



# Defender



Installation Instructions



## Discovery Emuwing Installation Instructions

Due to the intrusion of the hinge this product is not suitable for vehicles with passengers in the seats adjacent to the Emuwing. The Emuwing is designed as an addition to a storage system and should be removed if the seats adjacent to the Emuwing are ever reinstated.

### Parts List

 <p>Frame 1 per side</p>	 <p>Wing Panel x 1 per side</p>	 <p>Glue and Nozzle x 1 per kit</p>
 <p>Support Brackets x 2 per side</p>	 <p>Hinge &amp; Faceplate – One front &amp; One rear per side (Pre-Assembled)</p>	 <p>Weather Seal, 1 per side cut to length</p>
 <p>Gas Struts – two per side</p>	 <p>Panhead bolts x 4 per side</p>	 <p>Pinch Weld, 1 per side cut to length</p>
 <p>M4 Nyloc Nut x 8 per side</p>	 <p>M4 Nyloc Washer x 8 per side</p>	 <p>M4 Hex Bolts x 8 per side</p>
 <p>Keyring x 1 per kit Keys x 2 per side</p>	 <p>Installation Instructions</p>  <p>Model specific installation instructions x 1 per kit</p>	 <p>Emuwing Flyer x 1 per kit</p>

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**The following instructions detail the installation of your new EmuWing kit. Allow a total of one to two hours fitting time for each panel. Read the instructions thoroughly before starting the installation. Allow any additional time that may be required for rust repairs.**

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### 1: Remove the existing rear window.

#### Remove original window.

Remove the existing rear window, The Defender window is secured with rivets that need to be drilled out. Once the rivets have been removed the window can be removed.

### 2: Installing the frame.

#### Positioning the frame.

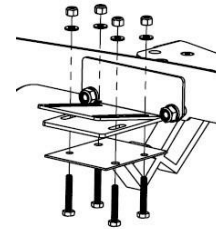
Within this kit are two frames, an inner and outer frame.

The outer frame has no bracketry or seal, the inner frame has brackets attached for the hinges and gas struts, these are bolted together with the supplied M4 hex head bolts, washers and nyloc nuts sandwiching the body of the vehicle between the two frames. Using two washers – one inside and one outside place all the bolts in place finger tight before tightening them all to around 2NM.

### 3: Attaching the door panel.

#### Attach the hinges.

Attach the Hinges to the frame using the supplied 4mm hex bolts, nyloc nuts and washers so the face of the hinge protrudes around 8mm from the frame. The exact depth will be adjusted later.

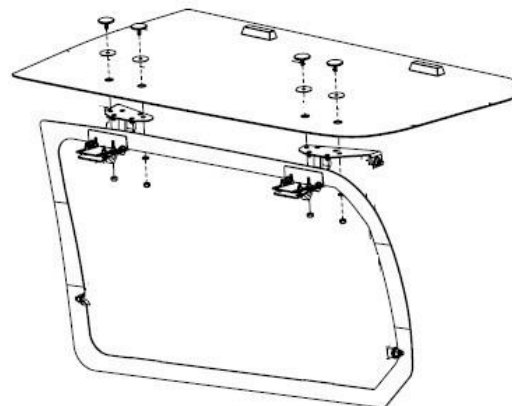


#### Placing the door panel.

When the hinges are in the closed position, place the door panel centrally.

Note: when the gas struts are attached the door panel will be pushed up as the hinges compress – try to allow for this when placing the door by positioning the panel 1 or 2 mm lower than it needs to be.

Close the handles a little so the cam latches over the frame to secure the panel in place while fixing into position.



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### Securing the door panel.

Placing the Pan Head bolts from the outside; fit a washer and nut on the inside.

Once all four pan heads are in place and secure, check that the door does not foul the car when opening and closing. If there is any fouling, adjust the door accordingly before attaching the gas struts.

Before loosening any nuts for any further adjustments, detach the gas struts first to prevent the hinges from twisting.

### Attach the gas struts.

Once the Door panel is adjusted as much as possible open the door and attach the struts (wider end to the top). Close the panel carefully, again watching if it touches the car as it closes. Once closed note any required adjustments to the door panel to align it with the car. The depth of the door can be adjusted later, once the seal has been attached. At this stage we are only concerned with the position of the panel in relation to the car.

### **4: Adjusting the door panel depth and fitting the weather-strip.**

#### Adjustments – left/right and up and down.

The door panel can be adjusted up/down and left/right by loosening the pan heads that attach the door to the hinge. Make note of the required adjustments and mark the current position of the hinge plate on the inside of the door before removing the struts and loosening the pan heads. Once you are happy the door panel is adjusted into position and the gas struts are reinstalled, the weather seal can be attached.

#### - Applying the weather-strip.

Close the door panel and carefully mark inside the door panel around the inside edge of the frame noting the distance between the line and the edge of your frame.

#### - Primer

Before attaching the weather strip use the 3M primer where you will be applying the weather strip. Apply using long strokes exactly where the weather strip will be placed



Once the door has been marked and primed, the weather seal can be attached to the door following outside of the marked lines so the seal will line up on the frame (if the seal does not correctly align, moisture and dust will find its way into the back of the vehicle). (Figure 8).



Toward outer edge of panel



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### Adjustments – Depth.

Once the weather seal has been set in place, close the door panel and check the depth to ensure it aligns with the car and compresses the rubber seal. If adjustment is required loosen the hinges from the top supports, apply pressure evenly to the outside of the door where the hinge meets the door until you see the rubber compress onto the frame, and then re-tighten the bolts.

### Setting the weather seal

Close the Emuwing ensuring the seal has not rolled and remains attached squarely to the frame, ensure the handles are closed and there is even pressure on the seal all the way around. Now use a heat gun to heat the frame from the back (inside the car) – this will activate the glue on the weather strip and affix it in place permanently. Use a piece of cardboard to protect any trims/roof lining from the heat of the gun as you work your way around and be careful not to burn the seal directly. The frame should be heated to the point that it is very hot to the touch – above 50 degrees Celsius.

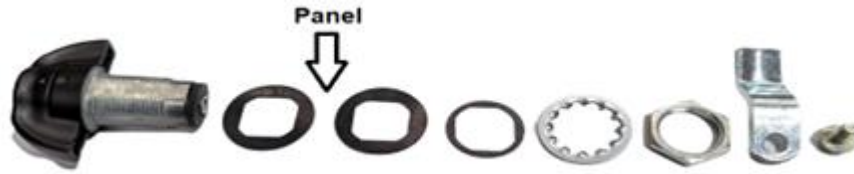
Leave the panel closed for an hour or two whilst the glue cools.

**If additional help is required, please feel free to give us a call on +613 8592 1926 between the hours of 10am and 4pm AEST – Monday to Friday.**

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### 5: Glass supplement.



We recommend tinting the glass prior to installation, this ensures the weather strip will not deteriorate faster than usual due to UV exposure.

#### Instructions:

1. Ensure glass is tinted and dry before attempting assembly.
2. Disassemble handles noting the order of reassembly, the panel is located between the two rubbers when reassembling.
3. Tighten the barrel nut until the rubbers are compressed ensuring a good seal.
4. Assemble and insert handles.
5. Ensure thread locking compound is used on the 10mm bolt securing the cam latch.

Prior to installation of the Emuwing kit the handles should be reassembled into the glass panel.

Ensure thread locking compound is used on the threads of the 10mm bolt securing the Cam.

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