Alu-Cab™

ULTIMATE OVERLAND PRODUCTS

FITMENT INSTRUCTIONS

2024 Hercules Roof Conversion to Landcruiser 78 Series

DISCLAIMER

SIKA: PRELIMINARY INFORMATION

Alu-Cab recommends using Sika 552 AT. See the spec sheet here.

Installation and fitment instructions include the tools required, fasteners included in the kit, and the hardware included in the kit.

Please follow the instructions and check the installation steps with the images in this document.

Alu-Cab recommends that all sealing work is allowed to cure for 24 hours, after which you may drive the vehicle on normal paved roads. Before driving off-road with your Alu-Cab product or operating your roof conversion, an additional cure period of 48 hours is required.

Failure to follow these instructions will void your warranty. Please ensure that you follow the sealant manufacturer's curing time as per their technical data sheet. These times may differ slightly from the times we have recommended.



Service Enquiries email
queries@alu-cab.com

DISCLAIMER

Preliminary information

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Review all instructions information carefully before installation.

Any damages, direct or indirect to the installer and/or property due to incorrect installation of any parts are the responsibility of the installer. Due to the various application and firment options available, the responsibility lies with the user to ensure all mounting points are secure and tight before every trip.

If unsure, consult with your Distributor regarding the operations of our products.

Users are advised to be mindful of the load they are carrying and drive in accordance with road conditions.

Installation Instructions

Tools & Items Required:

1.1

The tables below show the equipment, i.e. tools and fasteners required to start the Hercules roof conversion fitment onto a Landcruiser 78 series.

TOOLS
Ratchet/impact wrench
Nibbler
Adhesive applicator
Drill and Bits - 5 & 8mm
Stepped drill bit
Rivnut gun
Grinder
Star screwdriver
8,10,12 & 13mm Spanner
8,10,12 & 13mm Socket and Ratchet Wrench
4mm & 6mm Allen key
Plastic block
Quick grips
Hammer
Centre punch

ITEM
Gantry Crane - 1 tonne rated
Set of Lifting Slings - 500kg rated each
Turpentine
Cloth
Sika 552 AT
25mm & 50mm Masking tape
Rust preventative paint
EPE Foam

1.2 **Hardware Required:** (Included with Hercules)

ITEM	DESCRIPTION	QTY
RC-LC78-A00	LC78 MAIN ASSEMBLY	1
RC-LC78-MNT-KIT	LC78 MOUNTING KIT	1
EWL-RC-LC78	LC78 WIRING LOOM	1

1.2.1 **LC78 Main Assembly:** (Included with Hercules)

NB: The color of the vehicle images might vary as additional improvements have been made over time.

ITEM	QTY
LC78 ROOF ASSEMBLY	1
LC78 BASE ASSEMBLY	1
LC78 CONSOLE ASSEMBLY	1

1.2.2 **LC78 Mounting Kit:** (Included with Hercules)

NB: The color of the vehicle images might vary as additional improvements have been made over time.

ITEM	QTY
LC78 FRONT MOUNTING BRACKET RHS	1
LC78 FRONT MOUNTING BRACKET LHS	1
LC78 MOUNTING BRACKET	4
LC78 BOLT LOCATOR PLATE	6
BACKING PLATE	24

ITEM	QTY
M6 HEX NUT S/S	4
M6 L/F RIVNUT	4
M6 SPRING WASHER S/S	8
M6x12mm FLAT WAM8x50 HEX BOLT S/SSHER S/S	8
M6x18 OVERSIZED WASHER S/S	8
M8 HEX NUT S/S	12
M8 L/F RIVNUT	4
M8 NUT CAP	12
M8 NYLOC NUT S/S	12
M8 SPRING WASHER S/S	16
M8x16mm FLAT WASHER S/S	24
M8x20mm OVERSIZED WASHER S/S	12
M8x25 B/HD BOLT S/S	4
M8x35 HEX BOLT S/S	12
M8x50 HEX BOLT S/S	12

Disclaimer



It is important to check for any leaks that may be occurring through the roof or door areas, before starting the roof conversion. This will ensure that you are aware of problem areas that may arise when the roof conversion is completed.

STEP 1 :

Once you've checked the vehicle for any leaks, you can then set about preparing the vehicle by covering any areas inside the vehicle that may be susceptible to damage when removing the roof. Once all the parts are covered you can begin stripping the interior roof linings, seat belt mounts , and anything that may be attached or affected by the removal of the roof.



STEP 2.1 :

When removing all interior window linings, sun visors, mirror mounts etc, ensure they are stored in a safe place, as some of these parts will be re-installed during the installation of the Hercules roof conversion.







STEP 2.2 :

Take note of any exterior roof mounting points that may be installed as an OEM or aftermarket option. Remove these mounting point in preparation for removal of the roof.

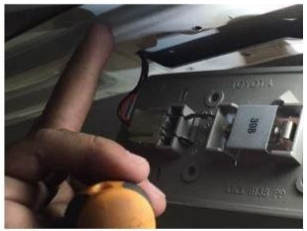


STEP 3 :

Remove the light from the top hat stiffener.

This light will be relocated to the console assembly.





STEP 4 :

Unbolt the A,B & C top hats







STEP 5 :

Remove the rear brake light from the roof.









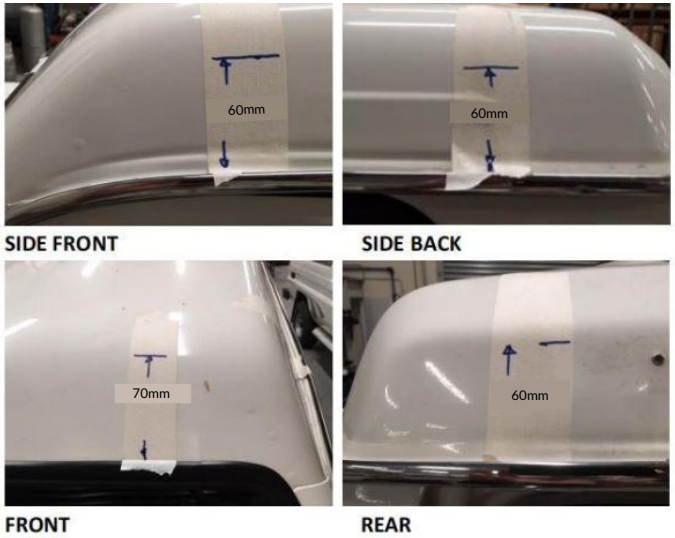






STEP 6 :

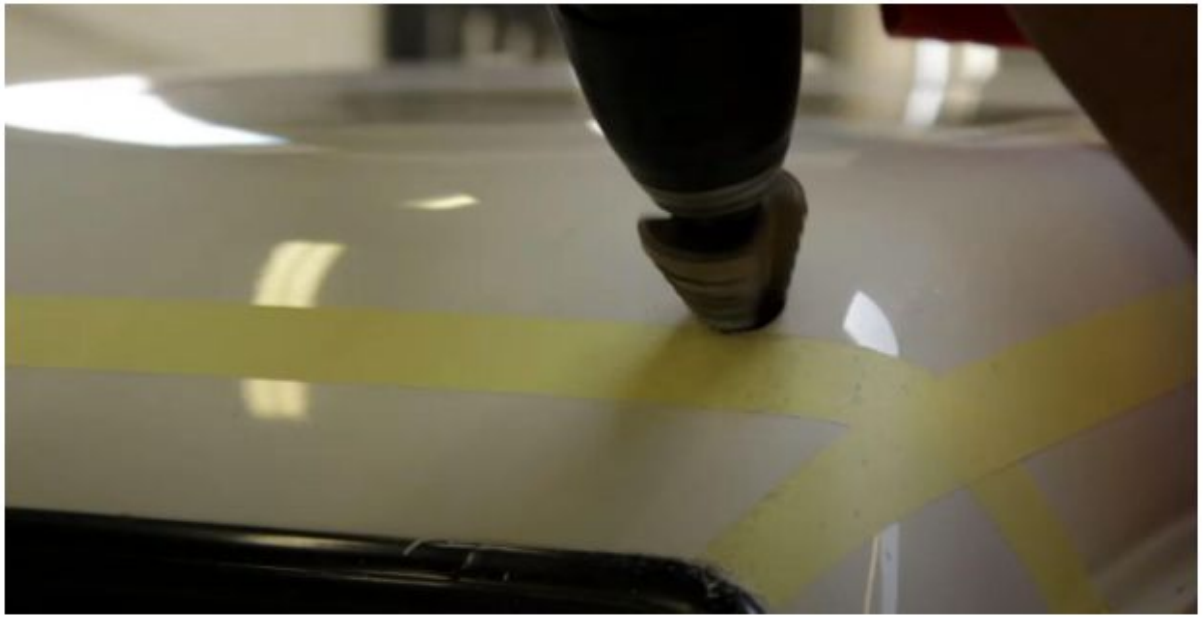
Measure and mark the roof 60mm along the sides and rear end of the vehicle and 70mm on the front side of the vehicle as seen below. Mask out along the measured edge, to serve as guide for trimming the roof.





STEP 7 :

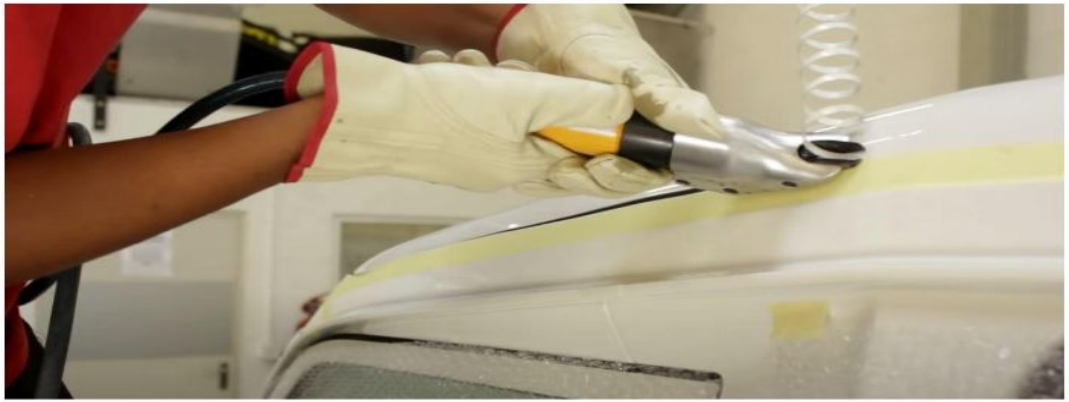
You will then need to drill access holes with the stepped drill bit at the corners of the roof so that you can use your Nibbler tool to cut the roof off.



STEP 8 :

Once the holes has been drilled, proceed to cut the roof along the masked guide line using the Nibbler tool as shown below.







STEP 9 :

The roof can now be removed from the vehicle.



STEP 10 :

Apply a rust preventive paint to the roof along the section which has been removed.



STEP 11.1 :

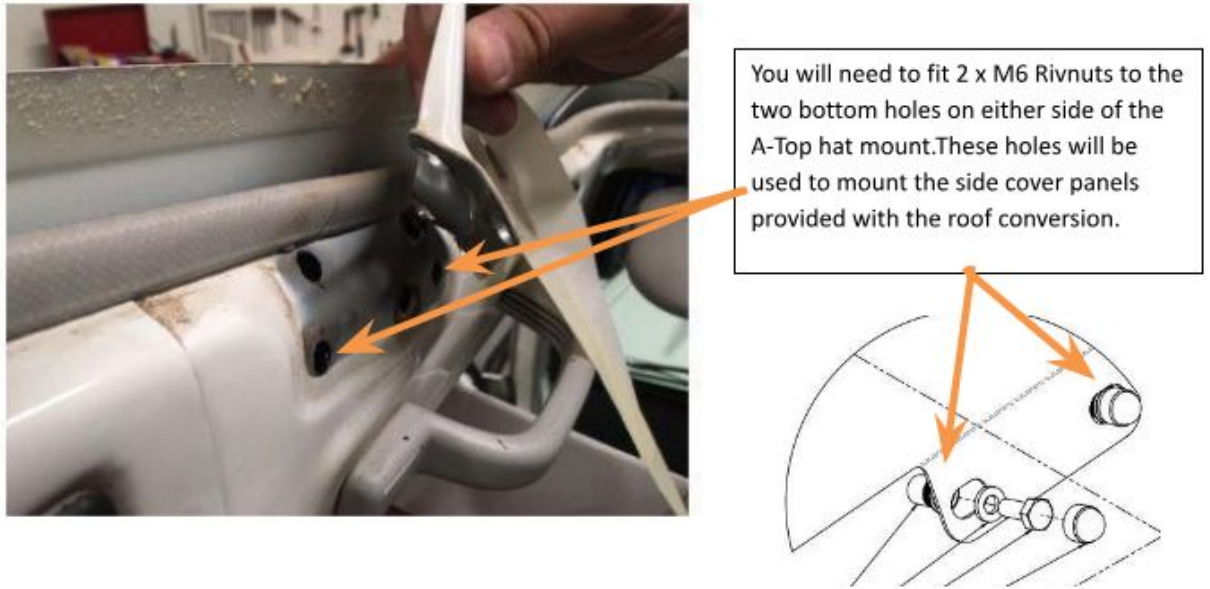
Drill the A top hat mount loose on the areas which are spot welded.





STEP 11.2 :

Fit 2 x M6 rivnuts to the two bottom holes on either side of the A top hat mount. These holes will be used to mount the side cover panels provided with the roof conversion.



STEP 11.3 :

Mark and cut 20mm off the top of the B & C top hat mounts as seen below.





STEP 11.4 :

Drill the bottom holes of the B & C top hat mounting points. Install the M8 rivnuts supplied in the kit.



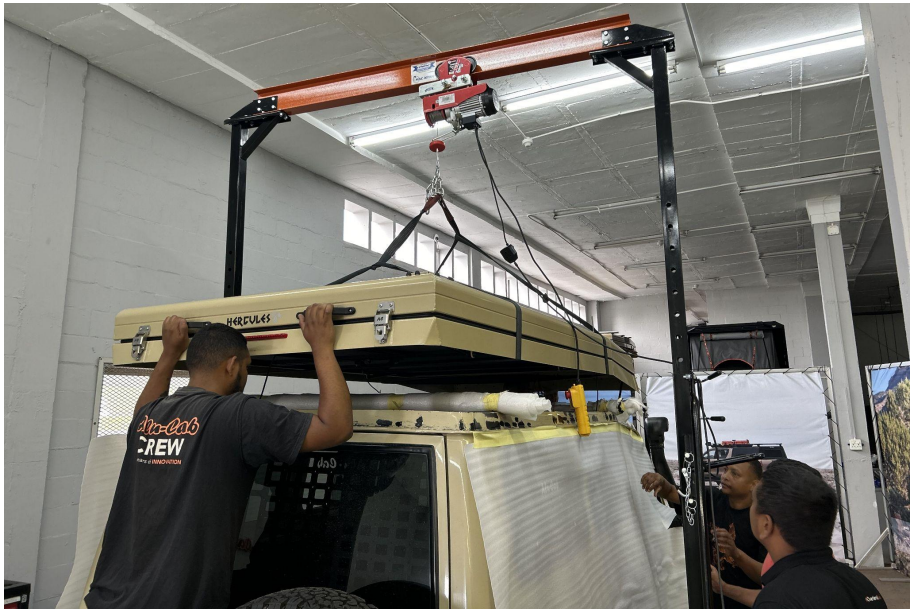


Installation Instructions

STEP 12 :

Dry fit the roof conversion into position with the gantry crane. Use two foam padded bars across the top of the vehicle to balance the roof conversion on top.

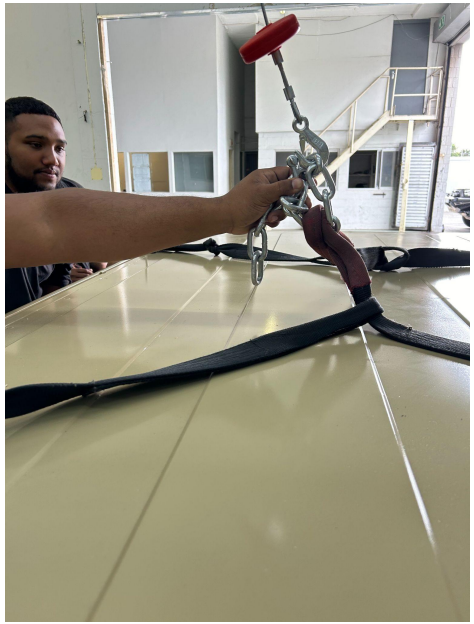
This will allow space for the removal of the lifting straps, prior to manually lowering the roof conversion into position.



STEP 12.1 :

The roof conversion can be lifted using a gantry crane and lifting straps.

M8 eye-bolts should be used in the roof cargo rail, to prevent the lifting straps from unwanted movement.





STEP 12.2 :

With the roof conversion lowered on the vehicle, check that the base is straight and true in relation to the vehicle roof. Ensure that that lid rubber is straight and makes a sufficient seal between the lid and the base.

Open the lid and clamp down the base to ensure that it is correctly seated on the vehicle.





STEP 12.3 :

Mark the positions and drill out the holes on the base and vehicle for the roof conversion latches bottom mounting bolts.

Use a 5mm drill bit, to match the M5 Button Head Bolt



STEP 12.4 :

Remove the roof conversion once the position and fit have been verified, and the necessary latch mounting holes have been drilled.



STEP 13 :

Place the roof conversion on a support structure, that allows access underneath the roof conversion.

Prepare the roof conversion base by roughening the inside lower edge with a Scotch-Brite pad, where it overlaps with the vehicle.

Apply Sika 552AT all the way around the inside lower edge of the roof conversion base.

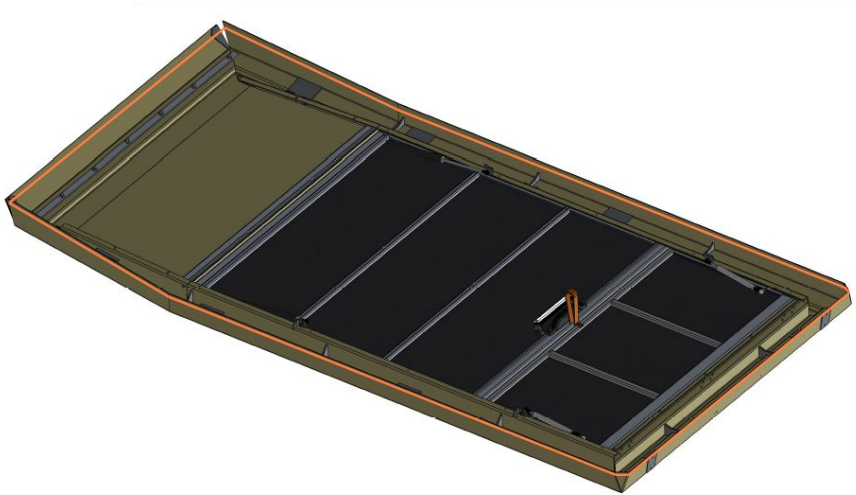
Note the following skin and open times for Sika 552AT:

- Skin time* (CQP019-1) 30 minutes
- Open time (CQP526-1) 20 minutes



STEP 13 :

Sika perimeter on edge of roof conversion base:



Nozzle and sika application example:



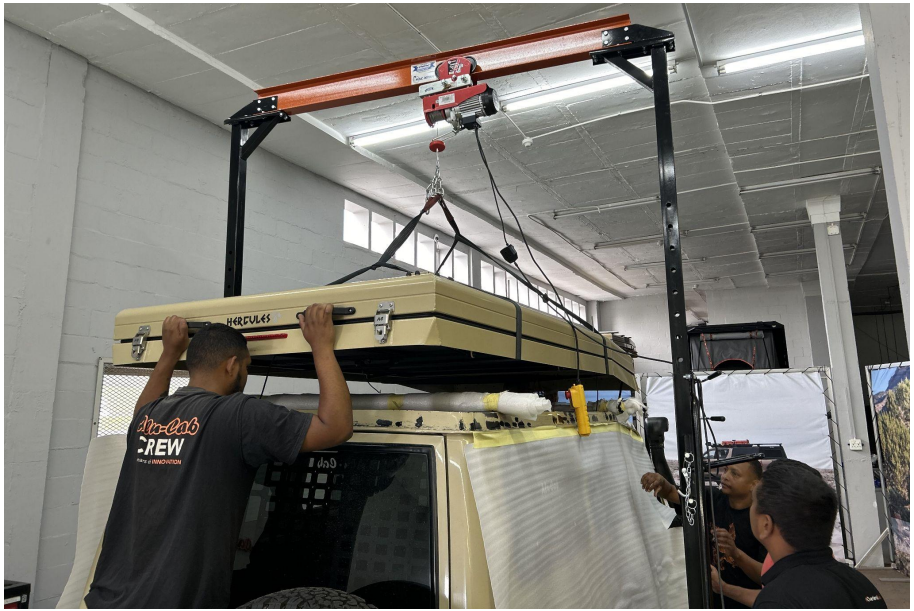


STEP 14 :

Final fit the roof conversion into position with the gantry crane. Use two foam padded bars across the top of the vehicle to balance the roof conversion on top.

This will allow space for the removal of the lifting straps, prior to manually lowering the roof conversion into position.

***Note that Step 14 in its entirety is time sensitive due to the aforementioned *Skin Time* of Sika.**



STEP 14.1 :

Clamp down the roof conversion with Quick Grips to ensure that it is correctly seated on the vehicle. Take precaution to not over-clamp the base to the vehicle, that may cause bowing in the base.





STEP 14.2 :

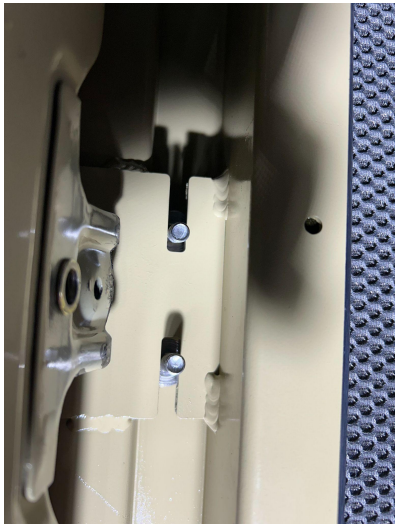
Place a bolt locator plate above the side mount support plate. Insert a M8x35 Hex Bolts into each of the slots.

Raise the mounting brackets up against the side mount support plate. Align the mounting bracket with the respective vehicle A, B & C top hat mounting positions.

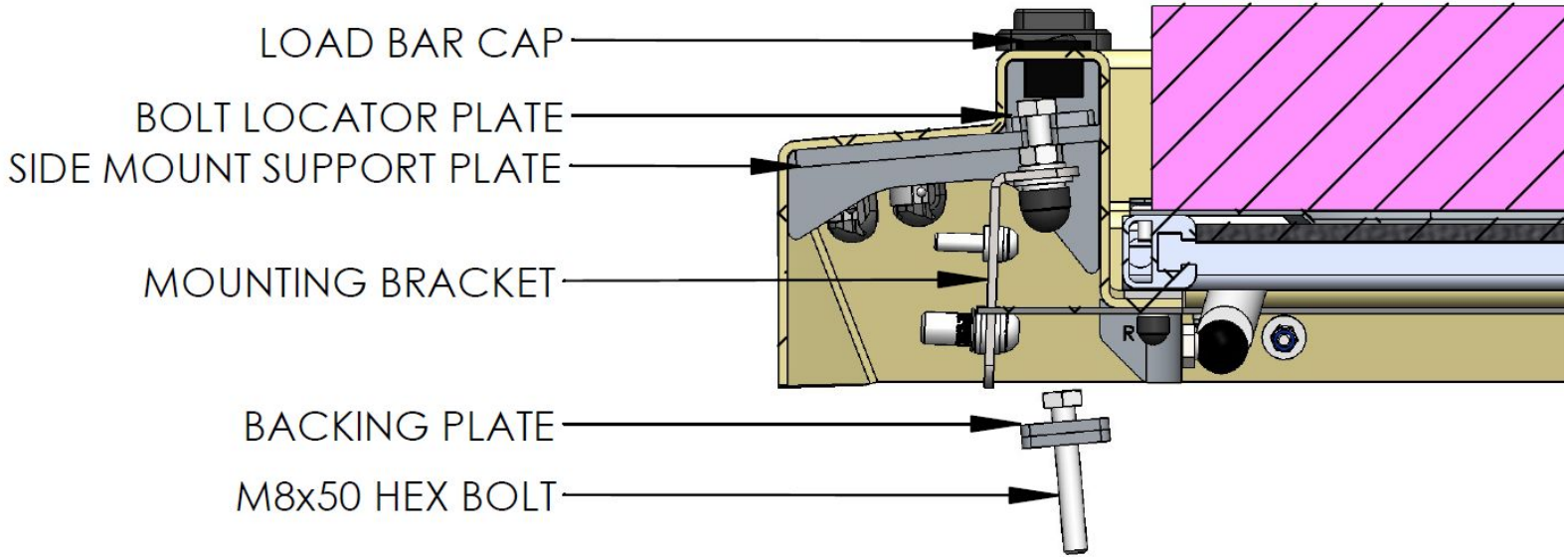
Determine if a backing plate is necessary to increase the mounting bracket spacing, in case the top hat bolts do not align. Use the M8x50 Hex Bolts accordingly.

Fasten the mounting bracket to the side mount support plate with M8 Nyloc Nut, Washers and Nut Caps.

Fix the bracket to the respective vehicle A, B & C top hat mounting positions with M6 and M8 Button Head Bolts, spring washers and washers as required.






LOAD BAR CAP
BOLT LOCATOR PLATE
SIDE MOUNT SUPPORT PLATE
MOUNTING BRACKET
BACKING PLATE
M8x50 HEX BOLT
R

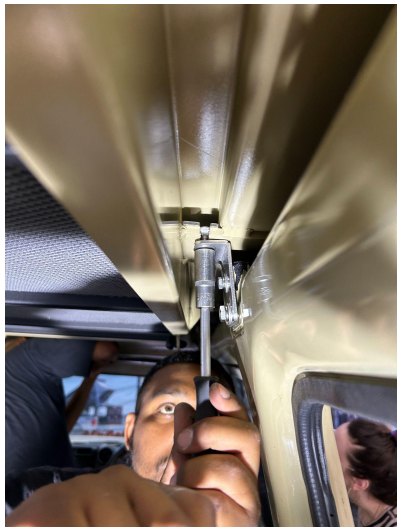
STEP 14.3 :

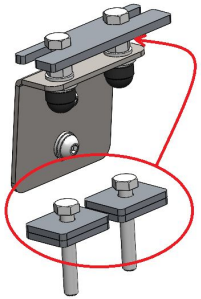
The roof conversion is now secured to the vehicle. Quick Clamps can be removed, and the seal between the lid and the base can be inspected to ensure integrity of the rubber sealing.

Take extreme precaution to not overtighten the mounting bracket M8 Hex Bolts, as this could cause bowing of the base, resulting in an insufficient seal between the lid and the base.

If bowing is observed, backing plates must be installed between the mounting bracket and the side mount support plate - return to Step 14.2

Load Bar Caps can be fitted into the top of the base, once the mounting brackets have been secured.



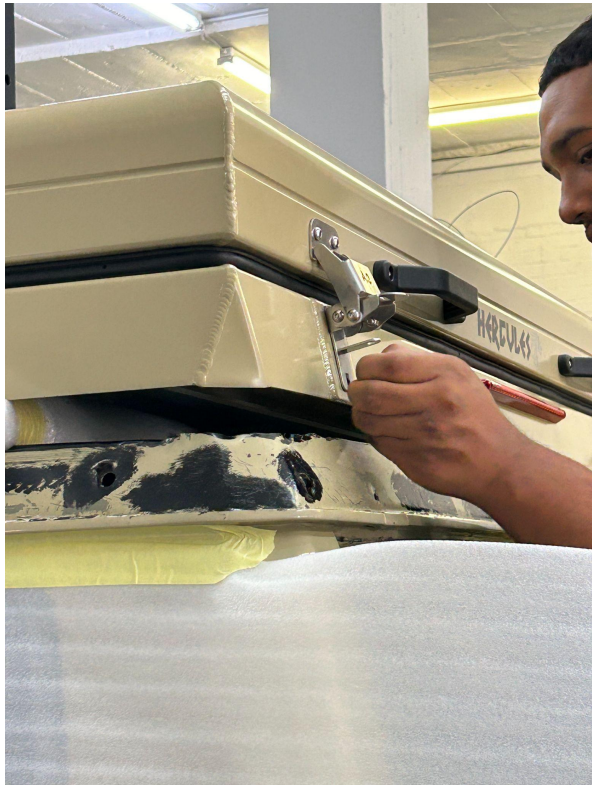


Backing Plate

STEP 14.4 :

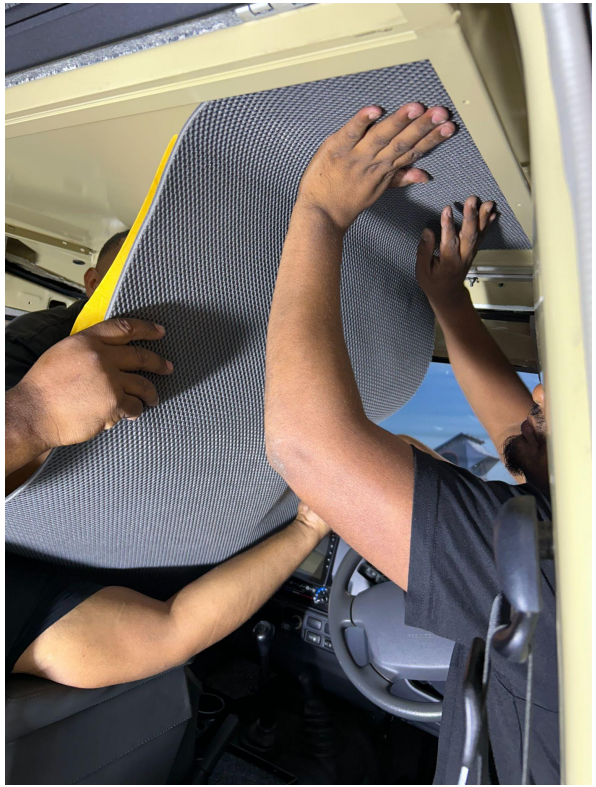
Fix the latch to the roof conversion base and car body.

Install the extended M5x35 Button Head Bolt in the lower bracket hole, that has been prepared in Step 12.2



STEP 15 :

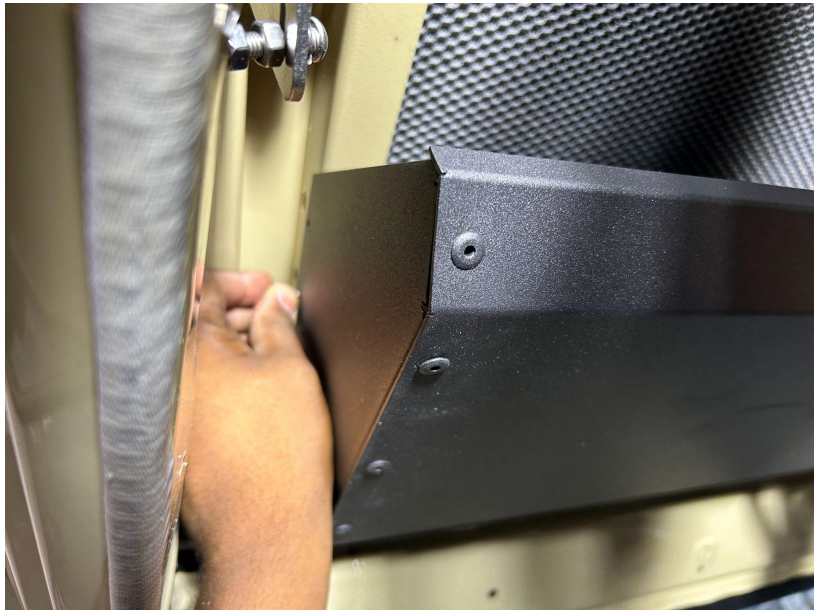
Install the automotive roof lining onto the front base.



Installation Instructions

STEP 16 :

Install the Roof Console and Roof Molle Plate assembly.





STEP 17 :

Prepare the existing roof light wire for soldering and extend the wire to reach the console and fit the OEM light which was removed from the B top hat to Hercules console as seen in the images below.

Furthermore, install the wiring loom through the roof console and roof conversion base, to the respective LED Lights, Rear Brake Light and Solar Plug on the roof conversion.

*This step should be carried out by a qualified electrician.







STEP 18 :

Instal the trim panel on the front, rear and sides of the roof conversion base.

- There is a left and right specific front trim panel.
- There is one trim panel fitted to the rear of the base.
- There is a left and right specific side trim panel



STEP 19 :

Proceed to mask off the roof gutter and base in preparation to sealing the seam between the two components.



STEP 20 :

Clean the roof gutter, to ensure that it is free from any debris.

Apply Sika between the roof gutter and the roof conversion base*. Wipe the excess Sika with a turpentine soaked cloth. Smooth out the Sika with soapy water.

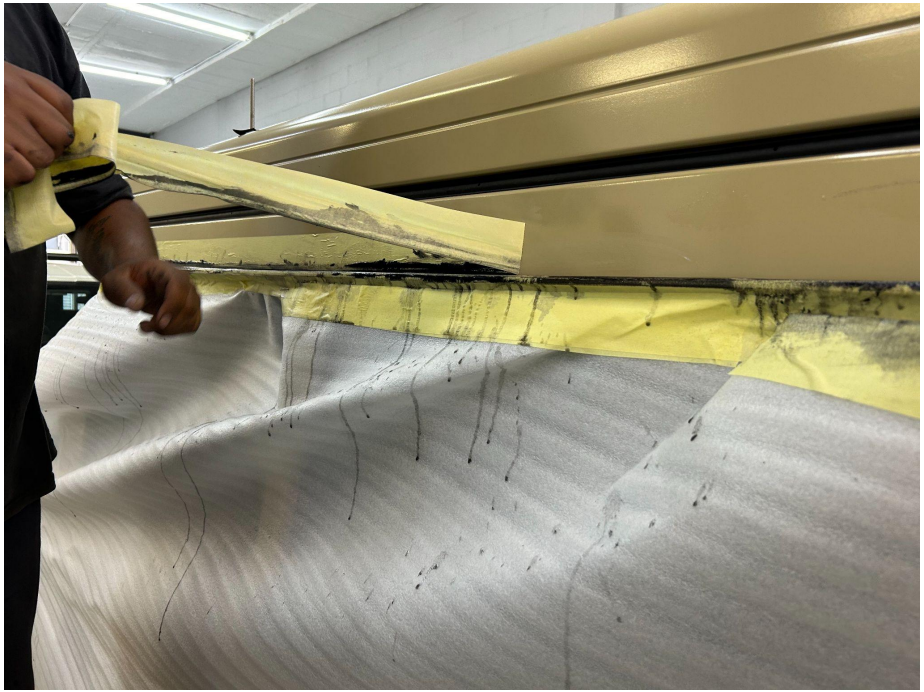
*It is important to work with the Sika in sections, as too much time lapsed could result in difficulty to remove the excess and smooth over the Sika.






STEP 21 :

Remove the masking tape and clean the working area.



NB: Alu-Cab recommends that all sealing work is allowed to cure for 24 hours, after which you may drive the vehicle on normal paved roads.

Before driving off-road with your Alu-Cab product or operating your roof conversion, an additional cure period of 48 hours is required.

Pressured Water Testing should be conducted after curing to ensure that the installation is watertight.

By now you should have successfully fitted your Landcruiser Hercules Roof Conversion.

All that's left to do is pull the vehicle outside, pop open your new roof, fit the spring poles and see how well your new roof conversion works.

Installation Instructions



Disclaimer

WARNING

Always wear appropriate PPE (Personal protection equipment) when fitting our products. Although the mounting kit is designed to be DIY, if you have any doubts or concerns, contact an accredited fitment centre to carry out the work. Alu-Cab will not be liable for any injury to persons, and/or damage to products and/or vehicles.

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