

TOOL USE INSTRUCTION

RIVIAN

TOOL NUMBER TSN01559-100-A

TITLE FIT GLASS INSTALLATION SYSTEM

REV - DATE REV A - 04/10/2025

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TOOL FUNCTION

REMOVAL AND INSTALLATION OF R1 AND EDV GLASS

Instructions on REV A document are specific to EDV (RCV/RSV) 500/700



OVERVIEW

LABOR CODES:

523410010 - Windshield (Remove and Replace)

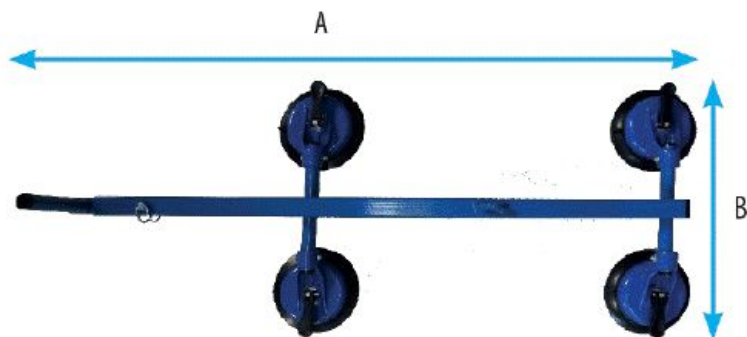
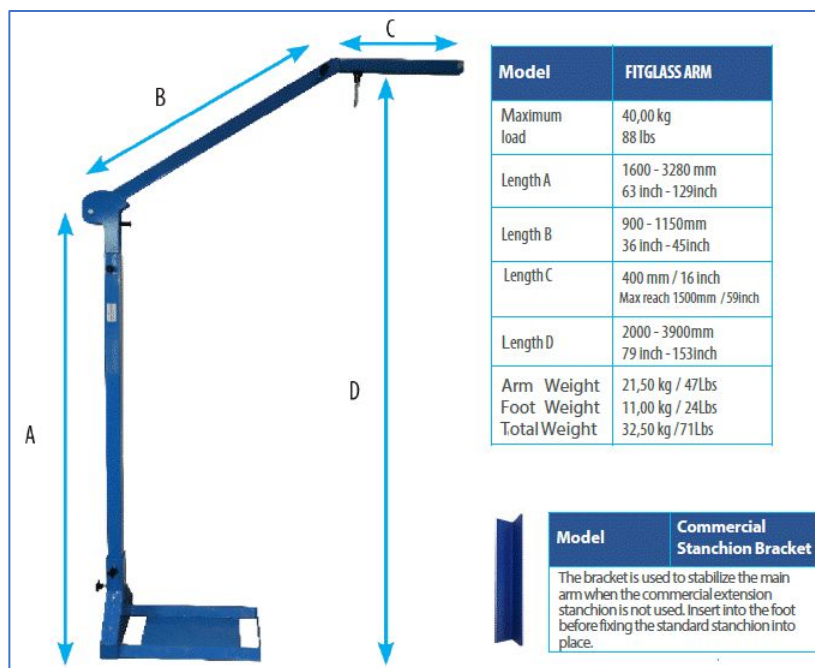
OTHER TOOLS REQUIRED:

TSN01568-300-A Windshield- Rotating Stand

TSN01013-100-A Raptor Deluxe kit

x2 Step ladder (3 or 4 step)

SPECIFICATIONS:



Model	Support Frame
Maximum Load	40,00 kg / 88 lbs
Dimensions	A : 1 000 mm / 39 inch B : 400 mm / 16 inch
Weight	5,00 kg / 11 lbs
Suction Cup	Ø 140 mm / 5.5 inch
Part Number	PP-WST200S

The arm assembly can be split down into 3 separate parts to reduce weight:

Main Stanchion: 8kg / 17lbs

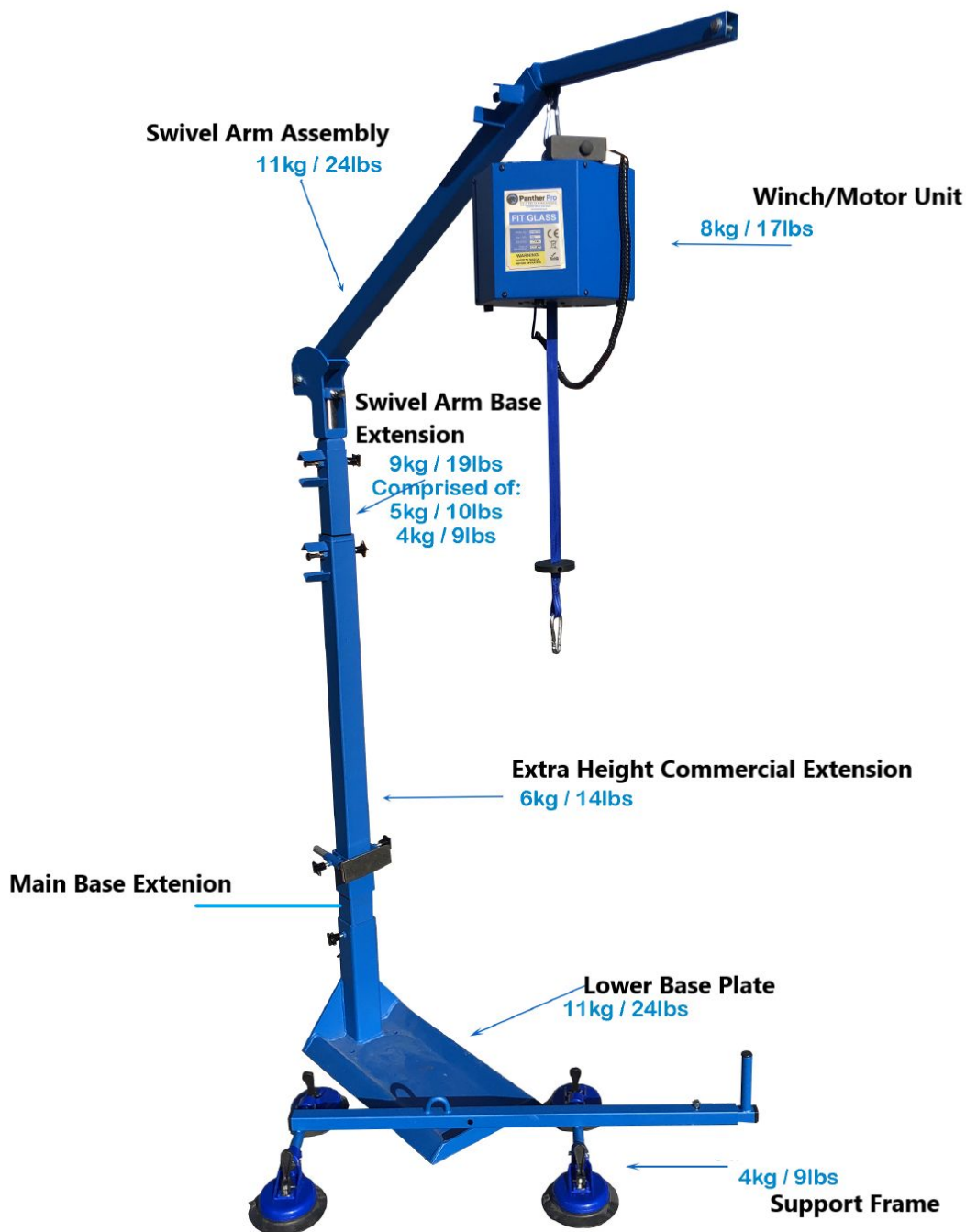
Commercial Extension: 7 kg/ 22lbs

Swivel Arm: 6.7kg / 15lbs



OVERVIEW

SPECIFICATIONS (CONT.)

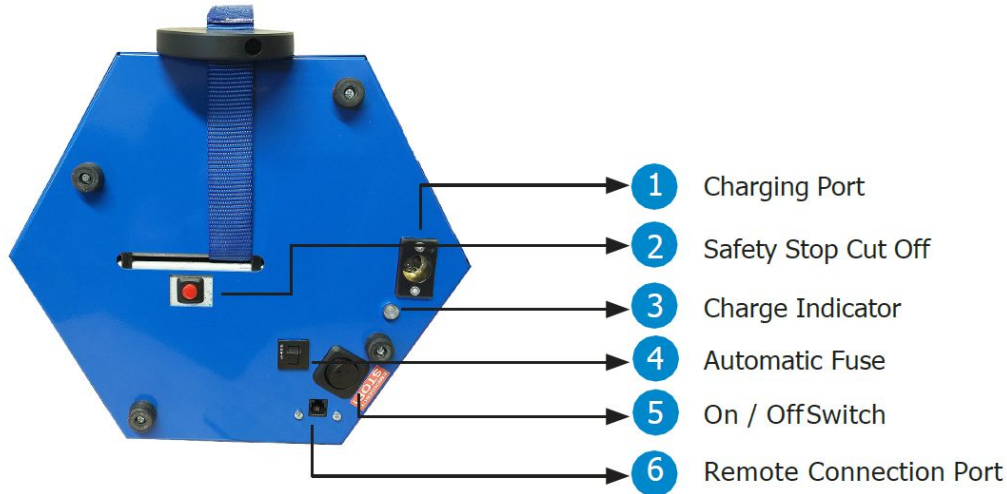


The arm assembly can be split down into 4 separate parts to reduce weight:
Main Stanchion: 2 Parts 5kg / 10lbs + 4kg / 9lbs Total 9kg / 19lbs
Commercial Extension: 6kg / 14lbs
Swivel Arm: 11g / 24lbs



SPECIFICATIONS (CONT.)

Controls



How to charge your Fit Glass battery:

Plug in the mains charger to the charging port 1, If the batteries are very low it may take up to 48 hours to charge.
If charging from an Inverter it must be a Pure / True Sine wave type inverter otherwise it may damage the Fit Glass.
Do not leave the charger plugged into the Fit Glass if the mains power is not on, otherwise this will drain the batteries.

The charge indicator 3 shows 3 levels of charge:

- 1. Green.....Fully charged ●
- 2. Yellow.....50% Charge ●
- 3. Red.....Do not start job. ●
Battery must be recharged to avoid damage.



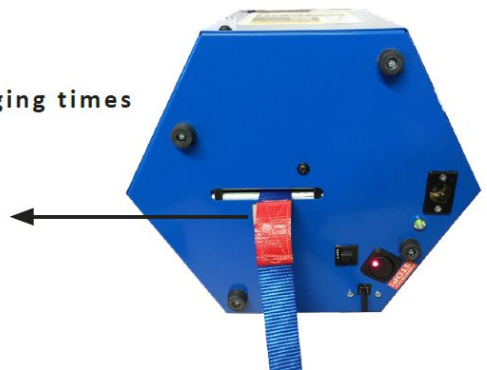
The remote control has a speed sensitive controller button. Use slow and steady inputs to the button to avoid jerky movements that will cause a bouncing of the glass and hinder a smooth fitment.

CHARGE EVERY NIGHT IF POSSIBLE

To avoid battery damage and excessively long charging times

The red tag indicates that you are at the end of the strap and not to go any further. If you continue to unwind the strap it will result in a tool malfunction and may damage the Fit glass. If you do go too far the strap will re-spool the wrong way and the direction of travel will become inversed

The safety stop cut off switch 6 prevents the support frame from coming into contact with the winch body.







**WARNING**

Do not perform procedure if tool is damaged or missing parts. Consult the Rivian Service Tool Catalog for replacement components.

Failure to follow guidelines outlined in this document could result in injury and/or property damage.

SAFETY GUIDELINES

1	<ul style="list-style-type: none"> • Eye protection • Closed toe shoes • Gloves 	
2	CAUTION Risk of <ul style="list-style-type: none"> • Damage to vehicle or property if tooling is used incorrectly 	
3	CAUTION Risk of Pinch Point <ul style="list-style-type: none"> • Keep hands and fingers clear of all moving parts. 	
4	Risk of major injury such as: <ul style="list-style-type: none"> • crushing / maiming • cuts / lacerations • death If tooling is used incorrectly	

DO



1. Wear the correct protective equipment (safety shoes, safety glasses etc.)
2. Inspect the entire system for damage before each use
3. Check that the winch is sufficiently charged to complete the job
4. Use the tool on level ground.
5. Separate all parts when handling the system to reduce the overall weight to be lifted. Apply correct manual lifting and handling techniques.
6. Beware of any pinch points when unfolding the arm
7. Only use on hard surfaces

DO NOT

1. Exceed the safe working load limits
2. Over-extend the strap
3. Over-extend the support arm
4. Use in a wet or high wind environment
5. Open the winch housing, all repairs should be carried out by a certified Panther Tools distributor
6. Use in area with presence of combustible gasses or dust
7. Use the system if any individual part is damaged.







INITIAL SETUP

1	Find a level space, ensuring that there is enough room to walk around the vehicle to allow movement of the glass when attached to the winch.	
2	Drive onto the plate and then put the vehicle in neutral so that it settles in the middle of the lower base plate.	
3	Once the vehicle has settled onto the plate, ensure the vehicle is in PARK with the EPB (electronic parking brake) actuated.	
4	Ensure that there is sufficient room between the plate upright and the vehicle body to insert the support arm. Minimum of 10cm (4 in) in spacing.	







INITIAL SETUP

5	NEVER attach or remove the support arm on the plate unless the plate is securely fixed under the wheel.	
6	Insert the Main base extension	
7	Slide the tire support bracket onto the Main base extension	
8	Install the tire support onto the tire support bracket	


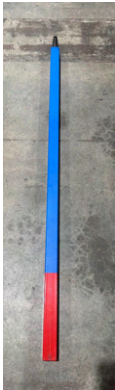




INITIAL SETUP

9	Insert the Main base extension into the lower base plate. Tighten the two screws in the base plate	
10	Set the tire support depth onto the tire.	
11	This is how it should look like once the Main base extension is set up.	
12	You will next get the Extra Height Commercial extension	

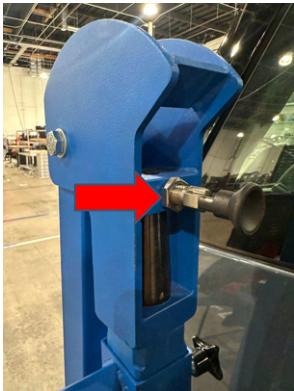
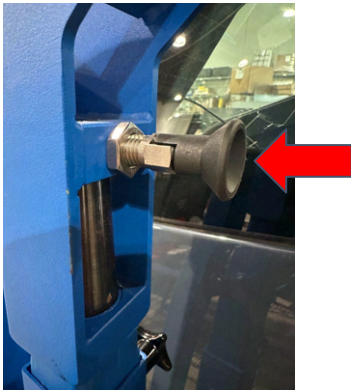
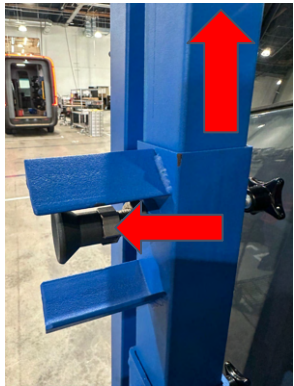



INITIAL SETUP




13	<p>Pull the slide pin and hold it in the “unlock” position and back out the turn screw to allow the extra height extension to slide all the way down into the Main stanchion</p>	
14	<p>Locate the Swivel Arm Base Extension and prepare to insert it.</p>	
15	<p>Pull the slide pin and hold it in the “unlock” position and back out the turn screw to allow the swivel arm base extension to slide all the way down into the Main stanchion</p>	
16	<p>Get the Swivel Arm assembly and prepare to install it on top of the Swivel Arm Base Extension</p>	




INITIAL SETUP

17	Keep the pin extended to help with installation over the taper guide on the Swivel Arm Base	
18	Lower the Swivel Arm assembly over the taper end and lock into place with the pin.	
19	Pull the pin on the Main stanchion and lift the Swivel arm base extension to set the height on the second hole (leaving one hole exposed)	
20	Once the swivel arm is installed, it will fold over the assembly. Make sure that one hole is exposed to set the height of the Swivel Arm Base.	







21	Set the height for the Extra Height extension (middle slide bar). set the lock at the 3rd hole (leaving 2 holes exposed and visible)	
22	Once all heights have been set it should look like this: Swivel Arm Base extension (set at 2nd hole leaving one hole exposed)	
23	Extra Height Extension (set at 3rd hole leaving 2 holes exposed)	
24	WARNING: Once the upper section is raised there is always one hole that is covered. Ensure that the lower section locating pin is aligned with an open hole, if not there is a risk of the arm dropping suddenly and causing possible damage to the vehicle.	




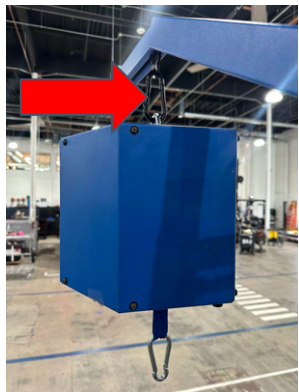

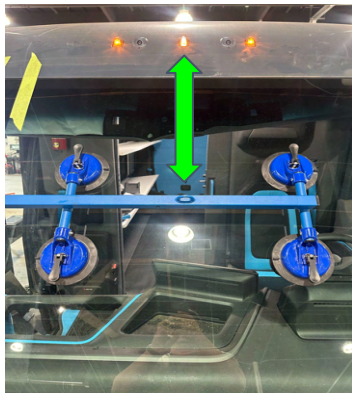
1	<p>Extending the Mast:</p> <p>When raising the mast, always extend the upper section first. When lowering the mast, always lower the bottom section first. Stop when the red section of the arm is showing. Always control the stanchion you are moving with your freehand.</p>	ADD A PICTURE
2	<p>Once you have achieved your desired height using the lower vertical support, ensure that the spring pin is correctly located and tighten the large security knobs to ensure the risk of a sudden drop is minimized.</p>	
3	<p>Warning: Tighten all knobs and secure all pins in the locking position before continuing.</p>	
4	<p>You can now move on to setting up the Swivel arm</p>	

INITIAL SETUP

25	Flip the Swivel arm assembly to position it over the windshield of the vehicle.	
26	Setup a step assembly to get proper access to the adjustable portion of the swivel arm.	
27	Adjust the length of the swivel arm by pulling the retracting pin and setting the locked position. Set length and lock to the 7th hole with 5 1/2 holes exposed.	
28	Locate the mounting loop on the Winch/Motor Unit	





INITIAL SETUP

29	Locate the carabiner on the swivel arm assembly	
30	Attach the mounting loop of the Winch/motor unit to the carabiner on the Swivel arm assembly	
31	Locate the support frame and prep the windshield (clean, etc.) to attach the support frame to it.	
32	Install the Support frame in the middle of the windshield below the upper header marker lights. Center the Support frame loop to the middle upper header marker lamp.	



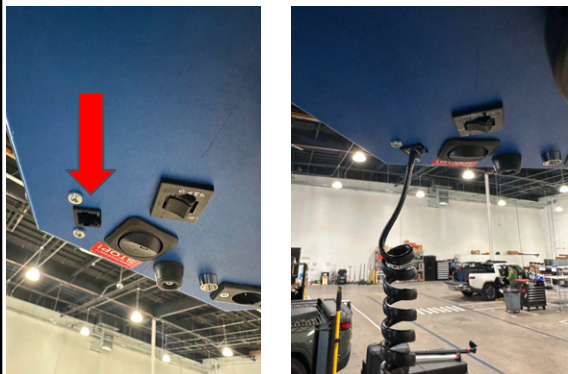


INITIAL SETUP

33	<p>The distance between the top of the windshield to the loop on the support glass should be about 23 in.</p>	
34	<p>Install the separate suction cup setup (has velcro patch for the winch control) on the passenger side of the windshield on the lower section to provide a handle to control the movement of the windshield</p>	
35	<p>For added control and stability you can add an additional suction cup setup to the driver side of the windshield (not provided in the kit but available in the glass and glaze kit)</p>	
36	<p>You are now ready to cut the windshield out of the vehicle. Refer to service manual procedure: EDV windshield remove/replace</p>	

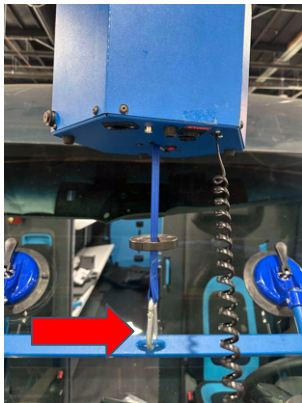




TOOL USE INSTRUCTION





1	Refer to service manual procedure: EDV windshield remove/replace to cut out the windshield. Once the windshield is ½ way cut out you will need to setup the tool to be ready to support the glass once it is all the way cut out.	
2	Locate the remote control for the winch/motor unit.	
3	Locate the end of the remote control unit	
4	Plug the end into the Remote connection port location of the Winch/Motor Unit	



TOOL USE INSTRUCTION




5	<p>You will use the remote control to lower the the strap to meet the loop on the support stand. Connect the carabiner on the strap to the support frame loop</p>	
6	<p>Mount the remote to the suction cup assembly on the passenger side (remote is held on with velcro)</p>	
7	<p>Once it is mounted, the setup should look similar to this:</p>	
8	<p>Continue to cut out the remainder of the windshield following the service procedure: EDV windshield remove/replace</p>	






9	<p>When the windshield is ready to be removed from the vehicle, apply some tension to the support beam to prevent the windshield from dropping.</p>	
10	<p>Once the windshield is fully cut, you can start to rotate the windshield towards the driver side. This will require 2 technicians to ensure stability and safety is maintained</p>	
11	<p>Position the TSN01568-300 Windshield- Rotating Stand to the driver's side to allow placement of the removed windshield onto it.</p>	
12	<p>Position the windshield onto the stand with the support stand landing onto the 90 degree handle part of the stand. Install pin to prevent windshield assembly from moving with the support stand.</p>	



TOOL USE INSTRUCTION




13	Disconnect suction cups with Windshield on the rotating stand and with 2 technicians, lift and discard the windshield to the appropriate location.	
14	Flip open the Windshield rotating stand (TSN01568-300) to prep for mounting the new windshield to the stand.	
15	Locate the new windshield and attach the support frame to the center of the windshield (as close to the same position as when it is mounted on the vehicle). Attach the additional suction cup assemblies in the similar setup as on the vehicle.	
16	It will take x2 technicians to remove the windshield from the parts packaging and move it to the Windshield rotating stand.	






17	<p>Mount the new windshield on the rotating stand with the support frame attached.</p> <p>Be sure to secure the support frame to the rotating stand with the pin lock</p>	
18	<p>Rotate the windshield on the stand to the “laying down” position and continue with prepping the vehicle and glass for installation</p>	
19	<p>Prep vehicle for windshield installation referring to the service procedure: EDV windshield remove/replace NOTE: For installation of the windshield, you will need to have 2 sets of steps on both sides of the EDV to aide with installation.</p>	
20	<p>Once the windshield is ready for installation, you will need to check and secure all suction cups on the rotating stand and flip the windshield in the vertical position.</p>	




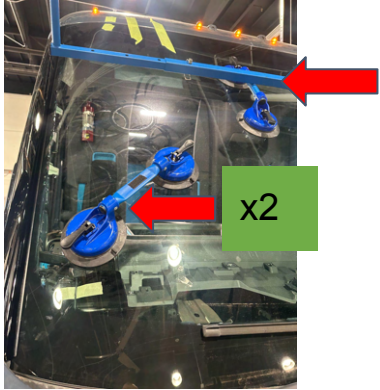
TOOL USE INSTRUCTION




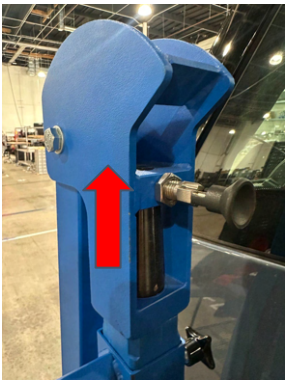
21	Mark the location of the dowel on the windshield with a piece of tape on the outside. This will help with windshield placement during the installation phase.	
22	On the vehicle side, mark with a piece of tape the location of where the dowel on the windshield will be placed. That way during installation it provides the technicians guidance on how to properly locate the windshield position.	
23	With the windshield in the vertical position, connect the carabiner to the support frame loop.	
24	After the carabiner is connected to the support frame loop, remove any slack in the strap using the remote and apply light tension.	







25	<p>With the light tension on the support frame holding the windshield, remove the pin.</p>	
26	<p>With control of the winch with the remote and the help of a second technician, lift the windshield from the stand and guide it towards the vehicle.</p> <p>You can control the height of the windshield and with the help from the 2nd tech, you can guide it from left to right.</p>	
27	<p>Note:</p> <p>The remote has a speed sensitive button that enables smooth movement of the strap.</p> <p>If you move operate the controller too quickly, it may cause the glass to “bounce”, requiring a reset on the winch</p>	
28	<p>Guide the windshield to the tape marks on both the windshield and the vehicle to help with windshield alignment and proper placement of the dowel pins.</p>	



<p>29</p>	<p>Once the windshield is installed, tape it down to ensure that the position of the windshield does not shift.</p>	
<p>30</p>	<p>Remove the Support Frame as well as the suction cup assemblies (x2) from the windshield</p>	
<p>31</p>	<p>Finish re-assembly of the vehicle using the service manual</p>	
<p>32</p>	<p>Perform all necessary ADAS calibrations if cameras have been moved or replaced during the procedure.</p> <p>Calibrate the Rain/Light sensor.</p>	



1	<p>WARNING: DO NOT disassemble the Fit Glass 40 kit when there is no vehicle over the Foot/ Base plate!</p> <p>This will cause the system to tip over and cause damage and/or injury to property or people</p>	
2	<p>Always start with removing of the winch/motor assembly from the swing arm assembly</p>	
3	<p>Fold the swing arm assembly until it is up against the Extra Height extension</p>	
4	<p>You can now remove the swing arm assembly by pulling the pin lock and sliding it upwards off the Swivel Arm Base taper end</p>	

TOOL DISASSEMBLY

5	Unlocking the required pins and the knob screws, you can now slide upwards the Swivel Arm Base	
6	Unlocking the required pins and the knob screws, you can now slide upwards the Extra Height commercial extension	
7	Unscrew the knobs and pull back the tire support.	
8	Unlocking the required pins and the knob screws, you can now slide upwards the Main Base Extension	



TOOL DISASSEMBLY

9	The vehicle wheel should be left on the Foot/base plate after everything has been removed	
10	Drive vehicle off the Foot/Base plate	



BASIC MAINTENANCE GUIDE

TASK	FREQUENCY
<p>Check the strap for any signs of excessive wear. If the strap is cut or frayed do not use. If in doubt DO NOT USE.</p>	<p>Before each use</p>
<p>Check that the red safety button is working correctly. To do this wind out at least 50 cm (~19.5") of strap. Taking a suitable tool commence winding back the strap and with the tool push the red button. The motor should cut out immediately. If this does not happen DO NOT USE.</p>	<p>Before each use</p>
<p>Check that all parts are moving freely. If in doubt DO NOT USE.</p>	<p>Before each use</p>
<p>Check that the suction cups are clean and free of damage.</p>	<p>Before each use</p>
<p>Check the carabiners and make sure they close correctly and are not damaged. If they do not close correctly do not use.</p>	<p>Before each use</p>
<p>Check that the metal work is free from structural damage and all the welds are intact. If structural damage is present or the welds are damaged do not use.</p>	<p>Before each use</p>



BASIC MAINTENANCE GUIDE (CONT.)

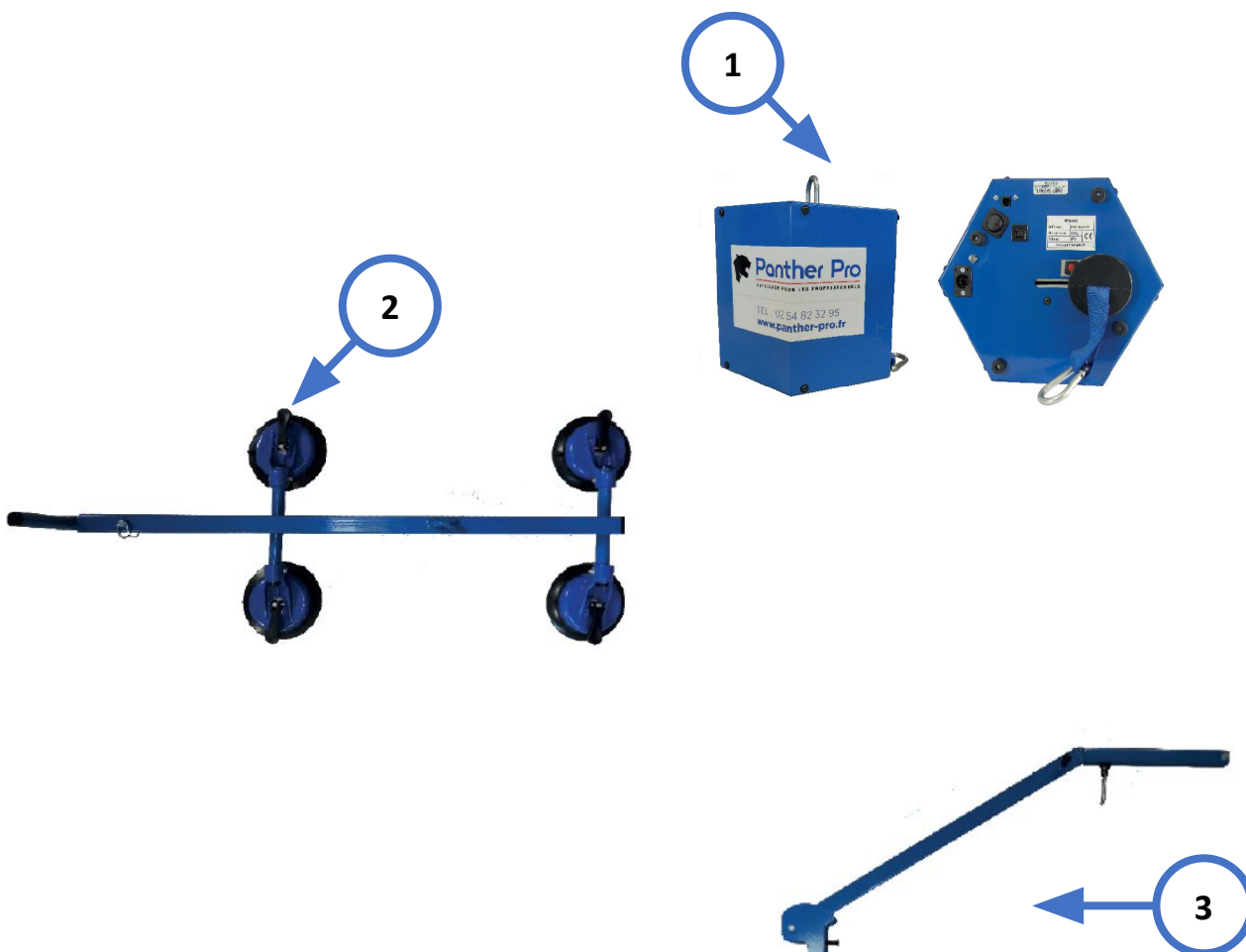
TASK	FREQUENCY
Check that the bearing slider moves freely. If you do not have a full range of movement on the bearing slider do not use.	Before Each Use
Check that the locating pins are free moving and locate correctly. If the pins do not locate easily and correctly do not use.	Before Each Use
Check that the remote works correctly and when you let go of the control button the winch stops. If this does not happen do not use	Before Each Use
Check that the battery has enough charge to complete the task. If it does not show a green light charge the unit before use.	Before Each Use
Suction cups (ALL)	Clean and Inspect before each use. Replace if necessary
Take apart all the different elements of the system. Inspect all areas for damage and ensure that they are clean and free from dirt.	Every 6 Months



SERVICE & REPLACEMENT COMPONENTS

FOR OTHER ITEMS NOT SHOWN, CONTACT RIVIAN SERVICE TOOL ENGINEERING

ITEM	DESCRIPTION	SUPPLIER + PART NUMBER
1	Winch/Motor Unit	PP-WST200
2	Support Frame	PP-WST200S
3	Swing Arm Assembly	PP-WST200A



PROBLEM	SOLUTION
Winch/Motor unit is not turning ON	<ul style="list-style-type: none"> • Check Battery level and charge as needed • Check ON/OFF switch
Winch/ Motor Unit stops while operating the windshield	<ul style="list-style-type: none"> • Operate the winch remote more smoothly to prevent "bounce" • Excessive "bounce will cause the Winch/Motor Unit to STOP for safety reasons due to weight strain • Turn OFF/ON the winch/motor unit
The Fit Glass 40 creaks while rotating and moving the glass	<ul style="list-style-type: none"> • Check all screw knobs for tightness • Check all pin locks to ensure that they are locked and secured
Suction cups are not holding as intended	<ul style="list-style-type: none"> • Replace the suction cup assemblies • Replace the support frame suction cups • Clean the glass and the suction cup surface





DANGER

Risk of electrocution or electric shock



WARNING

Risk of minor injury



DANGER

Risk of major injury such as

- fire
- chemical or poison
- crushing / maiming
- death



CAUTION

Risk of

- damage to vehicle or property
- data disruption
- voiding warranty



CAUTION

Risk of Pinch Point

- keep hands and fingers clear of all moving parts.



PPE REQUIRED

REVISION LOG

REV	DATE	CHANGE DESCRIPTION
A	04/08/2025	Initial release