



100/105 SERIES

Land Cruiser



Installation Instructions



LC100/105 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



Emuwing Frame
- One per side



Emuwing Panel
- One per side



Polyurethane Glue & nozzle
- One (1) per kit



Support brackets
- Two (2) per side



Hinge and Faceplate
- Two (2) per side



Adhesive Weatherstrip
- One (1) length per side



Pinchweld (if applicable)
- One (1) length per side



Gas Struts
- Two (2) per side



3M Primer
- One (1) per side



M5 CSK bolts- Eight (8) per side
attached to frame



Panhead bolts
- Four (4) per side



M4 Hex bolts, Washer & Nyloc nut
- Eight (8) per side



Handle
Two (2) per side



Keys & Keyring
- One (1) keyring with two (2) keys
for each Emuwing



Chalk Pen
One (1) per kit



Latch Plates and spacers
Two (2) per side

Tools required:

- 4mm Allen Key
- Medium size Phillips's head screwdriver
- Eight to Twelve Clamps per side
- Spanners 7mm, 8mm and *27mm
- Sockets 7mm and 10mm
- Caulking/Glue gun

Other things that you will need:

- Wax and Grease remover
- Clean rags or kitchen paper
- Masking tape
- Trim pry

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The following instructions detail the installation of your new EmuWing kit; allow a total of two to three hours fitting time for each panel excluding curing time. Read the instructions thoroughly before starting. Allow any additional time that may be required for rust repairs. We have installations on our YouTube channel which may be worth watching before commencing.

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1: Remove the existing rear window and mark the interior trim for cutting.

- Remove interior trim, glass and rubber.

- a. Detach both second-row top seat belt mounts.
- b. Remove the rear-most grab handles.
- c. Extract the plastic plugs located underneath the trim running across the top of the rear cargo doors.
- d. Note: The lower trim may impede the removal of the upper trim, requiring it to be pulled back or removed. This could be challenging with drawer systems, cargo barriers, etc., which may need to be temporarily removed.

Once the upper interior trim is removed, locate, and remove the two bolts holding the front of the window. Use a long 10mm socket for the recessed front nuts. Exercise caution when removing the front nuts to prevent dropping them, as retrieval could be difficult, leading to a potential permanent rattle.

With the trim removed, proceed to take off the rear window and rubber. After the rear window and rubber are removed, thoroughly wash off any dirt or residual glue from around the seam.

- Marking interior trim for cutting.

Temporarily reinstall the upper interior trim to its original position. Note that it will overhang the outside of the car.

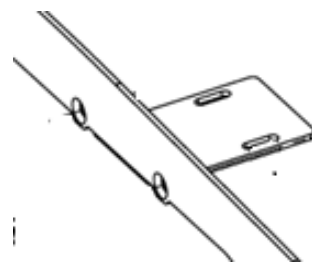
Check for any excess material of the interior trim overhanging the body.

Mark the areas where excess material is present.

Carefully remove the interior trim again.

Trim the marked areas precisely to ensure a clean and flush fit between the Emuwing frame and the body.

Before removing the interior trim, mark the top support bracket (Figure 1) for additional precision. This step involves marking an extra 5mm of material on the top support bracket. Position the frame against the car and mark the corresponding positions of the top supports onto the plastic interior trim.



Once the trim is accurately marked, proceed to remove it. This prepares the way for the installation of the frame.

Support bracket on frame. Figure 1.

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2: Installing the frame.

- Positioning the frame.

Prior to gluing the frame into position, ensure a thorough understanding of its correct positioning. While there is some allowance for adjustment during later stages of installation, getting the initial frame positioning right is crucial for a seamless installation and a polished finish.

Without applying glue, carefully position the frame. Ensure there is approximately a 3mm gap underneath (refer to Figure 2).

Move the frame back into position until the rear corner is pushed as far back as possible while maintaining a flat alignment against the car.

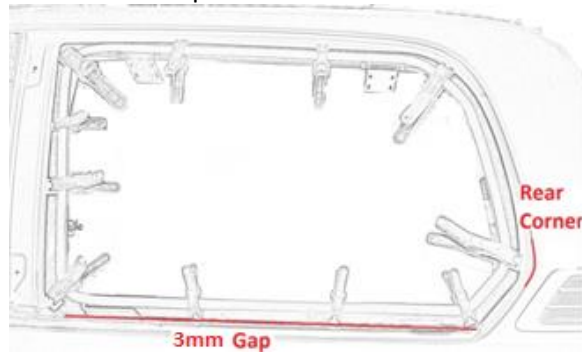


Figure 2

Place a clamp on each corner of the frame at this point. The frame will easily mould to the car. As a helpful tip, consider applying masking tape around the frame. This step will facilitate easier cleanup of excess glue later in the process.

- Gluing the frame into place.

Carefully remove the frame and meticulously clean the back and the area around the window seam to ensure no residual material is left on either surface. Utilizing gloves is advised to prevent the contamination of surfaces with grease or oils from hands.

Apply an even and consistent bead of Sikaflex around the inside edge of the window seam, on the car. Aim for approximately a 5mm width, slightly increasing to 6/7mm around the corners. Note: Your kit provides sufficient glue for a practice run before applying it to the window seam. Ensure there are no gaps in the bead, and it maintains consistency around the window.

Position your clamps within easy reach before placing the frame.

Place the frame into position and initially secure clamps onto each corner. Subsequently, secure clamps along the top and bottom edges.

Closely inspect for any visible light between the frame and the car. Use additional clamps if necessary and consider using a torch for a more detailed examination.

After applying the glue and securing the frame in place, allow it to dry undisturbed for a minimum of 24 hours.

While the glue is still wet and the frame is clamped, clean up any excess glue around the frame. To do this, use an old rag to guide the excess glue onto the masking tape.

Once all excess glue has been directed onto the masking tape, carefully remove the tape. Ensure the glue remains on the tape and does not spread onto yourself or the car.

For final cleanup, use wax and grease remover on the wet glue. Do not let the glue dry, as this may make it challenging to remove without causing damage to the paintwork.

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Do Not proceed with fitting any hardware to the frame until the glue has set and the frame is securely in place (at least 24 hours). Figure 3.

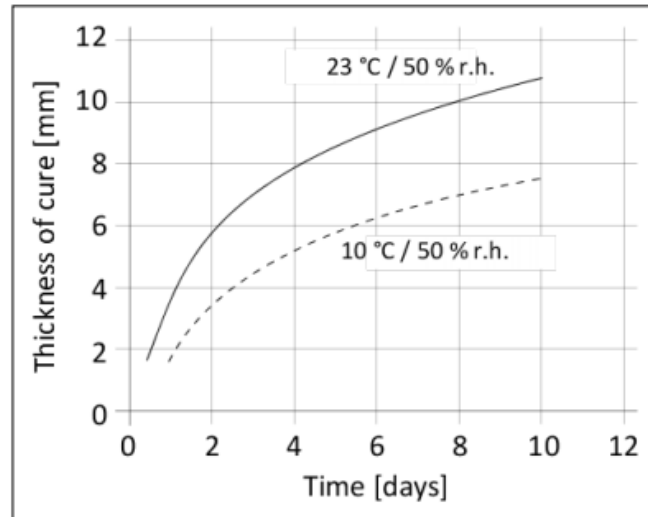


Figure 3

- Cutting interior trims.

In preparation for reinstallation, carefully cut the interior trim using the marks you made earlier. Refer to our YouTube channel for a helpful guide if you have any uncertainties about these cuts.

Make precise cuts along the marked lines, removing between 2mm to 5mm of material. Pay special attention to two sections at the top of the panel where the support brackets attach to the frame (refer to Figure 4); an additional 5mm of material needs to be removed in these areas.



Figure 4.

3: Attaching the door panel.

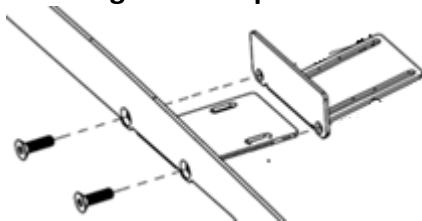


Figure 5.

- Place and tighten the support brackets.

Assemble the support brackets on top of the frame, using the M5 bolts. Securely clamp the frame to the body with these bolts. When tightening, avoid over-tightening; instead, ensure to tighten them firmly to approximately 5 Newton-meters (5NM).

Ensure even tightening of the two bolts to align the slots in the brackets and firmly press the bracket against the body.

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- Attach the Latch plates and Spacers

Now we can attach the latch plates to the bottom edge of the frame, spacers are also supplied but may not be needed.

Use the latch plates to clamp the frame to the pinch weld, placing the latch plate from the inside and attach using two M5 bolts.

Ensure to tighten them firmly to approximately 5 Newton-meters (5NM).

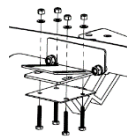


Figure 6.

- Attach the hinges.

Attach the hinges to the frame using the provided 4mm nuts, bolts, and washers. Ensure the face plate protrudes approximately 8mm from the frame. The exact depth of the faceplate will be adjusted at a later stage in the process.

Tighten to approximately 4 Newton-meters (4NM).

- Placing the door panel.

When the hinges are in the closed position, position the door panel centrally. Use a spacer at the bottom of the door panel to elevate it slightly, ensuring proper alignment. It's recommended to close the rear passenger doors to aid in alignment.

Partially close the handles to engage the cam latches over the frame, securing the door panel in place temporarily. This provides stability while fixing it into its final position.

- Securing the door panel.

From the outside, insert the Pan Head bolts with rubber washers. On the inside, place a washer first, followed by a nut. 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.

Once all four pan head bolts are in place, tighten each up to approximately 6NM, taking care not to strip the thread of the Aluminium pan head bolt. Align each of the pan head bolts visually from the outside, they should follow a straight line across the door panel.

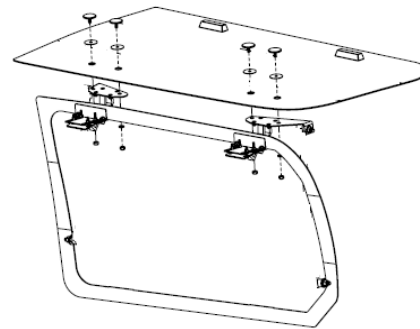


Figure 7

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

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- Attach the gas struts.

After adjusting the door panel as much as possible, open the door and attach the struts with the wider end positioned at the top. Carefully close the panel, observing any potential contact with the car. Once closed, take note of any necessary adjustments required to align the door panel with the car.

The depth of the door can be fine-tuned later during the attachment of the seal. At this stage, focus on the position of the panel in relation to the car. If the panel extends more than 10mm out from the frame, consider adjusting it inward to at least 10mm.

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

- Adjustments – left/right and up and down.

The door panel's vertical and horizontal positioning can be adjusted by loosening the pan heads that attach the door to the hinge. Before removing the struts and loosening the pan heads, take note of the required adjustments. Mark the current position of the hinge plate on the inside of the door.

Once satisfied with the adjusted position of the door panel and the gas struts are reinstalled, proceed to attach the weather seal to the interior.

- Applying the weather-strip.

Close the door panel and meticulously mark inside the door panel around the inner edge of the frame. Take note of the distance between the marked line and the edge of your frame.

- Primer

Before attaching the weather strip, use the provided 3M primer along the areas where the strip will be applied. Apply the primer using long strokes precisely where the weather strip will be placed.

Once the door has been marked and primed, attach the weather seal to the door, following the outside of the marked lines. Ensure the seal aligns with the frame correctly to prevent moisture and dust from entering the back of the vehicle (see Figure 8).

Handle the weather strip with care, especially around corners; avoid stretching it. Allow it to gently conform to the panel. Stretching may lead to potential shrinkage with heating, causing the strip to peel from the panel.



Figure 8



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- Adjustments – Depth.

After setting the weather seal in place, close the door panel and check the depth to ensure it aligns with the car, effectively compressing the rubber seal. If adjustments are needed, follow these steps:

Loosen the hinges from the top supports (the gas struts do not need to be removed).

Apply even pressure to the outside of the door where the hinge meets the door until you observe the rubber compressing onto the frame.

Re-tighten the bolts.

- Plastic Grommets.

In the kit, you will find black plastic grommets. These are intended to fill the holes left by the bolts that held the original window in place.

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.

Website: emuwing.com.au

Phone: +61 3 9017 1614

Email: info@emuwing.com.au



For Distributor and Installer enquiries please email sales@emuwing.com.au

**9/146 Northbourne Road
Campbellfield
Victoria, 3061**

ABN: 84 617 251 733