTE: *Use appropriate electrical conduit (not supplied in kit) for exposed electrical cable, providing extra protection as well as giving clean, finished look to installation.*

STEP 4: Run the three-core switch wire to the cab securing it in place and ensuring it enters the cab through the vehicle manufacturer specified route. Once the cable is in place choose a suitable location to mount the rocker switch in the dashboard. Wire the in-cab switch as per diagram on page 10.

SAFETY INFORMATION

For external weatherproof switch please see page 14 *"wiring external switch"* of installation instructions.

ROCKER SWITCH REAR VIEW

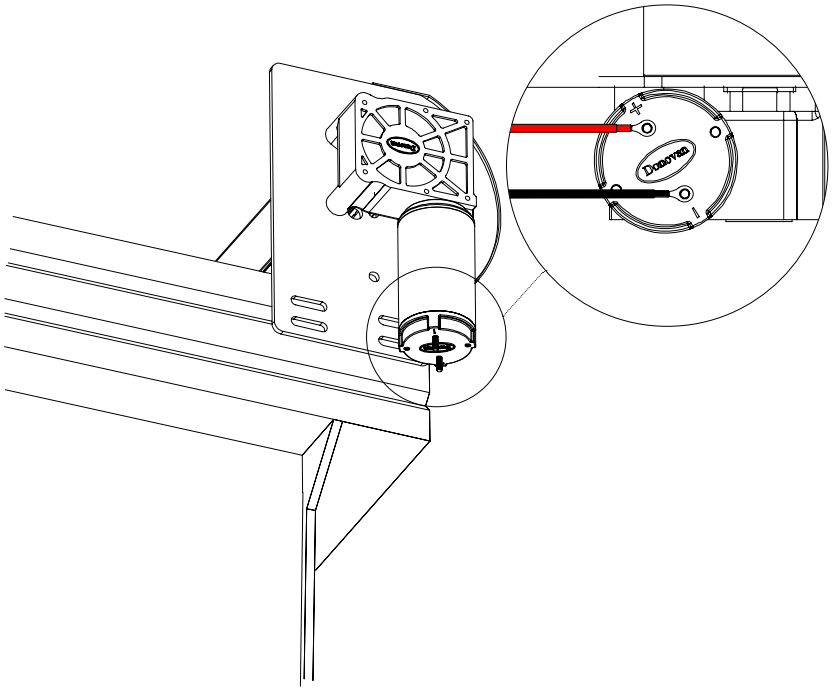


Item	Qty.	P/N	Description
02	1	1805480	RELAY BOX 24V
18	1	1805521	ROCKER IN-CAB SWITCH

CAUTION

Do not connect to battery until installation is complete.

STEP 5: Connect the two-core electric cable provided in kit to the Durabuilt motor 24V 07 mounted on housing assembly 03. Connect the red cable to positive terminal on motor and black cable to negative terminal



CAUTION

Vehicle *must* be wired using the wire provided. Smaller wire will cause the system to operate slowly and possibly overheat.

STEP 6: Take the other end of the electrical cable, now attached to electric motor, and safely route it to the relay box 24V 02. When routing the cable to relay box, secure it place to the body and chassis rail of vehicle. For tipping bodies route the cable around the pivot point as shown on page 9.

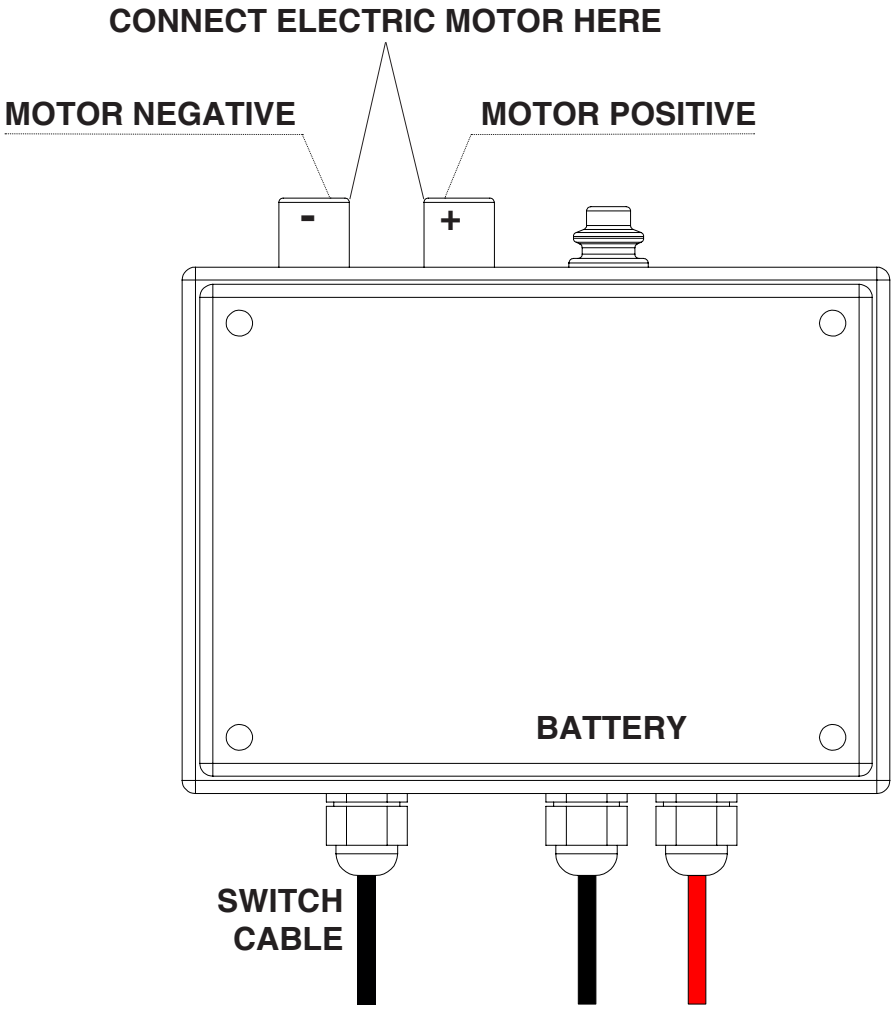
CAUTION

Always secure a tipping body that is lifted, before carrying out any work.

CRUSH HAZARD

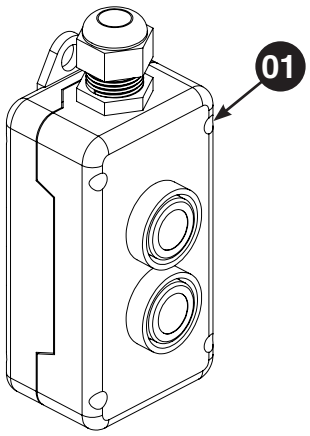
NOTE: *Use appropriate electrical conduit (not supplied in kit) for exposed electrical cable, providing extra protection as well as giving clean, finished look to installation.*

STEP 7: Once the cable is safely routed to the relay box, cut off any excess cable and connect it to relay box.



STEP 8: Connect the main power feed to vehicle batteries and test motor operation.

6. WIRING EXTERNAL SWITCH

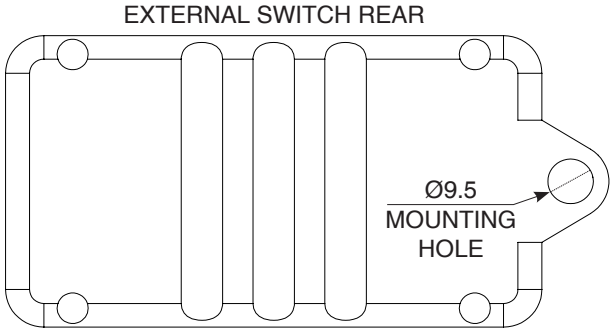


Item	Qty.	P/N	Description
01	1	1805543	EXTERNAL SWITCH
02	1	1805480	RELAY BOX 24V

STEP 1: Run the three-core switch wire from the relay box 24V (02) to the location where the external switch (01) will be mounted. Secure the cable from moving and shield it where practical from being directly exposed to damage.

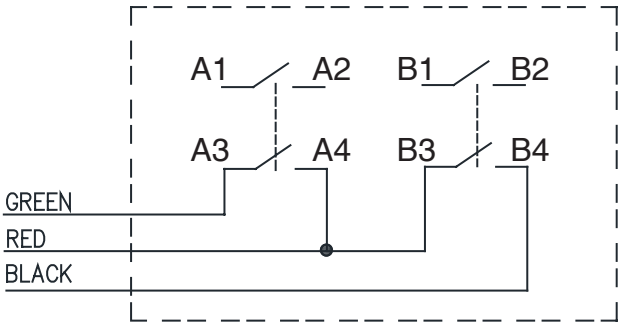
NOTE: *It is recommended to mount the switch in a vertical orientation with the nylon gland and wiring facing down towards the ground.*

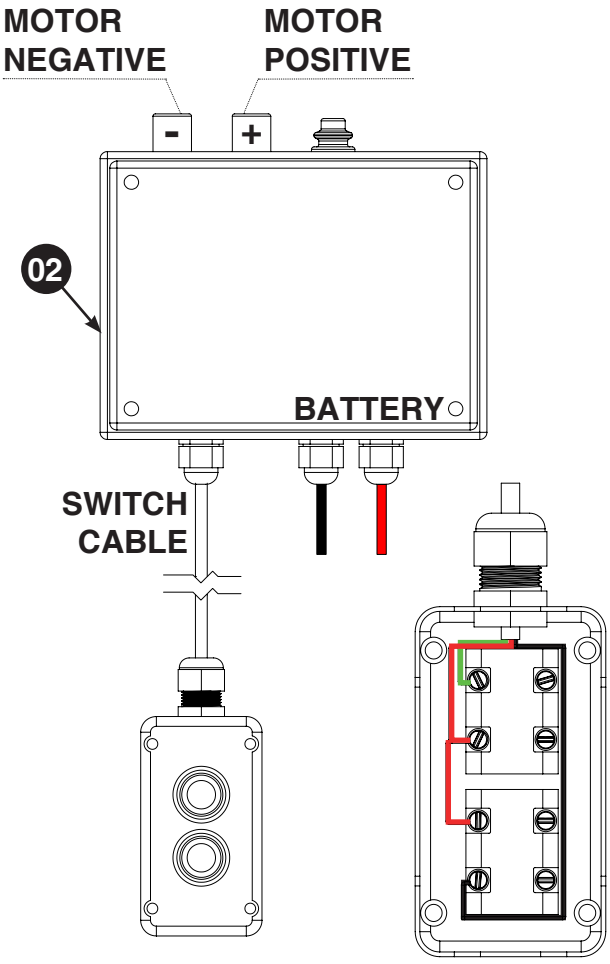
STEP 2: Once the mounting position of external switch is decided, use the switch enclosure mounting hole to mark the mounting hole position.



STEP 3: After mounting external switch front plate in place, insert the three-core cable into the switch housing through the nylon gland.

STEP 4: Remove the external yellow sleeve of the cable, exposing the three inner cores and connect it to terminals in external switch as shown in the diagram below:

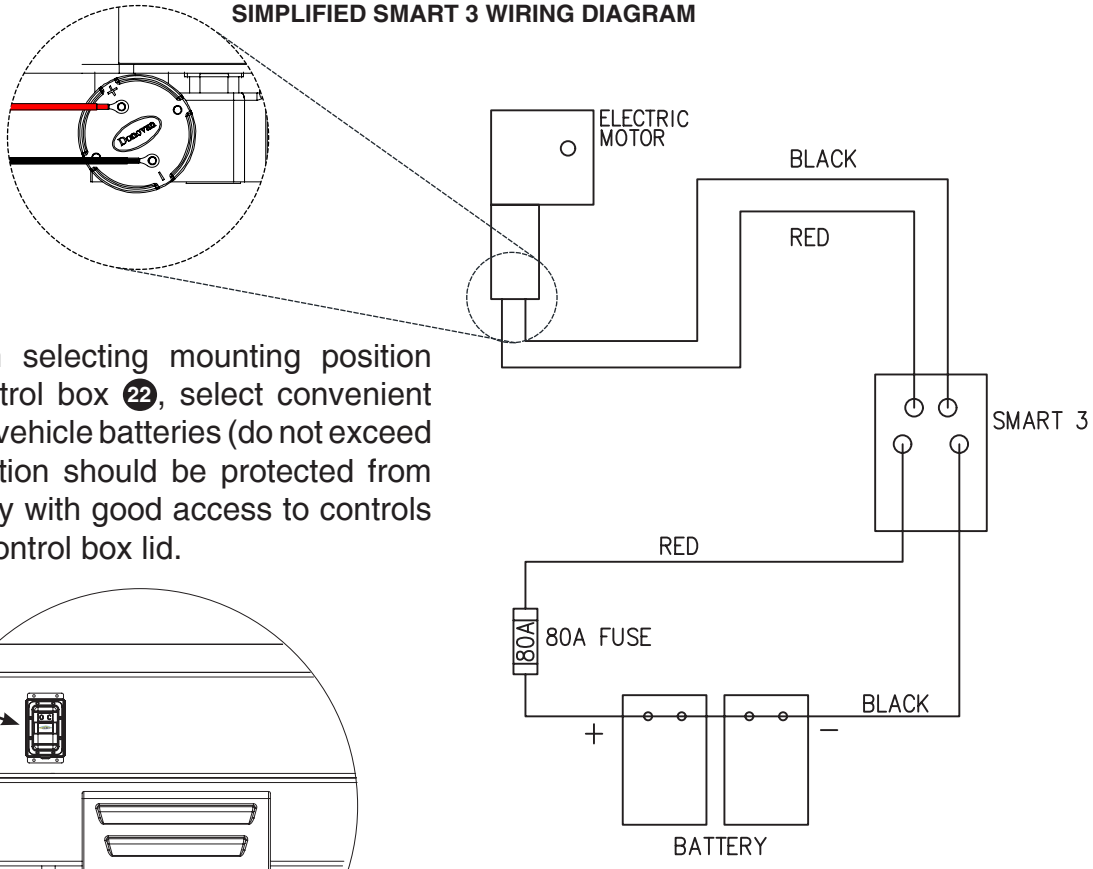




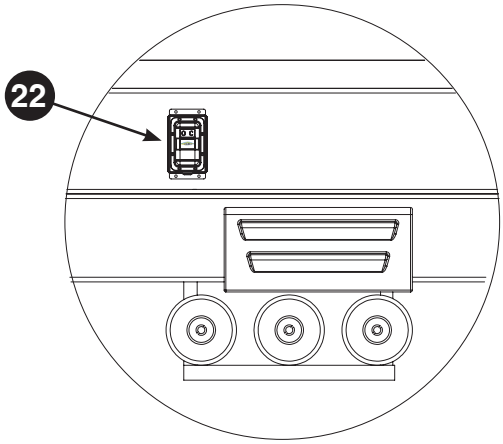
STEP 5: Fit the front face of the external switch housing, secure it in place with screws provided and ensure that the switch housing is sealed correctly.

7. INSTALLING SMART 3 - OPTIONAL

SIMPLIFIED SMART 3 WIRING DIAGRAM



STEP 1: When selecting mounting position for Smart 3 control box 22, select convenient location close to vehicle batteries (do not exceed 5 meters). Location should be protected from heavy road spray with good access to controls located on the control box lid.



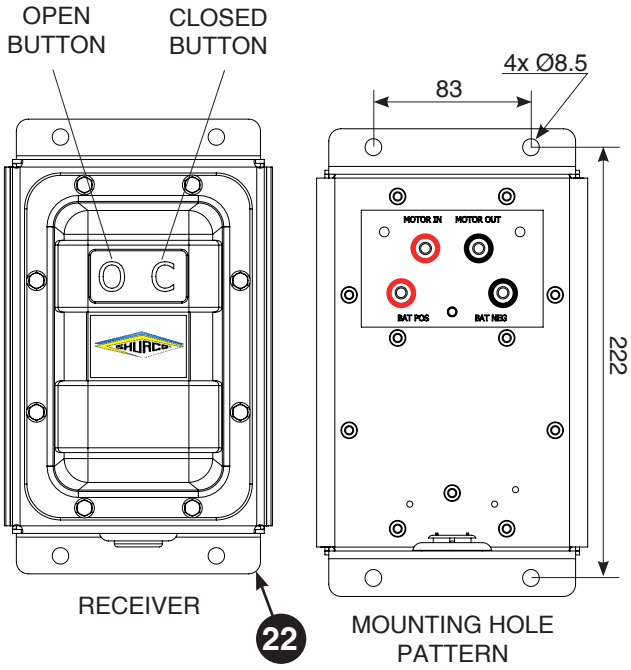
NOTE: *Maximum length of cable between battery and relay box is 5 meters. Exceeding that length may cause the system to not operate.*

CAUTION

Before bolting the Smart 3 in place, connect the motor and battery wires to the back plate of the control box.

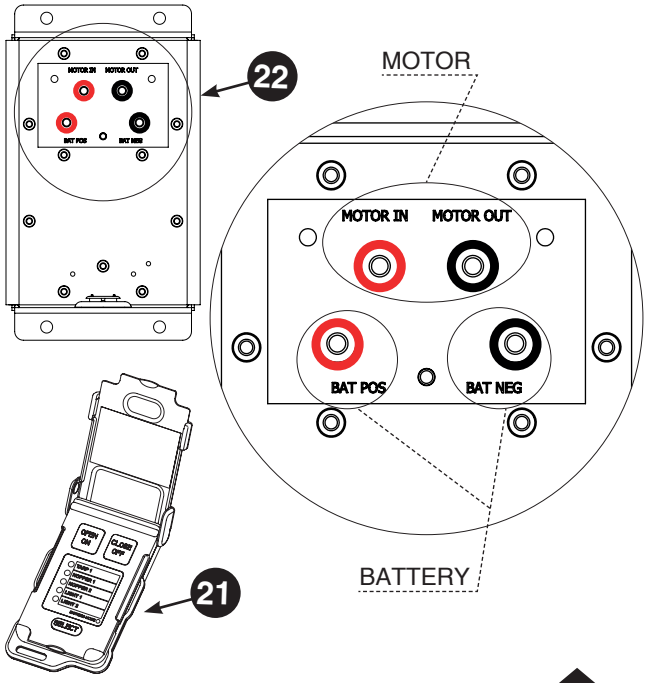
CAUTION

Vehicle must be wired using the wire provided. Smaller wire will cause the system to operate slowly and possibly overheat.



Item	Qty.	P/N	Description
22	1	1127921	S3 CONTROL BOX C/W REMOTE

STEP 2: Connect the 2-core battery cable to the BATTERY POSITIVE and BATTERY NEGATIVE terminals situated at the back plate of Smart 3 control box 22.



Item	Qty.	P/N	Description
07	1	1801965	DURABUILT MOTOR 24V
21	1	1126867	S3 REPLACEMENT REMOTE
22	1	1127921	S3 CONTROL BOX C/W REMOTE

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

STEP 3: Feed the cable through the rubber grommet in Smart 3 backplate and route it towards the vehicle battery. Secure the cable in place along the chassis' rail protecting it from damage. Fit fuses or circuits breakers as provided in the kit.

CAUTION

Do not connect to battery until installation is complete.

NOTE: *It is recommended that 80 amp in-line fuse is fitted between battery and Smart 3 control box on positive line.*

STEP 4: Connect the 2 core motor cable to the MOTOR IN and MOTOR OUT terminals at the back of Smart 3 control box. Feed the cable through the rubber grommet next to battery cable and ensure that 4 terminal at the back of control box as tighten up and not making contact with them self or backplate.

STEP 5: Apply dielectric grease to the control box terminals and fix the backplate to the vehicle, ensuring that terminals are not making direct contact with the vehicle.

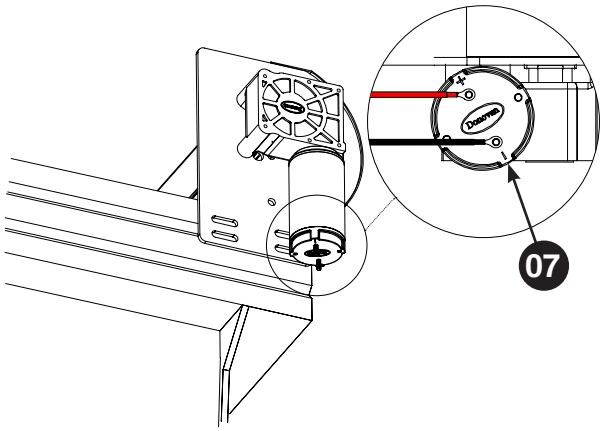
STEP 6: Route the motor cable from the Smart 3 control box 22 to the Durabuilt motor 24V 07 mounted to housing assembly. Ensure that the cable is secured in place and protected from damage.

CAUTION

Always secure a tipping body that is lifted, before carrying out any work.

CRUSH HAZARD

STEP 7: After reaching the electric motor, cut off excess cable and connect the red core cable to positive terminal and black core cable to negative terminal located at the bottom of electric motor.



STEP 8: Connect the Smart 3 control box battery cable to vehicle batteries. You can now test the electric circuit and run the motor using the open and close buttons located at Smart 3 lid or using the handheld remote.

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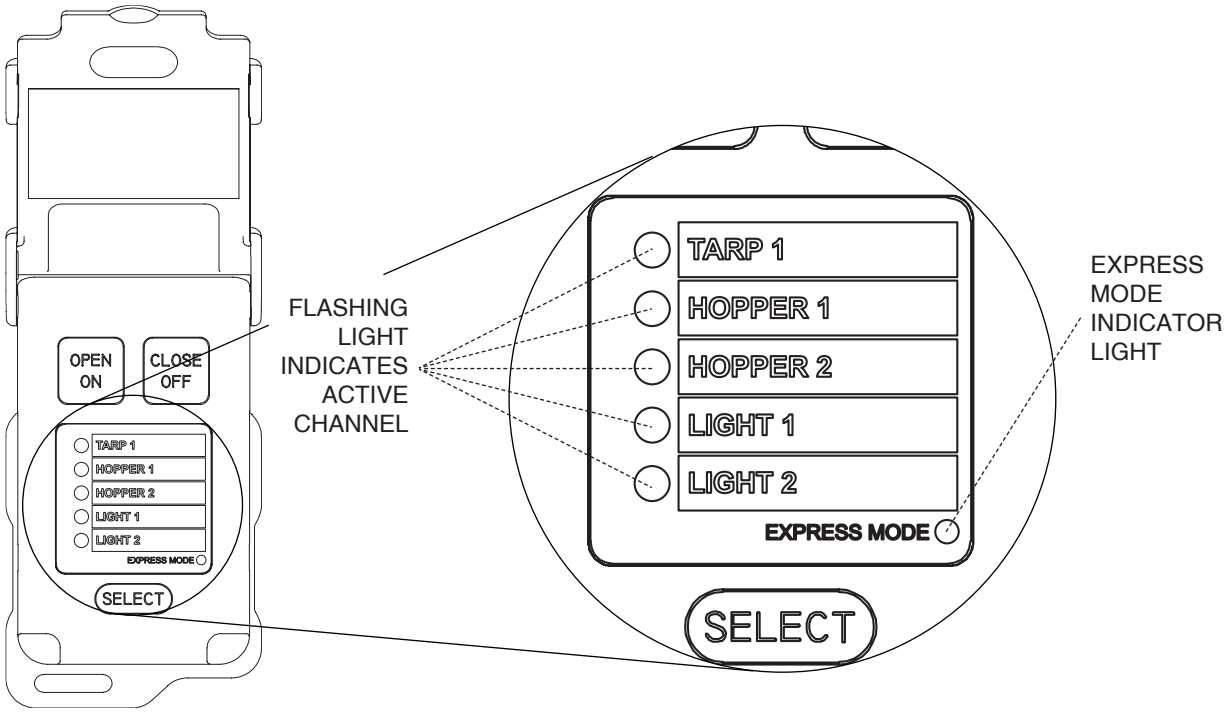
8. PAIRING HANDHELD REMOTE TO SMART 3

STEP 1: Make sure Smart 3 control box is connected to power source.



STEP 2: Press and hole both OPEN and CLOSE buttons located at the Smart 3 lid simultaneously until you hear an audible beep from control box (approximately 10 seconds). After you hear the beep, the control box will be in paring mode for 30 seconds searching for new a remote.

STEP 3: While being near the Smart 3 control box. Open the lid on handheld remote and press and hold both OPEN and CLOSE buttons simultaneously until light on selected channel stops flashing and is constantly lit. This will mean the handheld remote is in paring mode.

NOTE: *Before putting the remote into pairing mode you can use the SELECT button to choose which channel you want to pair the control box to.*

NOTE: *All lights flashing on the handheld remote as signalling low battery level. Change batteries before pairing the remote to control box.*

STEP 4: Successful pairing will be confirmed by double audible beep from control box.

QUESTIONS? CALL OUR HELP LINE:

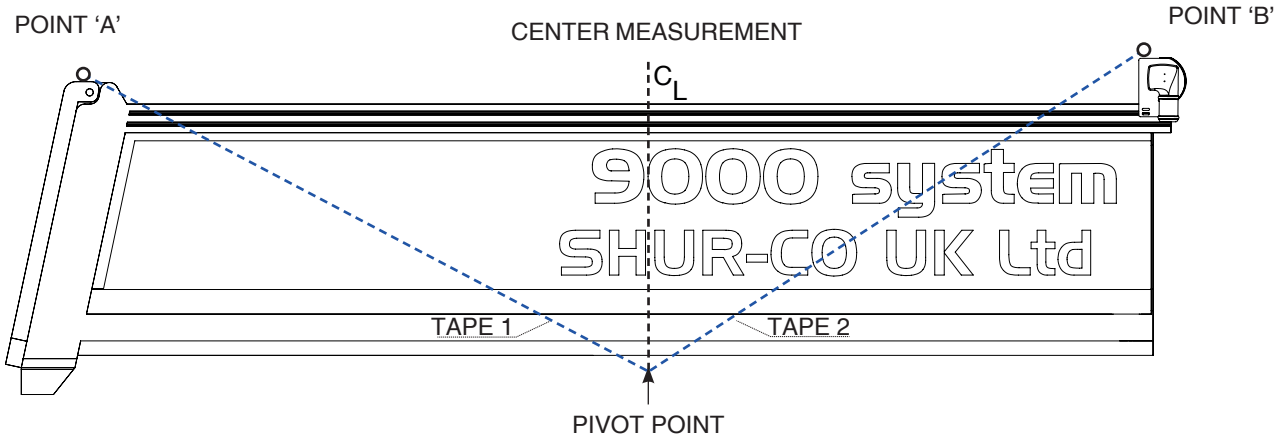
+44 (0)1634 862 363

MON-FRI 8 AM-5 PM

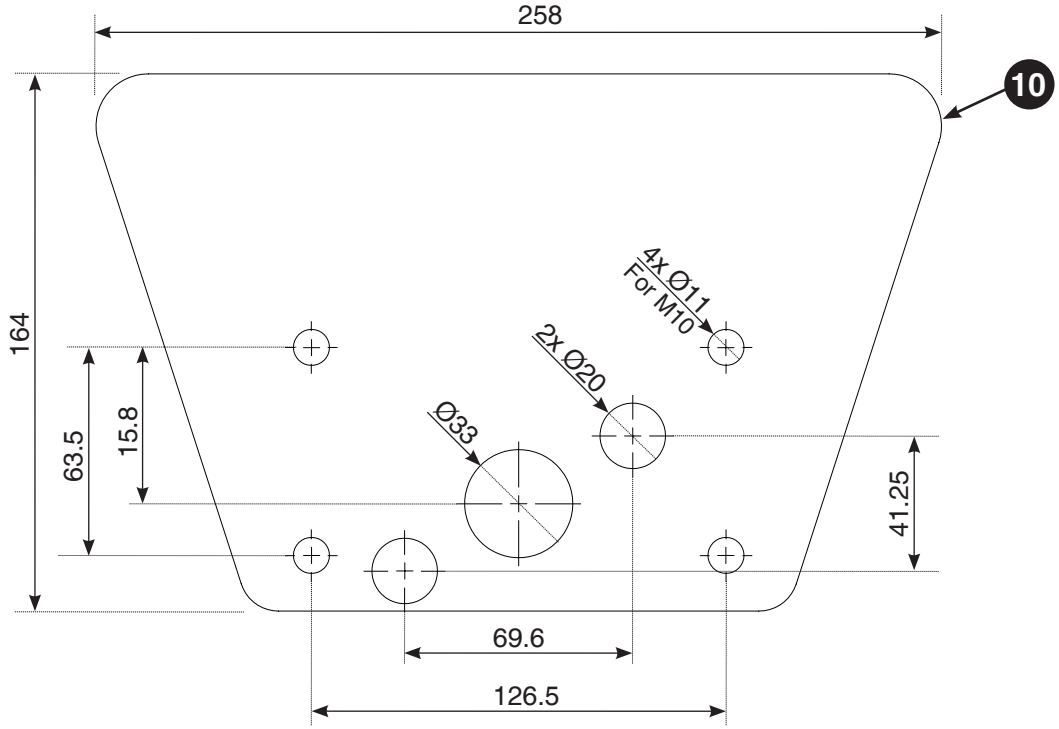
OR EMAIL US: SALES@SHURCO.CO.UK

9. FINDING THE PIVOT POINT

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 truck body where the two measurements are **equal**. Mark the spot beneath where they cross. This is your pivot point.



STEP 2: Use the underbody spring assembly ⓭/㉚ as a guide to determine the hole position for mounting. Ensure the centre of the spring mounting plate ⑩ is aligned with the pivot point as shown. It is recommended that the spring hanger plate is welded to the body at the pivot point.

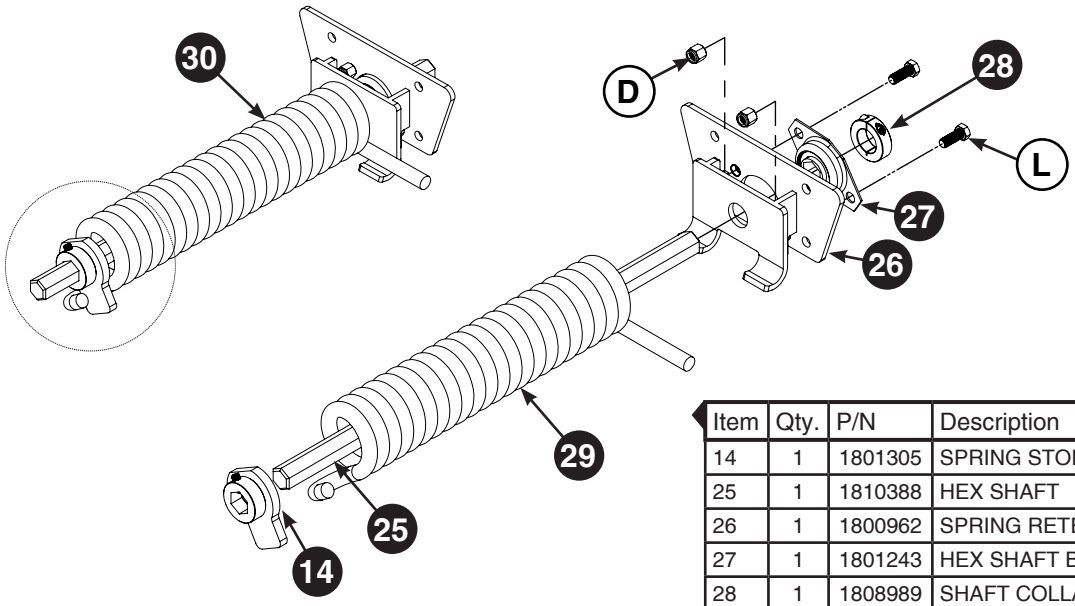


Item	Qty.	P/N	Description
10	2	1800960	U/B SPRING MOUNTING PLATE

Unit 41 & 43 Rochester Airport Estate, Laker Road, Rochester ME1 3QX

10. MOUNTING UNDERBODY SPRING ASSEMBLIES

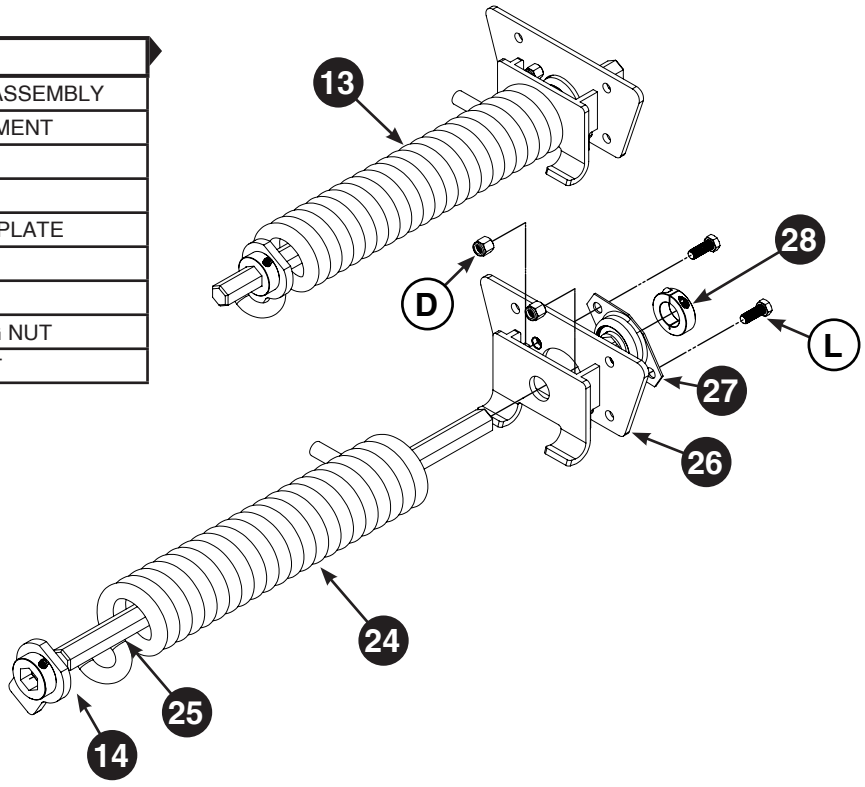
P/N: 1808485: LH 22 COIL SPRING ASSEMBLY

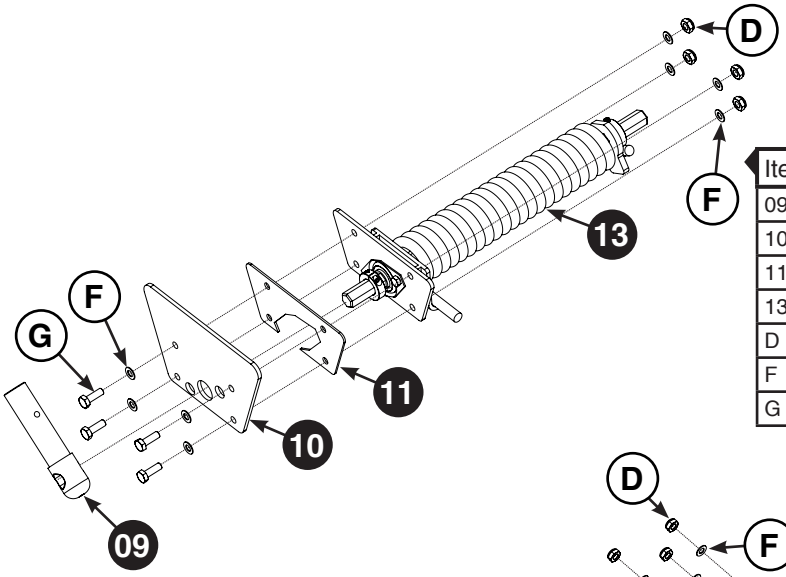


Item	Qty.	P/N	Description
14	1	1801305	SPRING STOP WELDMENT
25	1	1810388	HEX SHAFT
26	1	1800962	SPRING RETENTION PLATE
27	1	1801243	HEX SHAFT BEARING
28	1	1808989	SHAFT COLLAR
29	1	1800279	LH 22 COIL SPRING
30	1	1808485	LH 22 COIL SPRING ASSEMBLY
D	2	-	M10 NYLON LOCKING NUT
L	2	-	M10x25mm HEX BOLT

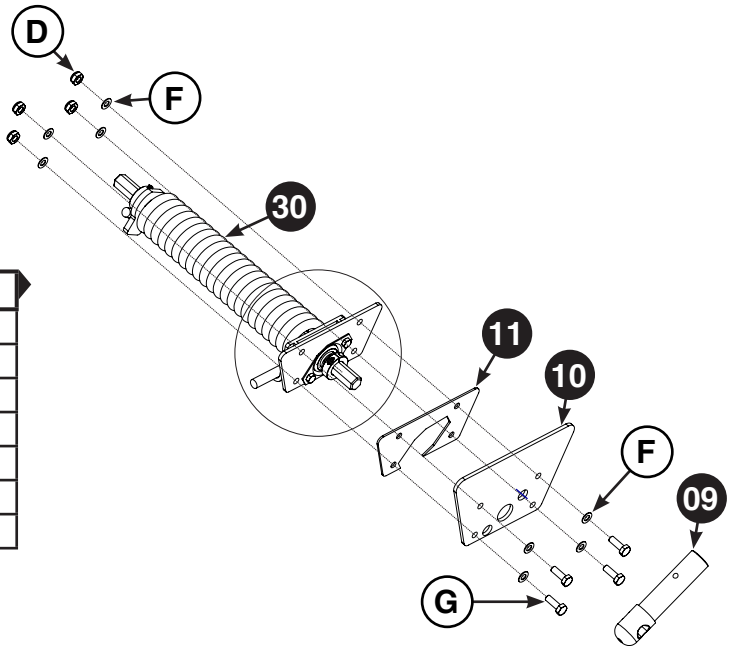
P/N: 1808485: RH 22 COIL SPRING ASSEMBLY

Item	Qty.	P/N	Description
13	1	1808486	RH 22 COIL SPRING ASSEMBLY
14	1	1801305	SPRING STOP WELDMENT
24	1	1800280	RH 22 COIL SPRING
25	1	1810388	HEX SHAFT
26	1	1800962	SPRING RETENTION PLATE
27	1	1801243	HEX SHAFT BEARING
28	1	1808989	SHAFT COLLAR
D	2	-	M10 NYLON LOCKING NUT
L	2	-	M10x25mm HEX BOLT





Item	Qty.	P/N	Description
09	1	1805436	PIVOT CAST
10	1	1800960	UB SPRING MOUNTING PLATE
11	1	1801049	SPACER PLATE U/B SPRING
13	1	1808486	RH 22 COIL SPRING ASSEMBLY
D	4	-	M10 NYLON LOCKING NUT
F	8	-	M10 FORM A FLAT WASHER
G	4	-	M10x30mm HEX BOLT

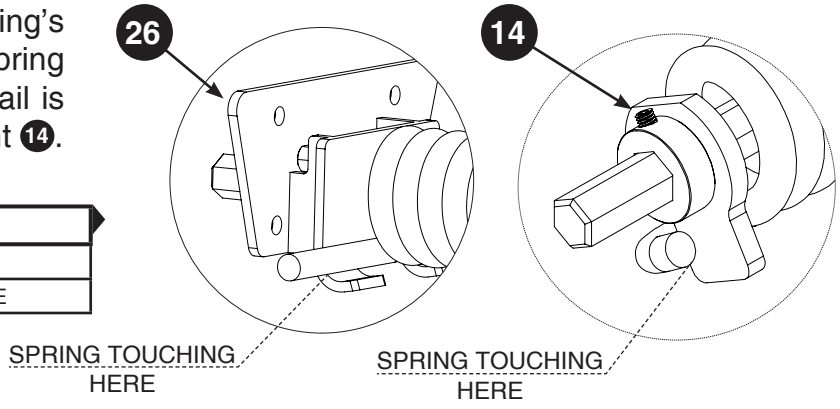


Item	Qty.	P/N	Description
09	1	1805436	PIVOT CAST
10	1	1800960	UB SPRING MOUNTING PLATE
11	1	1801049	SPACER PLATE U/B SPRING
30	1	1808485	LH 22 COIL SPRING ASSEMBLY
D	4	-	M10 NYLON LOCKING NUT
F	8	-	M10 FORM A FLAT WASHER
G	4	-	M10x30mm HEX BOLT

STEP 1: Insert the spacer plate U/B spring ⓫ onto UB spring mounting plate ⓾.

STEP 2: Secure the spring assembly ⓭/㉚ onto pivot mounting plate ⓾ using Ⓓ, Ⓕ and Ⓖ.

STEP 3: Make sure that the spring's straight tail is sitting securely in spring retention plate ㉖ and spring hook tail is bracing against spring stop weldment ⓮.



Item	Qty.	P/N	Description
14	2	1801305	SPRING STOP WELDMENT
26	2	1800962	SPRING RETENTION PLATE

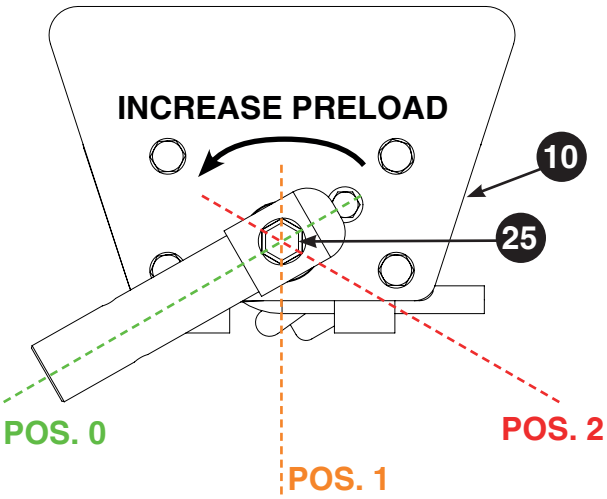
CAUTION

The pivot cast, spring assemblies and 9000 arms will be under high spring tension during and after pre-loading tension and mounting the arms.

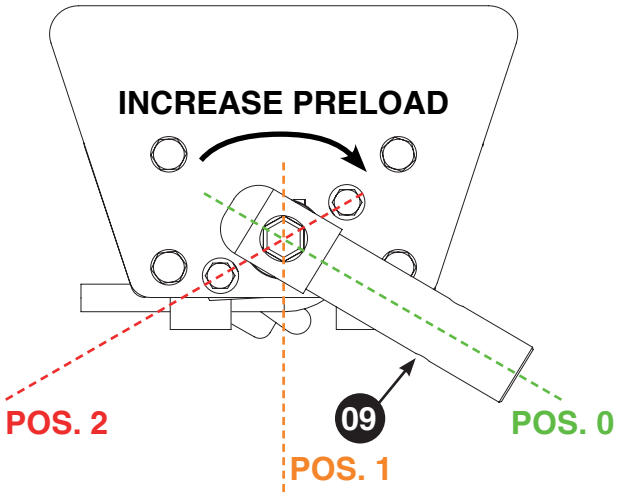
CRUSH HAZARD

STEP 4: Insert the pivot cast 09 onto spring assembly hex shaft 25. The typical position of pivot cast on hex shaft is shown below (POS. 0). This is ensuring that the necessary preload is created on the spring when mounting the arms. If required, rotate the pivot cast counter clockwise for driver side ensuring the spring is in contact with U/B spring mounting plate and clockwise for passenger side.

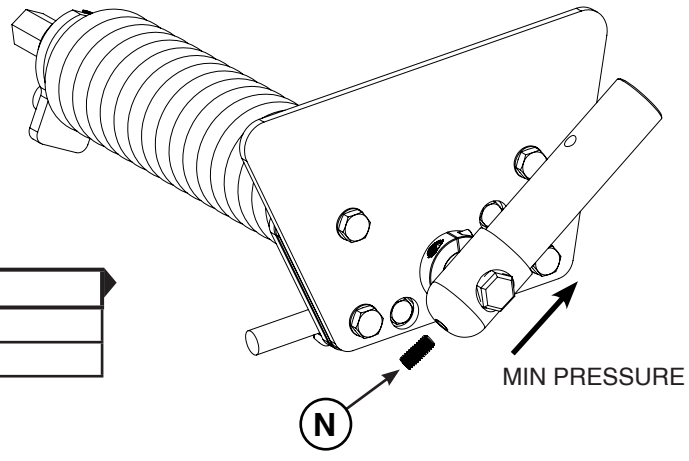
DRIVER SIDE (UK)
SPRING ASSEMBLY



PASSENGER SIDE (UK)
SPRING ASSEMBLY

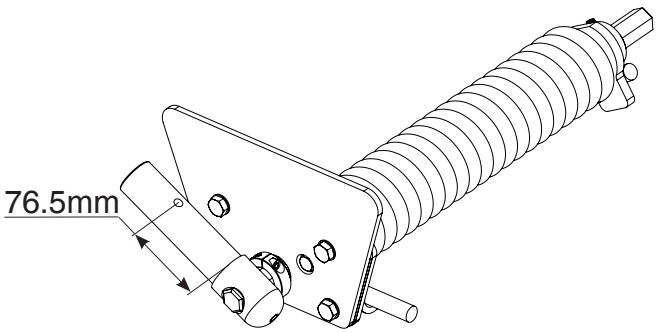


STEP 5: Secure the pivot cast with set screws provided. Spring should be with minimum pressure when in pivot cast is lifted to horizontal position.



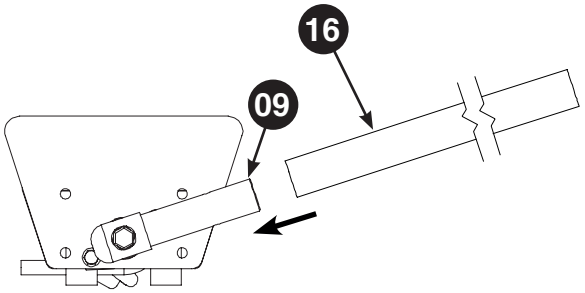
Item	Qty.	P/N	Description
09	2	1805436	PIVOT CAST
N	2	-	M10x20mm SET SCREW

11. FIX ARM SYSTEM TO PIVOT CASTS

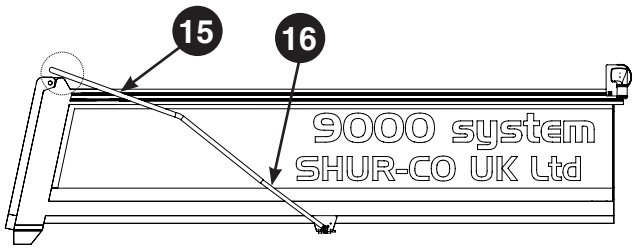


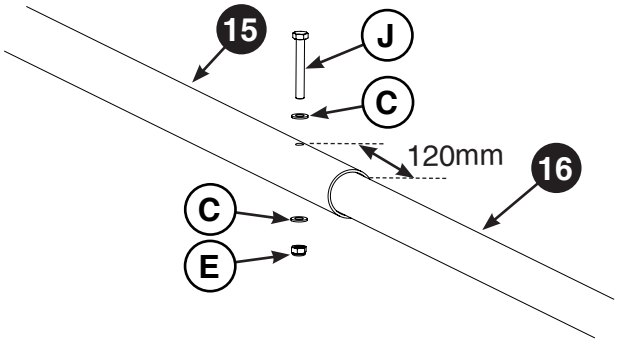
STEP 1: Drill Ø8mm hole in lower arm to secure it to pivot cast. Hole predrilled in pivot cast is 76.5mm from the flat surface at which the lower arm sits.

STEP 2: Ensure pivot cast 09 is pointing towards rear of vehicle and lower arm 16 is fully inserted. Secure the lower arm with C, E and J.

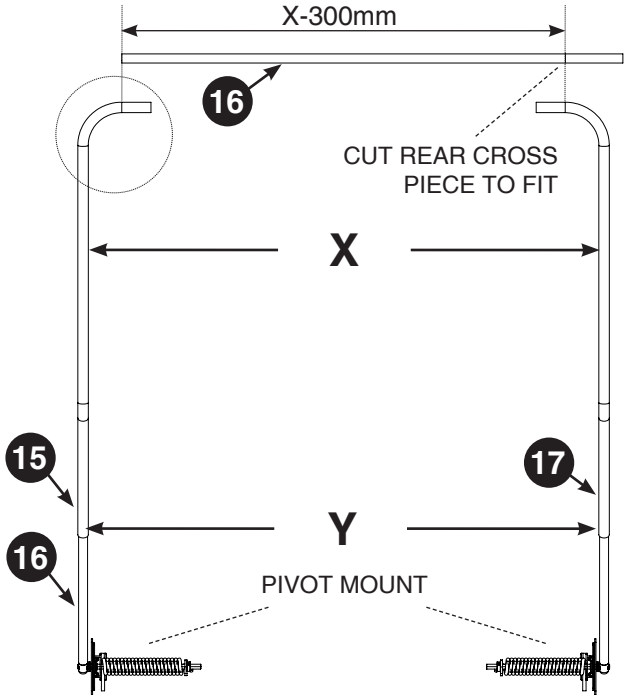


STEP 3: Slide the upper arm 15 onto lower arm 16. Bend in the arms should be oriented as shown in the picture below; subject to overall length of the arm, lower arm and upper arm can be cut down to suit the vehicle. Once the arms are in the correct position, drill Ø8mm holes for M8 through the upper and lower arm approximately 120mm from the insertion point.



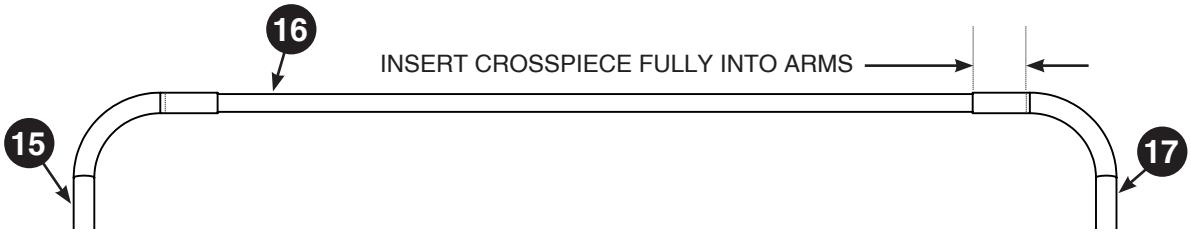


Item	Qty.	P/N	Description
15	1	1805466	9000 UPPER ARM RIGHT
16	2	1805458	9000 LOWER ARM/REAR CROSSPIECE
17	1	1805464	9000 UPPER ARM LEFT
C	4	-	M8 FORM A FLAT WASHER
E	2	-	M8 NYLON LOCKING NUT
J	2	-	M8x65mm HEX BOLT



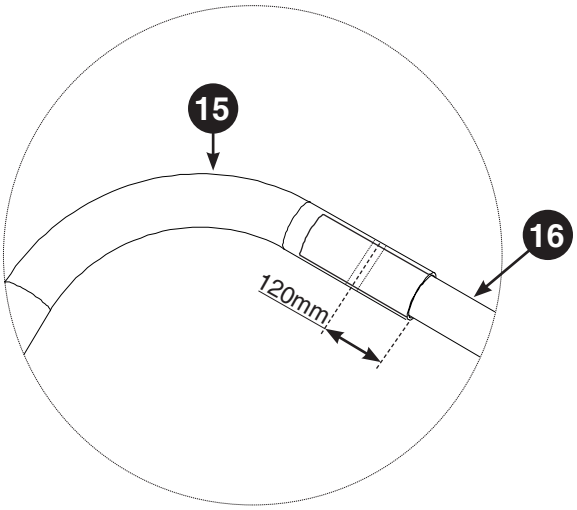
STEP 4: Slide rear crosspiece 16 into arms; it is important arm system is square. Subject to width at the pivot points, you may need to cut down rear crosspiece to compensate. To determine required measurement of rear crosspiece, measure **X** and **Y** and adjust as required until measurement X is equal to measurement Y. Once system is square, cut rear crosspiece to X-300mm for proper fit.

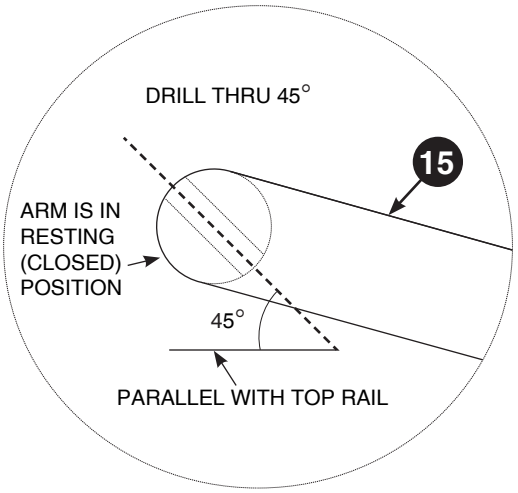
Unit 41 & 43 Rochester Airport Estate, Laker Road, Rochester ME1 3QX



STEP 5: With crosspiece 16 fully inserted into arms and secured, drill Ø8mm hole through both crosspiece and upper arm 15/17 at approximately 120mm in from insertion point. Repeat process for adjacent side and upper arm.

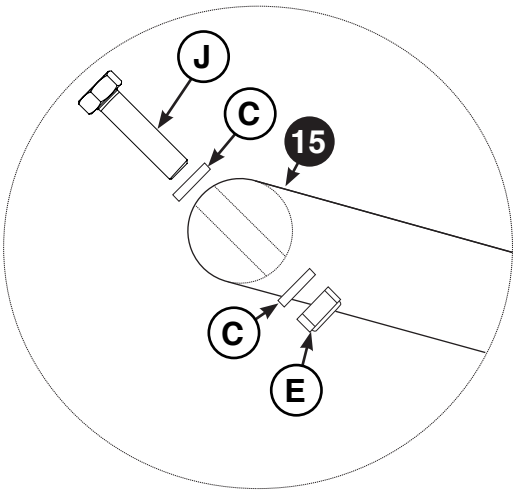
NOTE: It is recommended that crosspiece bolts are fitted at 45° angle to prevent damage to sheet.





STEP 6: Secure one of the arms to the crosspiece with (C), (E) and (J) While leaving the second arm unfixed.

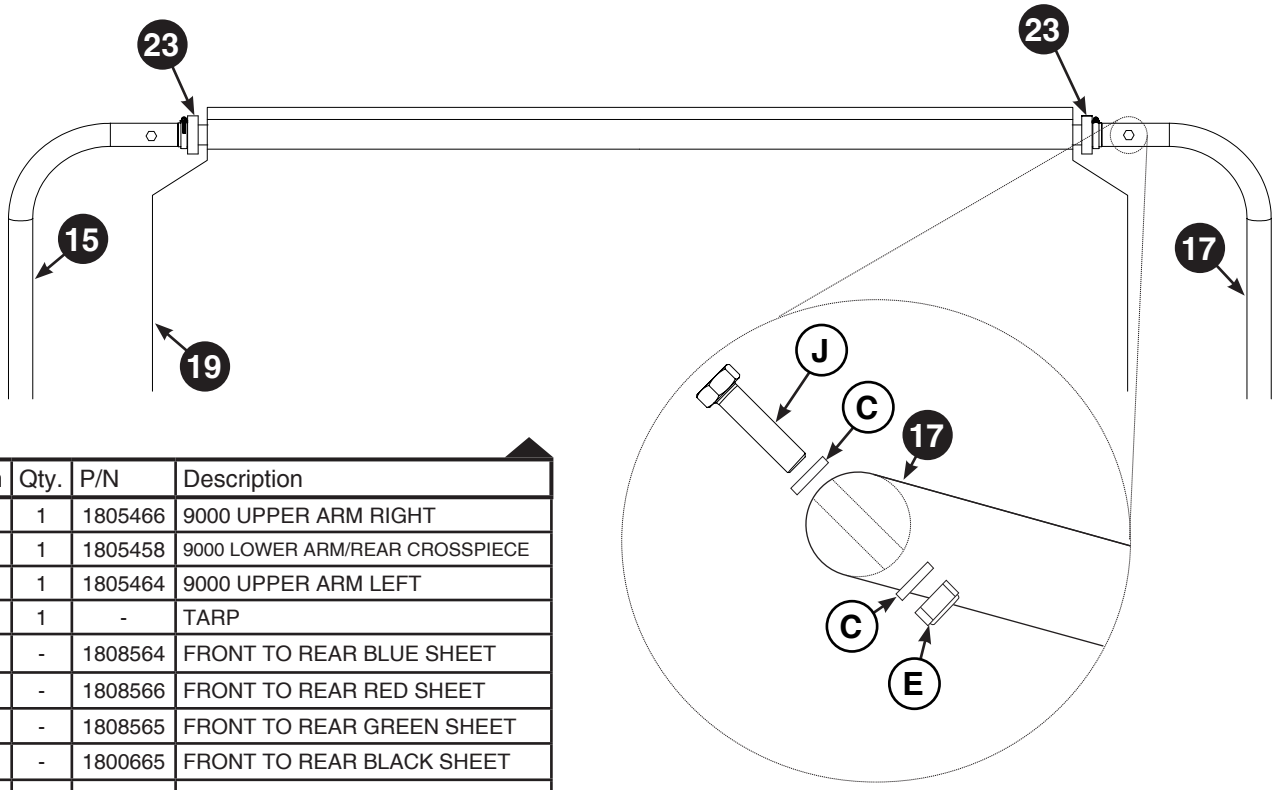
Item	Qty.	P/N	Description
15	1	1805466	9000 UPPER ARM RIGHT
16	1	1805458	9000 LOWER ARM/REAR CROSSPIECE
17	1	1805464	9000 UPPER ARM LEFT
C	4	-	M8 FORM A FLAT WASHER
E	2	-	M8 NYLON LOCKING NUT
J	2	-	M8x65mm HEX BOLT



12. MOUNTING TARP

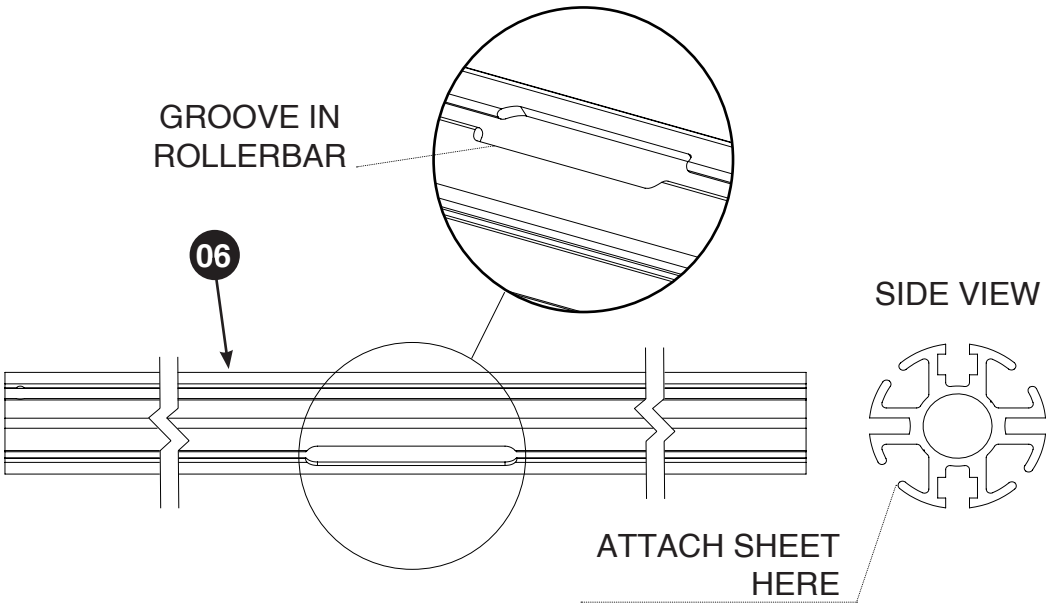
STEP 1: Separate the unfixed upper arm 15 or 17 from crosspiece 16 and slide main pocket on the front of the sheet 19 onto crosspiece.

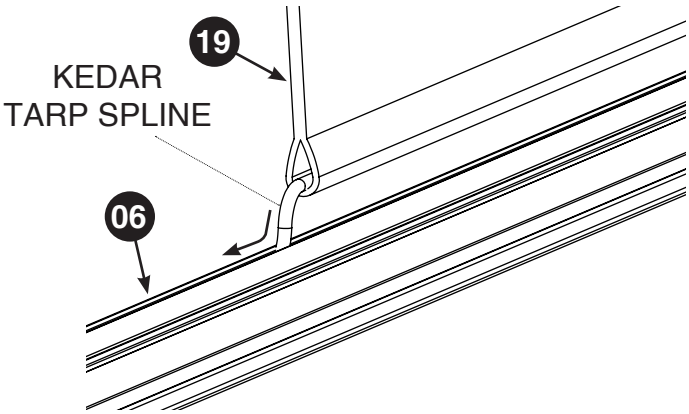
STEP 5: Secure the second arm to the crosspiece with C, E and J. Push the yellow rubber tarp stops 23 as far into the ends on the rear crosspiece as possible and tighten.



Item	Qty.	P/N	Description
15	1	1805466	9000 UPPER ARM RIGHT
16	1	1805458	9000 LOWER ARM/REAR CROSSPIECE
17	1	1805464	9000 UPPER ARM LEFT
19	1	-	TARP
19.1	-	1808564	FRONT TO REAR BLUE SHEET
19.2	-	1808566	FRONT TO REAR RED SHEET
19.3	-	1808565	FRONT TO REAR GREEN SHEET
19.4	-	1800665	FRONT TO REAR BLACK SHEET
23	2	1805563	YELLOW RUBBER TARP STOPS
C	4	-	M8 FORM A FLAT WASHER
E	2	-	M8 NYLON LOCKING NUT
J	2	-	M8x65mm HEX BOLT

STEP 3: Slide main tarp spline at front of sheet into extruded aluminium rollerbar 06 groove. Start at centre of rollerbar and feed left and right as needed.





SCAN ME

NOTE: *Tutorial video available on YouTube: https://www.youtube.com/watch?v=go0sYYx0PWE*

13. DECALS & SERIAL NUMBERS

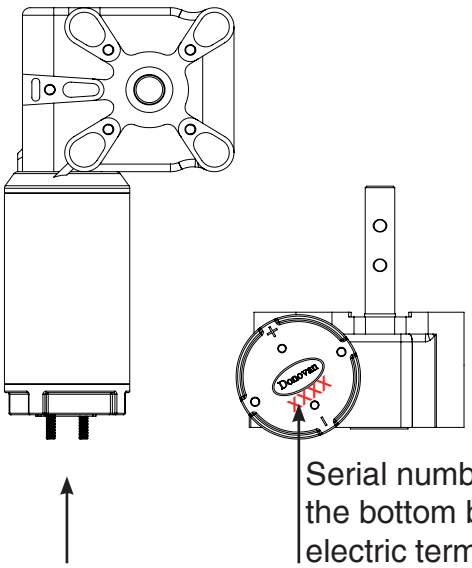
CAUTION

Ensure that all decals supplied in the decal pack are displayed on the vehicle.
Decals must be applied in place clearly visible to operator of the system.

P/N: 1811840 160x160mm

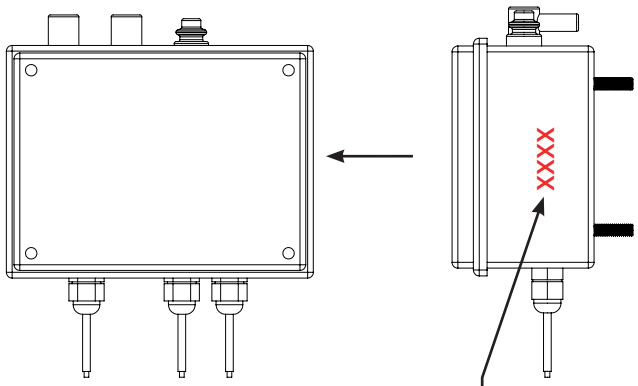
Serial Number Locations

P/N 1801965 Durabuilt motor 24V



Serial number on the bottom by the electric terminals.

P/N 1805480 Relay box 24V



Serial number on right side of relay box enclosure.

14. TESTING & COMMISSIONING SYSTEM

SAFETY INFORMATION

Before running the system for the first time remember to check all bolts and make sure the tarp is correctly attached to the rollerbar.

Running the System for the First Time:

STEP 1: Conduct visual inspection of the metalwork making sure it will not get into contact with vehicle when in motion.

STEP 2: With the arms located at the back of the vehicle, press the OPEN button to start operating the system. Electric motor will start to spin and wind the tarp on rollerbar. If there is a slack in the sheet the arms will not move until the sheet is under tension.

STEP 3: Once the arm moves to the front of the vehicle observe the metal work to make sure it is square and moves smoothly on both sides of the vehicle.

STEP 4: When the arms reach the rest point at the front of the vehicle let go of the OPEN button and inspect the metalwork in front rest position.

STEP 5: Stay clear of the vehicle and press the CLOSE button to start unwinding the sheet from rollerbar using the electric motor.

CAUTION

Arms are under high spring tension when in open position.

CRUSH HAZARD

STEP 6: Once the arms reach the rest position at the back of the vehicle, let go of the CLOSE button and inspect the system for any deformations in metalwork.

NOTE: *If the arms are not moving to the back of the vehicle but the sheet is discharging from the rollerbar. See section Troubleshooting – adjusting spring tension - page 34*

Final checks and adjustments:

- Check all fasteners for tightness.
- Adjust the position of tarp stops if the sheet is not rolling square.
- Adjust the length of the arms if they are not landing in correct rest place.
- Paint all bare metal to prevent corrosion.
- On tipping bodies, check that power cable connecting the motor to control box is not over stretched or cut when the body is lifted and lowered.

15. OPERATING INSTRUCTIONS

SYSTEM OPERATION

- Operate the system only when vehicle is parked in safe place with parking brake engaged;
- 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 persons are on or around vehicle when system is in operation;
- Do not stop the arms in mid-open position;
- If arms stop moving, they have possibly made contact with an obstruction. Return arms to original position and clear any obstructions before reactivating system;
- Always return the system to closed position prior to moving the vehicle.

Uncovering the Body:

STEP 1: Make sure the vehicle is parked with parking brake engaged and there are no overhead obstructions.

STEP 2: Make sure no persons are on or around the body or sheeting system.

STEP 3: Press the OPEN button to roll the sheet onto rollerbar and bring the arms towards the front of the vehicle – system will run for as long as you keep the button pressed.

STEP 4: Once the arms reach the front of the vehicle and are in rest position release the OPEN button.

Covering the Body:

STEP 1: Press the CLOSE button to roll the sheet onto rollerbar and bring the arms towards the front of the vehicle – system will run for as long as you keep the button pressed

STEP 2: Make sure no persons are on or around the body or sheeting system.

STEP 3: Press the OPEN button to roll the sheet onto rollerbar and bring the arms towards the front of the vehicle – system will run for as long as you keep the button pressed.

STEP 4: Once the arms reach the rear of the vehicle and are in rest position release the CLOSE button.

16. MAINTENANCE SCHEDULE

Pre-operation check should consist of:

- Visually check geometry of arms for bends/deflections, damage, making sure the metal work is square. Adjust the position of tarp stops if the sheet is not rolling square.
- Check fitment of the pivot cast on hex shaft, and visual condition of the springs.
- Visually check condition of the sheet and rollerbar for any damage, immediately replace damaged or worn sheets/parts with approved SHUR-CO® product only.

Monthly check should consist of:

- Check all fasteners for tightness.
- Check electrical cables for wear damage.
- Check all electrical connections (electric motor, relay box/Smart 3, switch) and apply dielectric grease to any exposed electrical terminals.

17. TROUBLESHOOTING

General troubleshooting guidelines for system with relay box.....31
Problem: Sheeting system is not operating – electric motor is not rotating 32
Problem: Sheeting system is not operating – electric motor is rotating 33
Problem: When closing the sheeting system arms are not moving to the rear of the vehicle but sheet is unwinding from the rollerbar– adjusting spring tension.....34
Problem: Arms are not traveling square when system is in motion 37
Problem: Handheld Smart 3 remote is not working 38
Guide: Replacing the tarp on 9000 system 40

CAUTION

Installation, repair and troubleshooting should only be completed by competent persons. When attempting to diagnose or repair the system always use suitable PPE and perform your own risk assessment prior to any work being carried out.

CAUTION

When replacing any components on the system always isolate the system by disconnecting the power supply.

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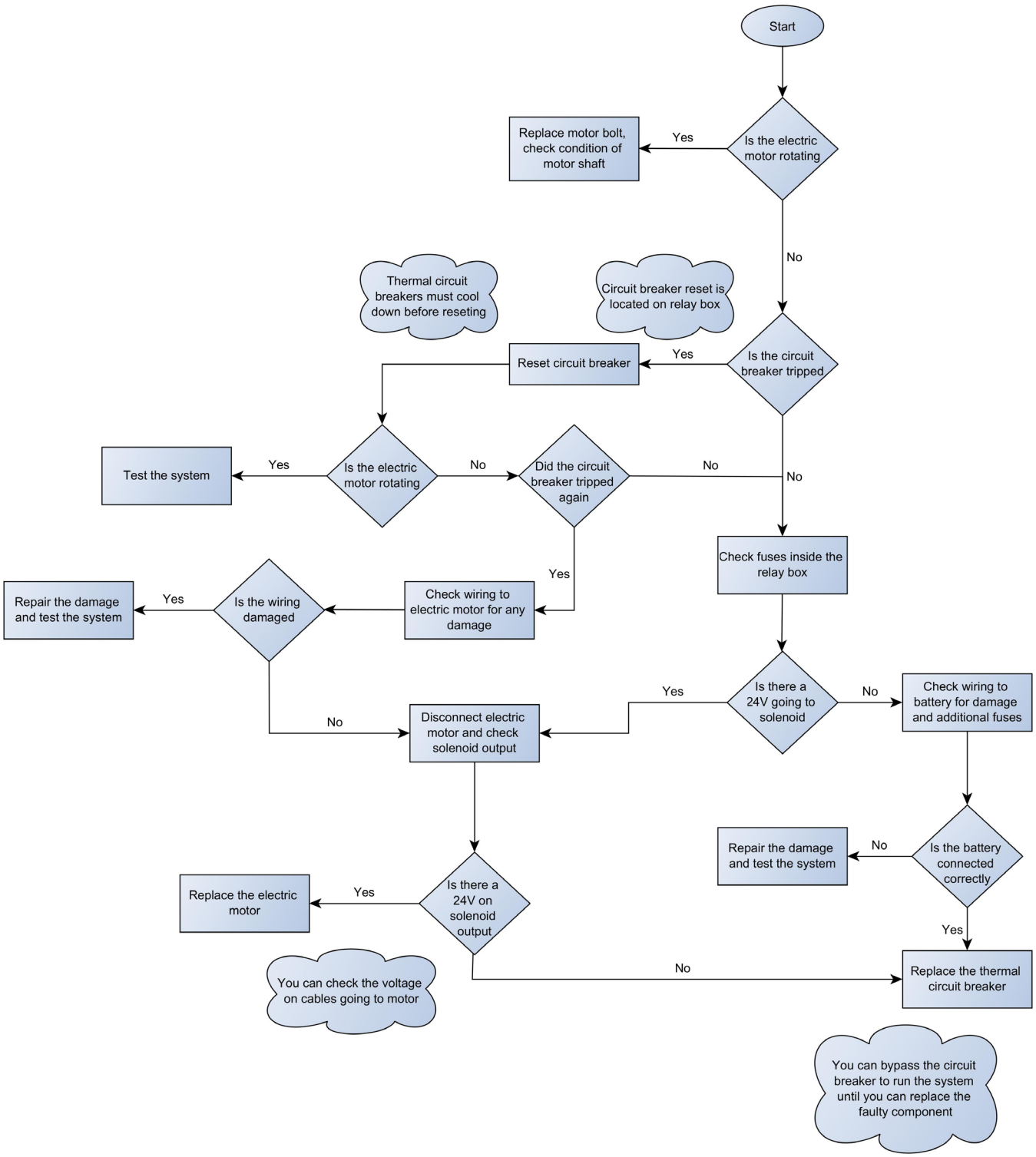
General troubleshooting guidelines for system with relay box



Problem: sheeting system is not operating - electric motor is not rotating.

STEP 1: Check if the electric motor is rotating when you press OPEN or CLOSE button.

STEP 2: If the electric motor is not rotating check if the thermal circuit breaker (Reset Switch) is tripped. Thermal circuit breaker is typically located at the relay box, press it in to reset it.

STEP 2.1: If the circuit breaker keeps on tripping disconnect the electric motor and check if the circuit breaker trips.

STEP 2.2: If the circuit breaker trips – replace it with new unit and connect the electric motor to test the system.

STEP 3: If the circuit breaker does not trip check all the fuses in relay box and look for any additional in-line fuses between the relay box - the battery and between relay box – electric motor.

STEP 4: If all the fuses are in good condition, check the voltage going to solenoid and output voltage from the solenoid.

STEP 5: If the solenoid is not operating check the signal from the switch wire.

STEP 5.1: If there is no signal from the switch wire to solenoid check the wiring going to switch for any damage.

STEP 5.2: Inspect the switch and replace if necessary.

STEP 5.3: If the switch wire and switch are in good condition and working as intended, replace the solenoid.

STEP 6: If the solenoid operates correctly, check the voltage at the electrical motor terminals.

STEP 6.1: Disconnect wiring from electrical motor and test for the voltage

STEP 6.2: If there is no voltage at the electrical motor terminal wires when operating the system, follow and inspect the wiring going to electrical motor.

STEP 6.3: If the voltage readings are correct and the electric motor still is not rotating when electrified – replace the electric motor.

Problem: sheeting system is not operating - electric motor is rotating.

STEP 1: Check the condition of motor bolt connecting the electric motor output shaft to the rollerbar.

STEP 1.1: If the motor bolt is missing or has snapped, replace it with new M8 high tensile (grade 12.9) bolt.

STEP 1.2: If the motor output shaft has snapped, replace the electric motor.

STEP 2: Typically, the electric motor bolt or output shaft would be damaged if the system has been operated with a deformed rollerbar, check the condition of rollerbar. Bent rollerbar should be replaced before fitting new electric motor or motor bolt.

STEP 3: Check the condition of bearing opposite to electric motor connected to rollerbar, if damaged or in bad condition replace it to prevent further damage to system and potential down time.

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Problem: when closing the sheeting system arms are not moving to the rear of the vehicle but sheet is unwinding from the rollerbar - adjusting spring tension.

STEP 1: Check that the arms are not obstructed, making them unable to move. If there is obstruction secure the arm in place, remove the obstruction and slowly release the arms.

CAUTION

Arms are under high spring tension when in open position. Keep sheet under tension to prevent sudden movement of arms.

CRUSH HAZARD

STEP 2: Check the condition of the 22-coil underbody spring. If the spring is damaged - replace it.

CAUTION

These instructions are for guidance only, operators must perform their own risk assessment prior to replacing and/or re-tensioning the spring. Repair should be carried out by competent persons.

STEP 2.1: Unwind the sheet (tarp) completely so that the tipper body is covered, and the tarp is loose in the body. You may need to assist the arms to travel to the back of the vehicle.

STEP 2.2: Remove mounting bolts connecting rear cross bar to upper arm (section with 2 bends), slide cross bar out of upper arm, lower complete arm to the ground. You may need to remove the rubber tarp stops.

STEP 2.3: Remove the bolt connecting upper arm to lower arm, slide upper arm off lower arm.

STEP 2.4: Lower arm is connected to the hex shaft of spring assembly with machined pivot cast. Remove the grub screw from the pivot cast.

STEP 2.5: Pull off lower arm with pivot cast from the hex shaft – this may require applying heat, rust penetrating spray or hub puller – as this area may have some corrosion after a period of time.

STEP 2.6: With the lower arm removed from the hex shaft, push the hex shaft through the hex bearing towards the inside of vehicle.

NOTE: *If you are not replacing the spring skip to step 2.9*

STEP 2.7: Hex shaft with 22 coil spring and spring hook bracket should slide out on the back of the spring hanger bracket. If you don't have enough clearance to slide the shaft towards inside of the vehicle. Remove the grub screw in spring stop weldment bracket at the end of hex shaft and slide just the hex shaft towards the outside of the vehicle through the hex bearing.

STEP 2.8: Replace the damaged 22 coil underbody spring. Slide the spring over the hex shaft and insert the hex shaft into the hexagon bearing the same way it was removed in step 2.7

STEP 2.9: Make sure the spring is correctly located in the spring hanger bracket and that spring stop weldment bracket on hex shaft is engaging with the 22-coil spring tail.

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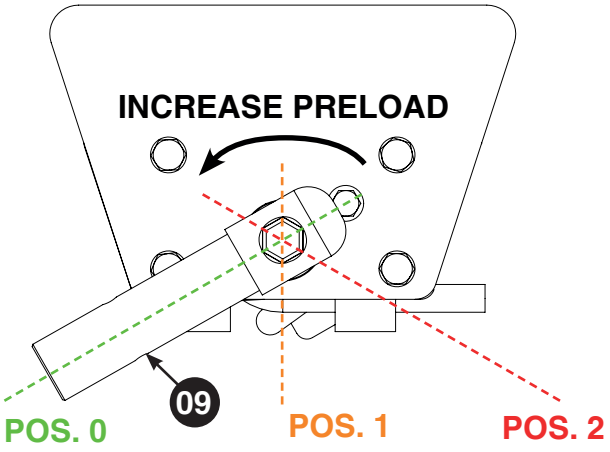
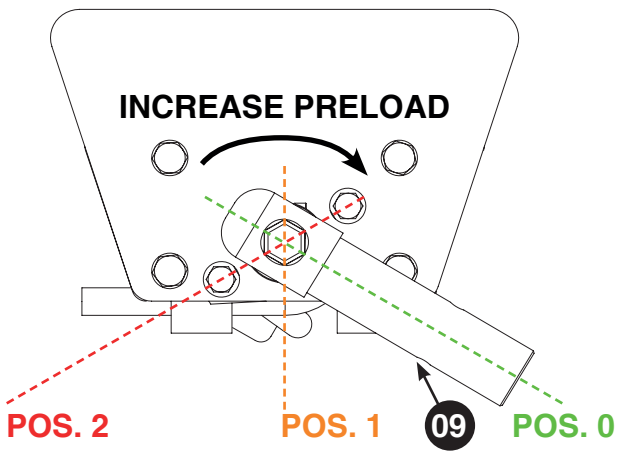
STEP 2.10: To get correct tension on 22 coil spring, turn hex shaft clockwise for passenger side (UK) and anticlockwise for driver side (UK) until it is in full contact with the spring.

DRIVER SIDE (UK)
SPRING ASSEMBLY



PASSENGER SIDE (UK)
SPRING ASSEMBLY



STEP 2.11: The lower arm should then be re-fitted to the hex shaft, by sliding the pivot cast on to the end of shaft. The correct position for the lower arm will be between 7 and 8 o'clock for the passenger side (UK) and between 4 and 5 o'clock for the driver side (UK).

STEP 2.12: Complete steps 2.5 to 2.1 in reverse to re-fit arms.

STEP 2.13: Test the system and adjust the spring tension, if necessary, make sure all fixings are tightened up.

Problem: arms are not travelling square when system is in motion.

STEP 1: Check that the metalwork (arms) is not damaged and/or bent - if necessary, replace damaged components.

STEP 2: Make sure the sheet is in good condition and is in the centre of the cross piece, secured in place with the rubber tarp stops, stopping it from sliding.

STEP 3: Check that the rollerbar is not bent and if the sheet is aligned with the centre of the rollerbar. If needed unwind the tarp from rollerbar and slide the sheet to correct position.

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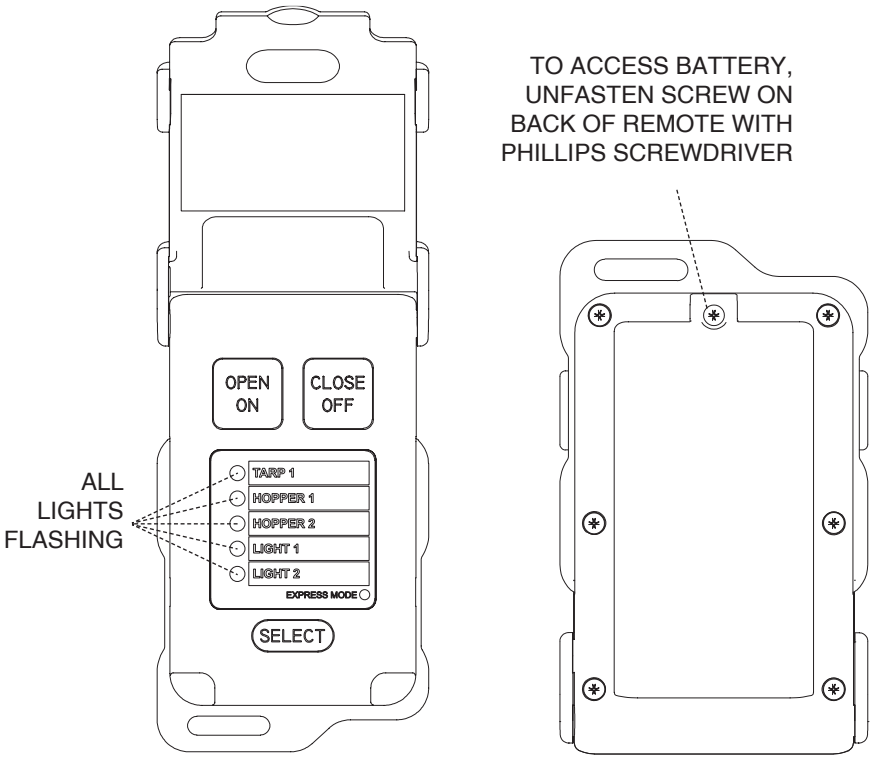
Problem: handheld Smart 3 remote is not working.

STEP 1: If you open the handheld remote and all lights are flashing together or no lights are present, this indicates low battery level – check battery terminals in remote to make sure they make good contact with the board.



STEP 2: If the remote does not light up after replacing the batteries – replace the remote with new unit.

STEP 3: If the handheld remote lights up but the system is not operating, check whether the system operates while using the OPEN or CLOSE buttons located on the lid of Smart 3 receiver mounted to the vehicle.

STEP 4: If the system is operating using the buttons located on the lid of Smart 3, try repairing the handheld remote to the control box.

STEP 4.1: Make sure Smart 3 control box is connected to power source.

STEP 4.2: Press and hold both OPEN and CLOSE buttons located at the Smart 3 lid simultaneously until you hear audible beep from control box (approximately 10 seconds). After you hear beep the control box will be in paring mode for 30 seconds searching for new remotes.

NOTE: *Before putting the remote into paring mode you can use the SELECT button to choose which channel you want to pair the control box to.*

STEP 4.3: While being near the Smart 3 control box. Open the lid on handheld remote and press and hold both OPEN and CLOSE buttons simultaneously until light on selected channel stops flashing and is constantly lit. This will mean the handheld remote is in paring mode.

NOTE: *All lights flashing on the handheld remote signals low battery level. Change batteries before paring the remote to control box*

STEP 4.4: Successful pairing will be confirmed by double audible beep from control box.

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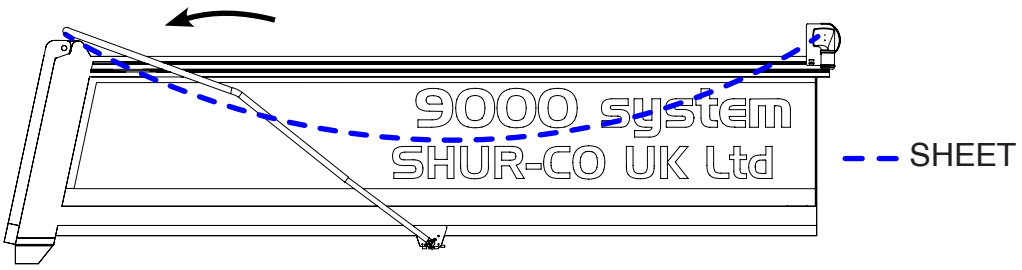
Guide: Replacing the Tarp on 9000 System

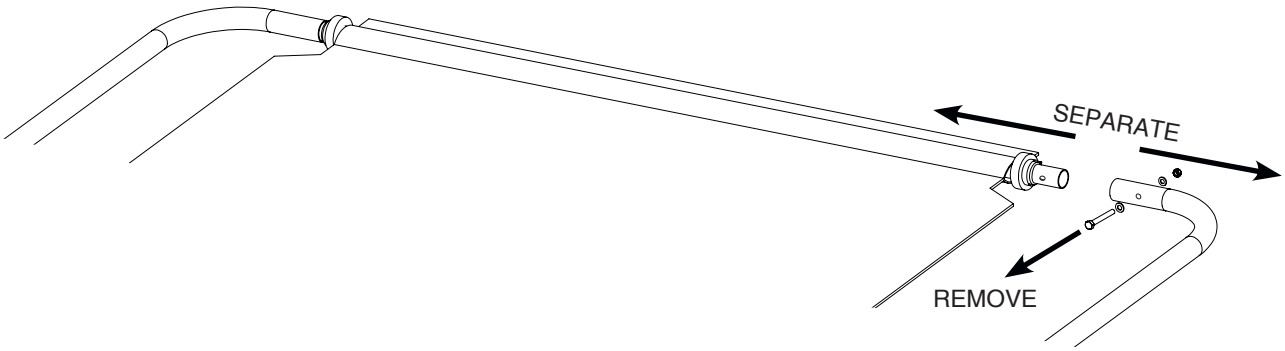
CAUTION

These instructions are for guidance only, operator must perform their own risk assessment prior to replacing sheet on vehicle.

STEP 1: Completely unwind the sheet (tarp) so that the tipper body is covered, and the tarp is loose in the body. You should be able to see the rollerbar groove where the kedar slides into the rollerbar and the arms should be resting at the rear of the vehicle.



STEP 2: Remove mounting bolts connecting rear cross bar to one of the upper arms (section with 2 bends). Lower the upper arm attached to lower arm to the ground. Keep the other arm with crosspiece at the back of the vehicle and secure it in place to prevent it from falling.



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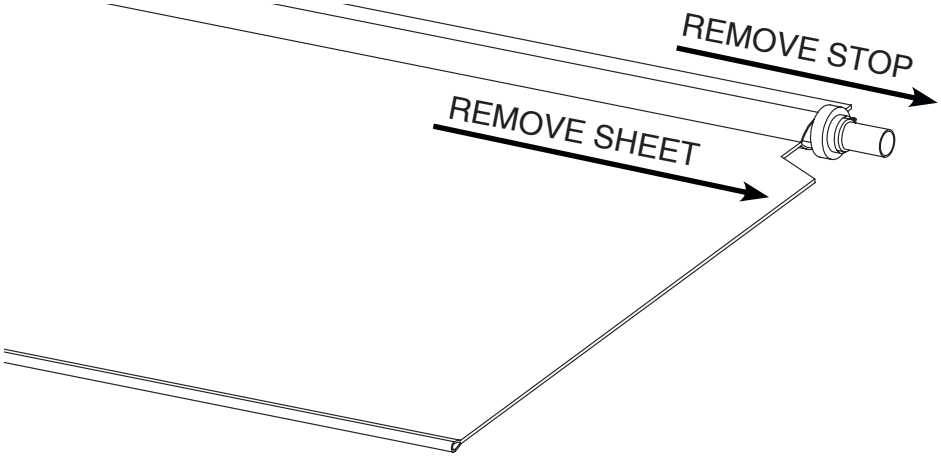
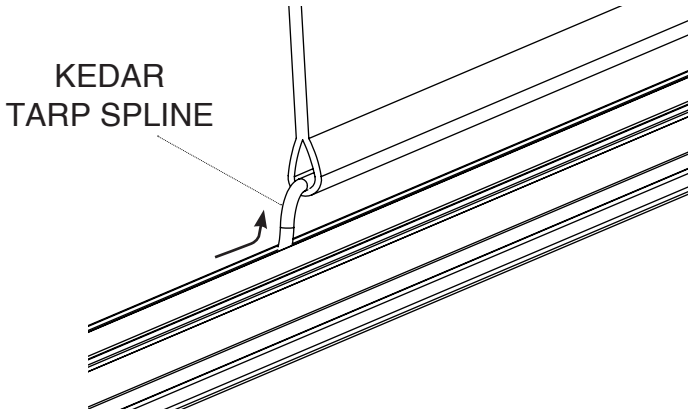
STEP 3: Remove the rubber tarp stops and slide the sheet off the cross piece.

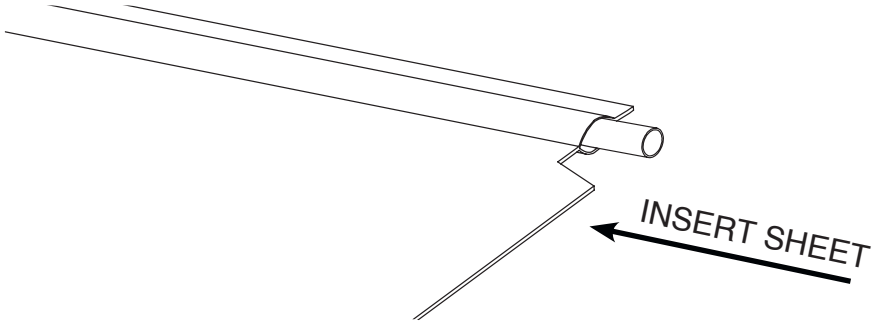


STEP 4: Remove the old sheet from the rollerbar by sliding it off through the cut out in centre of rollerbar

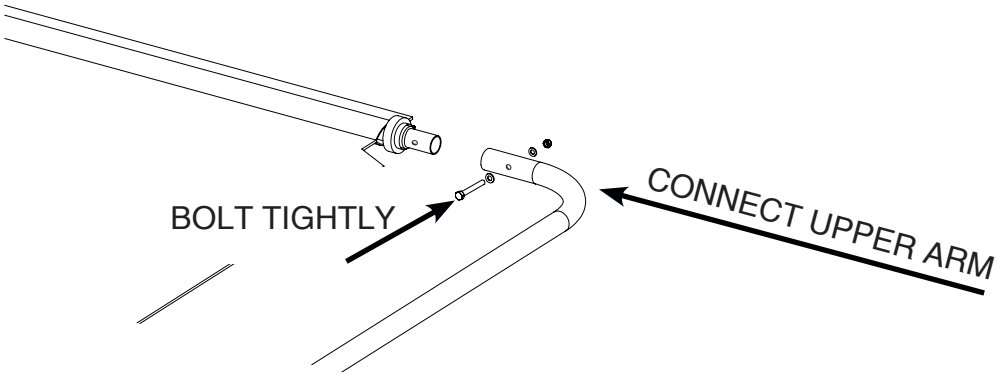


STEP 5: Open and lay the new sheet inside the vehicle with correct side up – Shur-Co tag at the pocket end should be visible facing the sky. Slide the new sheet kedar into rollerbar via the groove in the centre.

STEP 6: Slide the new sheet pocket onto the cross piece, ensure the sheet is not twisted.



STEP 7: Lift the upper arm from the ground and attach it to cross piece. Make sure the arm is bolted tight to cross piece.



NOTE: *Applying copper grease to cross piece where it inserts into upper arm, will prevent rust and allow easier removal in the future.*

STEP 8: Attach the rubber tarp stops, if previously removed ones are damaged replace them. Make sure the sheet is located squarely on the cross piece.

STEP 9: Visually check the metalwork, remove any debris that may be left on the new sheet and test the system.

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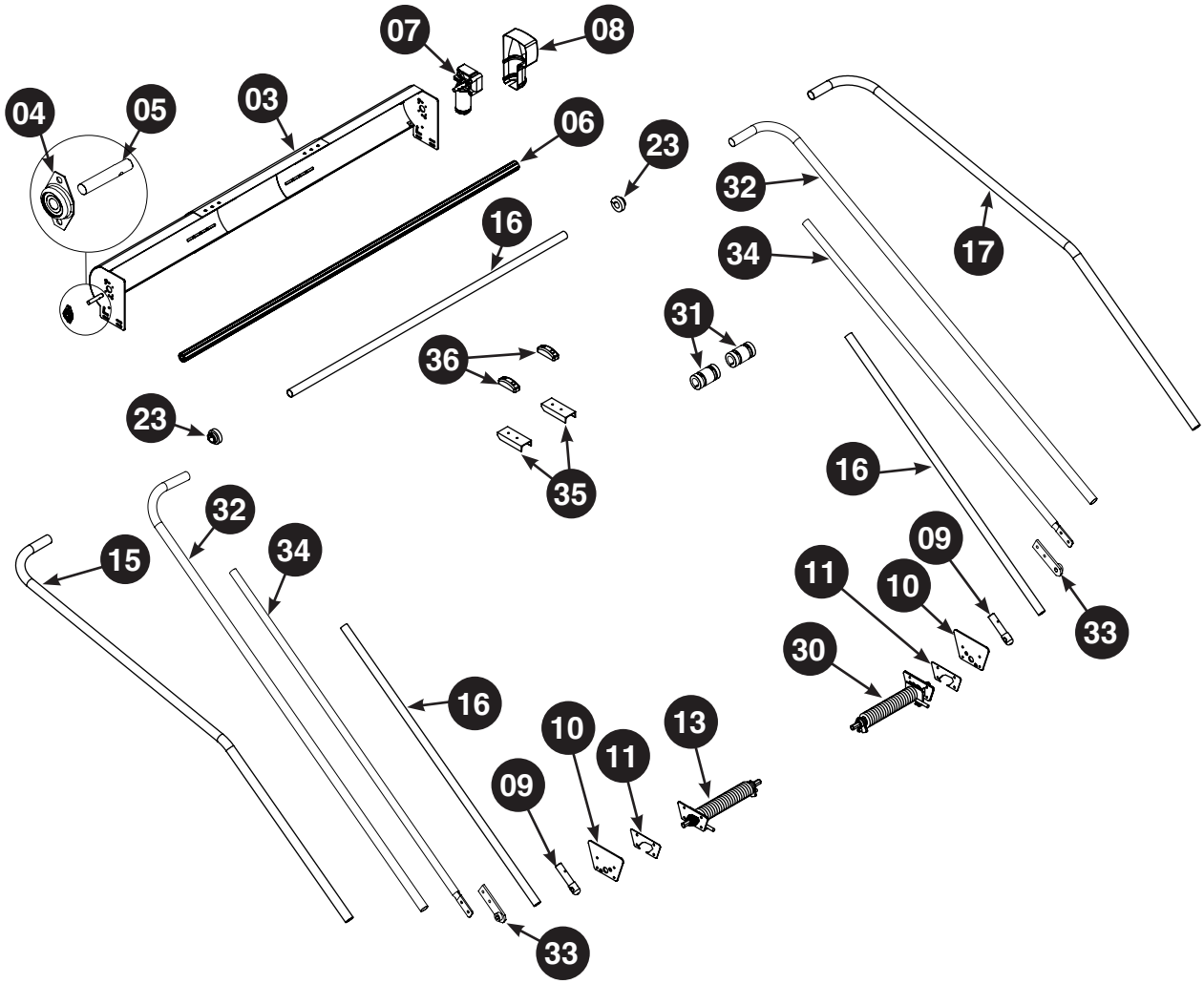
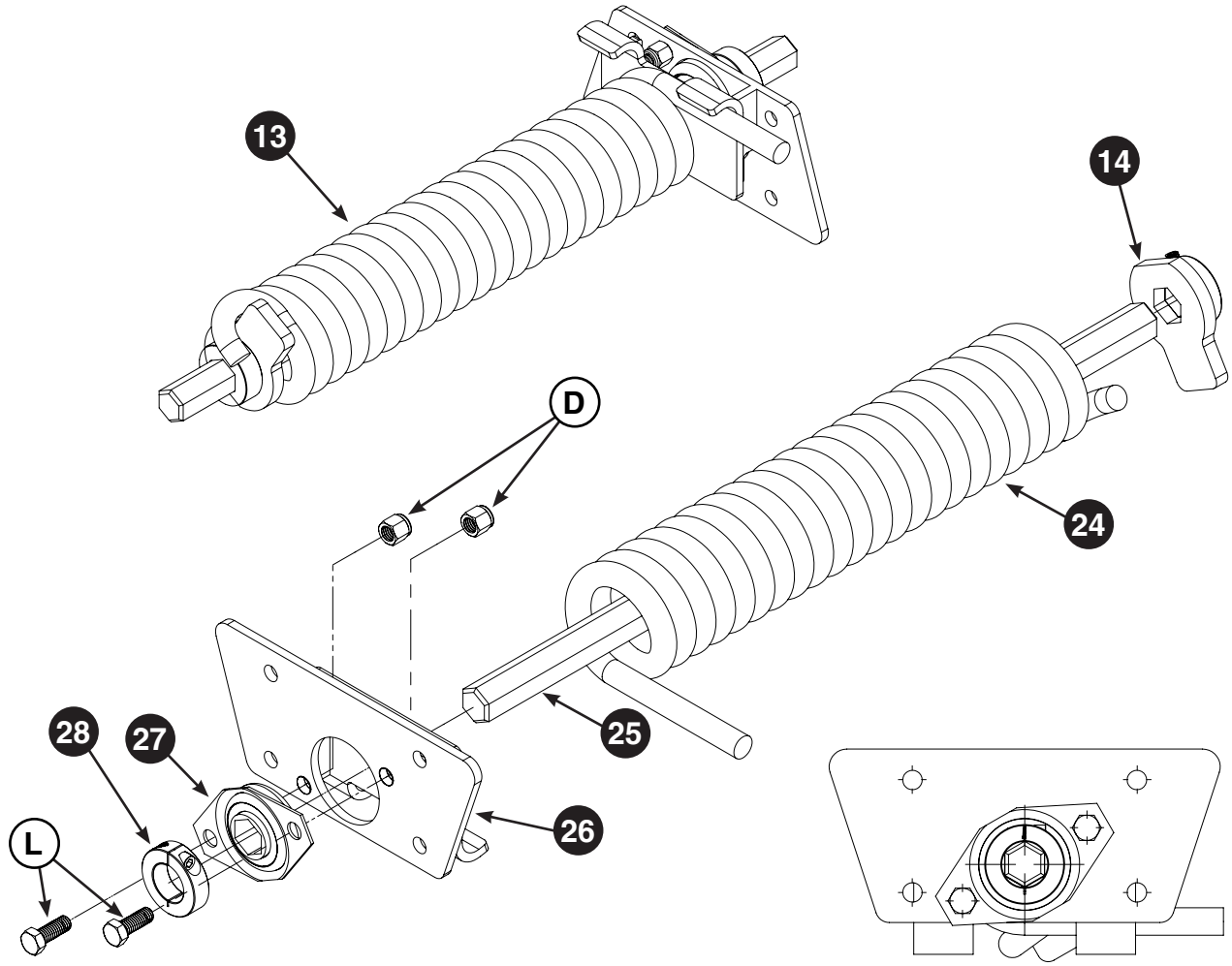
18. SPARE PARTS

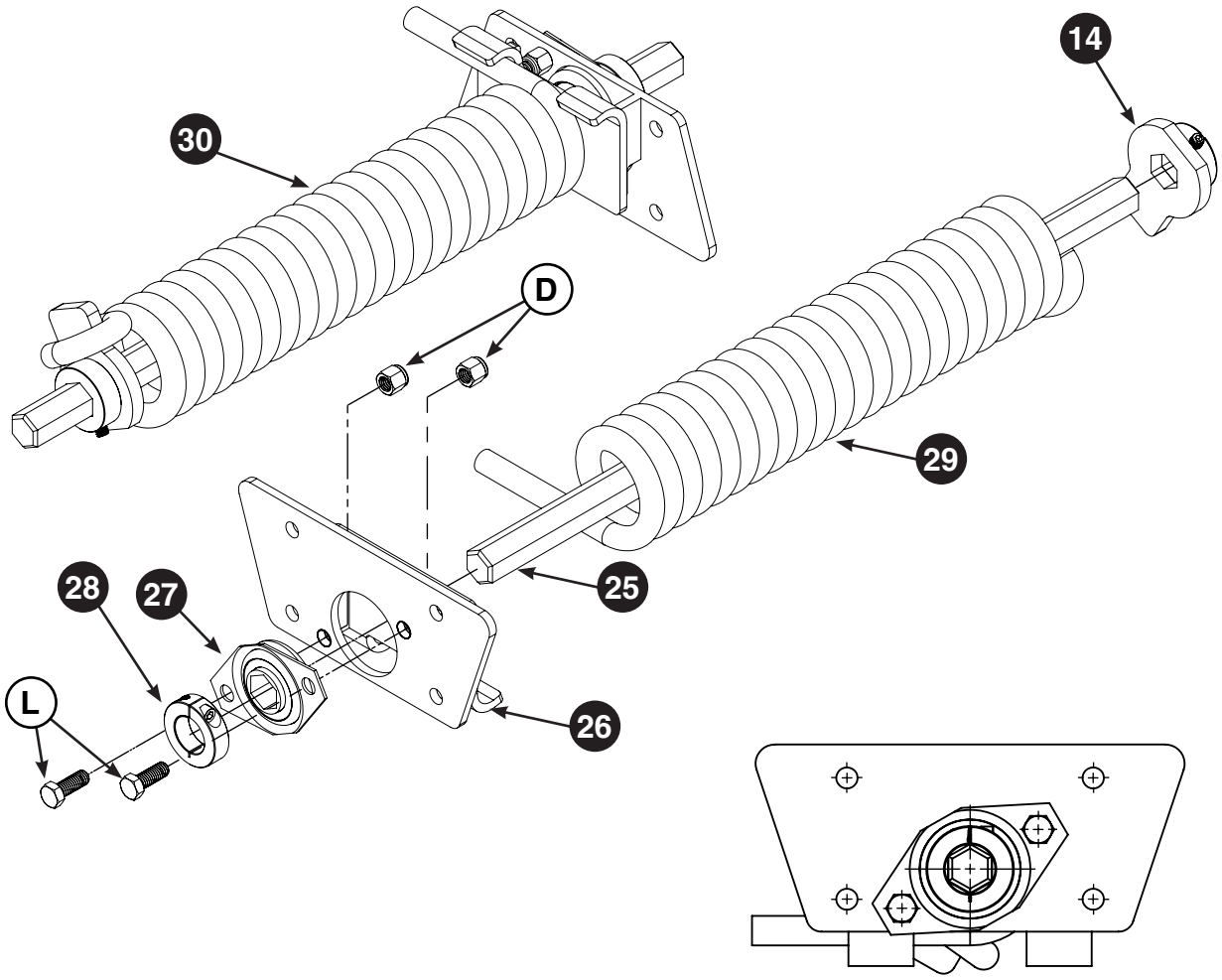


Item #	Part #	Description
03	1809707	HOUSING ASSEMBLY
04	1800042	3/4" BEARING (145)
05	1809639	3/4" SHAFT 4IN LONG
06	1800737	ALUMINIUM ROLLERBAR
07	1801965	DURABUILT MOTOR 24V
08	1808998	MOTOR COVER BLACK
09	1805436	PIVOT CAST
10	1800960	U/B SPRING MOUNTING PLATE
11	1801049	SPACER PLATE U/B SPRING
13	1808486	RH 22 COIL SPRING ASSEMBLY
15	1805466	9000 UPPER ARM RIGHT

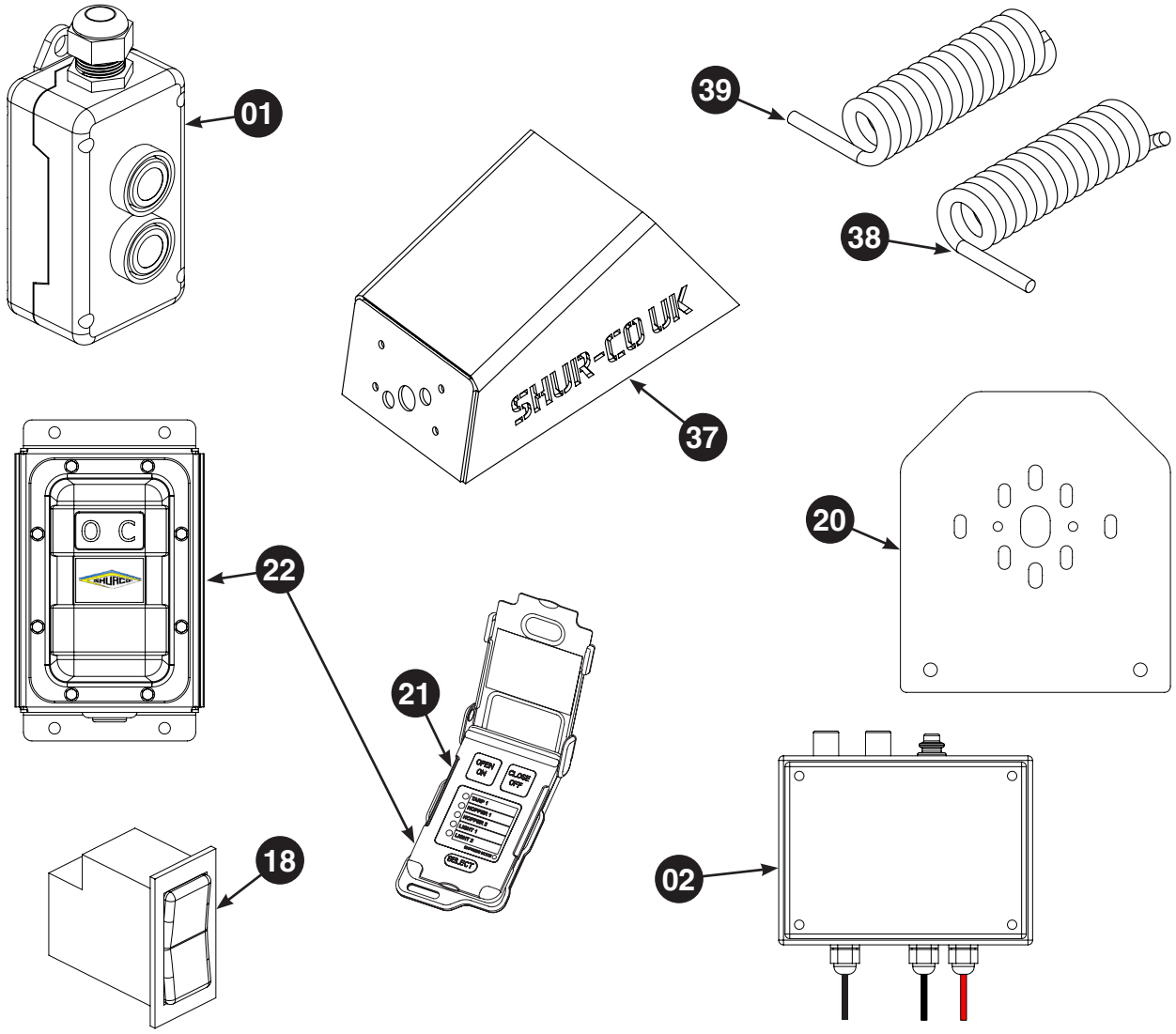
Item #	Part #	Description
16	1805458	LOWER ARM / REAR CROSS PIECE
17	1805464	9000 UPPER ARM LEFT
23	1805563	YELLOW RUBBER TARP STOPS
30	1808485	LH 22 COIL SPRING ASSEMBLY
31	1808819	XL RUBBER TARP STOPS
32	1805460	9000 STRAIGHT UPPER ARM
33	1800915	CRIMPED LOWER ARM BRACKET
34	1805458	CRIMPED LOWER ARM
35	1800744	STEEL ARM REST
36	1805524	4" x 1 3/4" RUBBER BUFFERS



Item #	Part #	Description	Item #	Part #	Description
13	1808486	RH 22 COIL SPRING ASSEMBLY			
14	1801305	SPRING STOP WELDMENT			
24	1800280	RH 22 COIL SPRING			
25	1810388	HEX SHAFT			
26	1800962	SPRING RETENTION PLATE			
27	1801243	HEX SHAFT BEARING			
28	1808989	SHAFT COLLAR			
D		M10 NYLON LOCKING NUT			
L		M10x25mm HEX BOLT			



Item #	Part #	Description	Item #	Part #	Description
14	1801305	SPRING STOP WELDMENT			
25	1810388	HEX SHAFT			
26	1800962	SPRING RETENTION PLATE			
27	1801243	HEX SHAFT BEARING			
28	1808989	SHAFT COLLAR			
29	1800279	LH 22 COIL SPRING			
30	1808485	LH 22 COIL SPRING ASSEMBLY			
D		M10 NYLON LOCKING NUT			
L		M10x25mm HEX BOLT			



Item #	Part #	Description	Item #	Part #	Description
01	1805543	EXTERNAL SWITCH			
02	1805480	RELAY BOX 24V			
18	1805521	ROCKER IN-CAB SWITCH			
20	1805570	MOTOR MOUNTING PLATE			
21	1126867	S3 REPLACEMENT REMOTE			
22	1127921	S3 CONTROL BOX C/W REMOTE			
37	1805440	SPRING PIVOT BOX			
38	1800071	LH 15 COIL SPRING			
39	1800072	RH 15 COIL SPRING			

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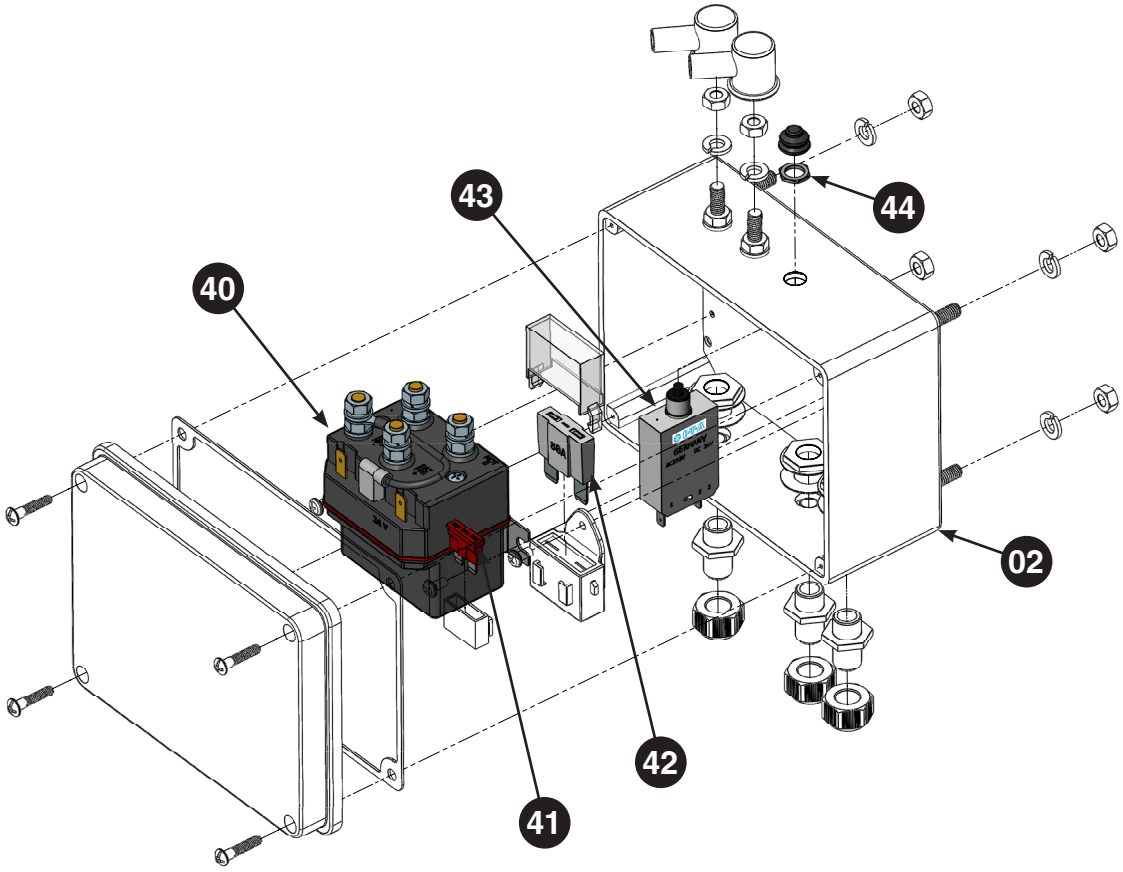
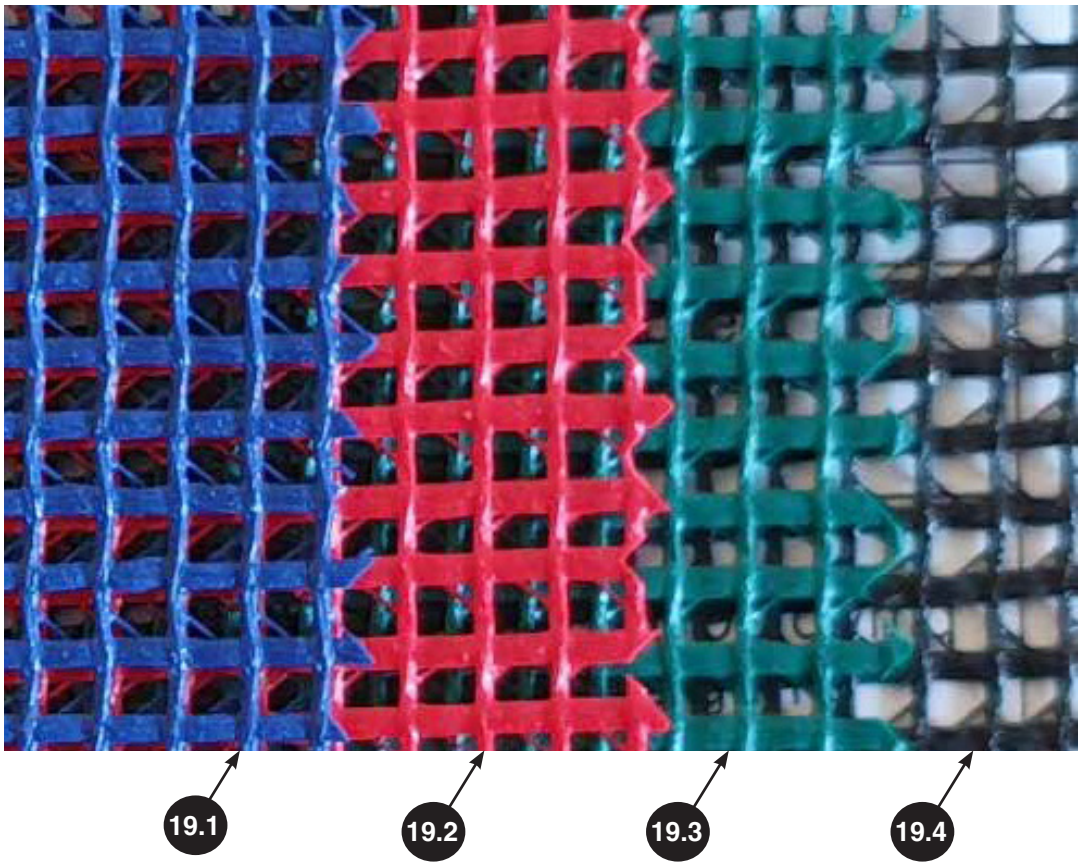


Item #	Part #	Description	Item #	Part #	Description
02	1805480	RELAY BOX 24V			
40	1805439	24VDC SOLENOID			
41	1811427	10A FUSE			
42	1811426	80A FUSE			
43	1808786	RESET SWITCH			
44	1805519	RUBBER BOOT & HEX NUT			

REPLACEMENT SHEETS IN STANDARD MESH



Item #	Part #	Description	Item #	Part #	Description
19.1	1808564	UK FRONT TO REAR BLUE			
19.2	1808566	UK FRONT TO REAR RED			
19.3	1808565	UK FRONT TO REAR GREEN			
19.4	1800665	UK FRONT TO REAR BLACK			

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