

## Front Bar Installation Instructions

Land Rover - New Defender



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***Bumper Evo 3D***

## Please Read Prior to Commencing Installation



Thank-you for choosing to equip your vehicle with our product. Following are some of the great features that our bar includes:

- Our bar is designed to follow the original lines and aesthetics of your vehicle.
- The approach angle of your vehicle will be increased dramatically, while increasing protection.
- Our modular system allows you to replace parts individually.
- We do not cut the original plastic bumper, thus it can be reinstalled if required.

Before commencing the installation it is important that you read and understand these installation instructions, if you require any technical advice please contact your closest Rhino 4x4 dealer.

Welcome to the Rhino 4x4 team!

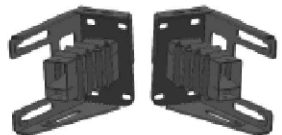



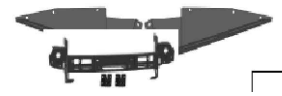




### **A T T E N T I O N**

- Do not attach VFPS vehicle using any fixing points not intended for this purpose.
- Do not use this product on any other vehicle make or model, other than those specified.
- Do not remove the warning labels or Rhino 4x4 logo from the VFPS.
- Do not modify the VFPS in any way.

# Bill of Materials



CHECK LIST		RPDE30DSF-LRD		RPDE30PP-FRR 1+D		BOLTS KIT	
		RPDE30DCH-LRD				RPDE30DLC-LRD	
		RPDE30DB-LRD RPDE30DBF-LRD				RPDE30DPC-LRD	
<b>a</b>	HEX M10-1.5 X 30	28u.	<b>l</b>	NUT 6-100	10u.	Flange Nut M6	6u.
<b>b</b>	WASHER D 10	28u.	<b>n</b>	Countersunk screw M8 1.25 x20	4u.	WASHER D 8	4u.
<b>c</b>	NUT 10-1.50	28u.	<b>o</b>	Allen Button M8-100 x 20	4u.		
<b>i</b>	HEX M6-100 X 25	2u.	<b>p1</b>	Threaded plate 10 1.50	2u.		
<b>j</b>	Allen Button 6-100 x 15	6u.		Threaded plate 8 1.50	4u.		
<b>k</b>	WASHER D 6	6u.		Flange Nut M8	4u.		
							PARTS CHECK LIST
							FASTENING BOLTS

## Block 1: Preparing the Chassis

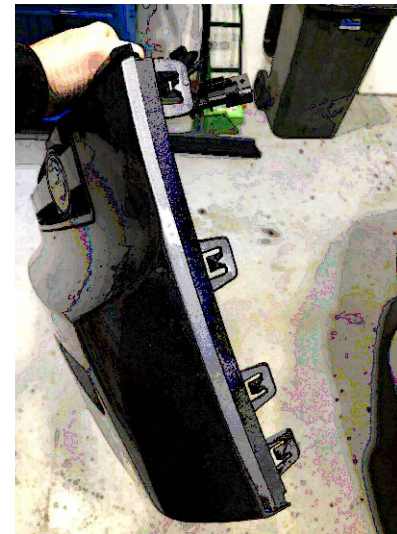


### Remove the Bumper and Grille



Begin by removing the 4 plastic clips and 4 Torx screws from the top cover, then push the cover back to release the sides.

The top cover can then be removed.



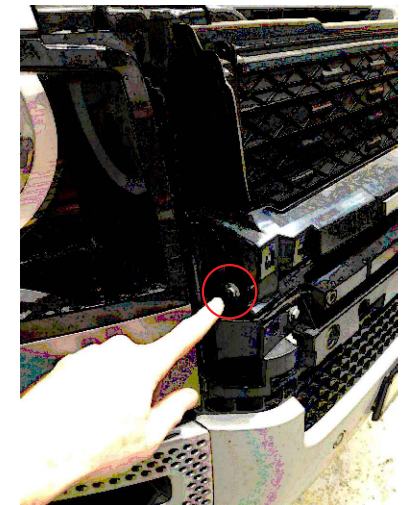
The grille will require the 4 tabs on each side releasing, use either a large flathead screwdriver or pry bar.

Release the clip and then plug on the top corner of the grille.

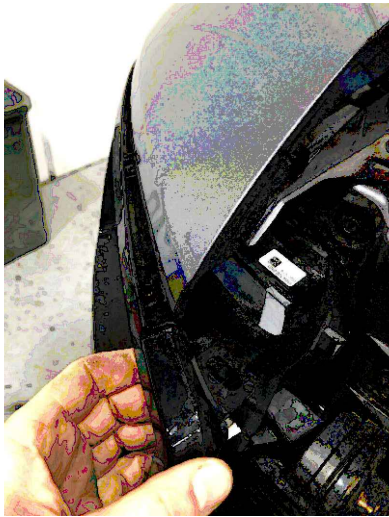


Remove the 10mm bolt circled.

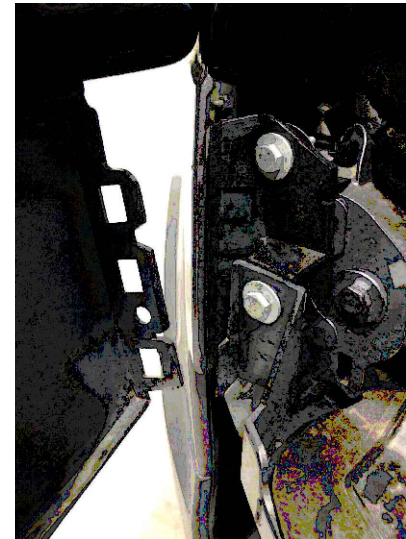
Then repeat on the opposing side.



## Block 1: Preparing the Chassis



Release the tabs along the top of the headlight surround using a long thin screwdriver.

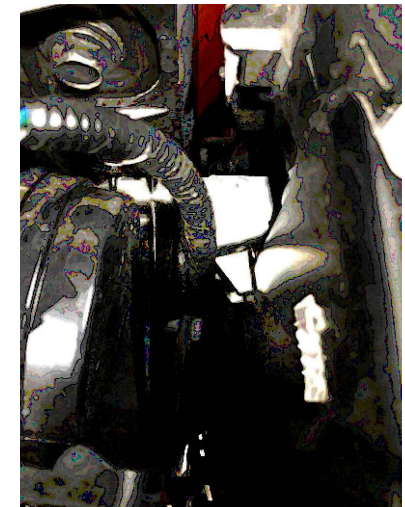


Release the remaining clip using a 90 degree pick tool. Undergo with caution as the clips are easily broken.

Push the surround down slightly to release the two small barbs on the bottom.



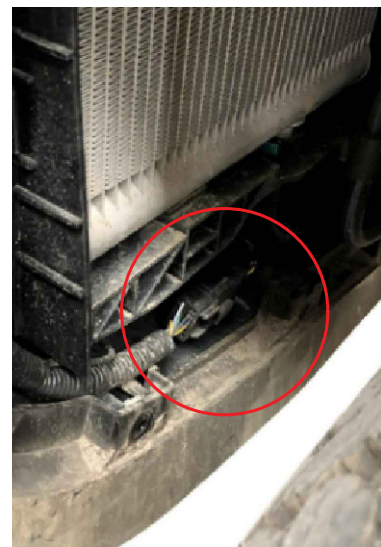
Push the cable behind the passenger surround aside before removing it, this will prevent it getting caught.



## Block 1: Preparing the Chassis

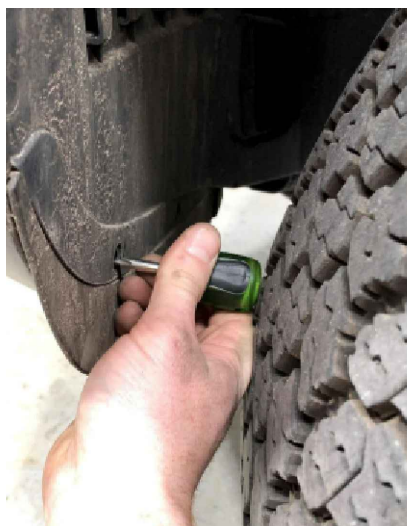


Remove the three plastic clips supporting the wheel arch liner.



Release the 2 plugs behind the wheel arch liner, one of these plugs is circled and the other is behind it.

Remove the four phillips screws, this will be easier if the wheels are turned out slightly.



Undo the 5 x 10mm hex bolts along the top of the bumper.



## Block 1: Preparing the Chassis



Fold back the tab on the front of the wheel arch.



Use force to pull the lower plastic cover directly forward.

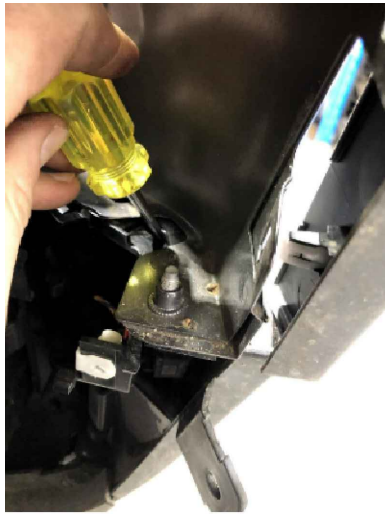
Undo the four slotted screws holding the plastic cover.



With the lower plastic cover removed, undo the 4 x T30 torx screws

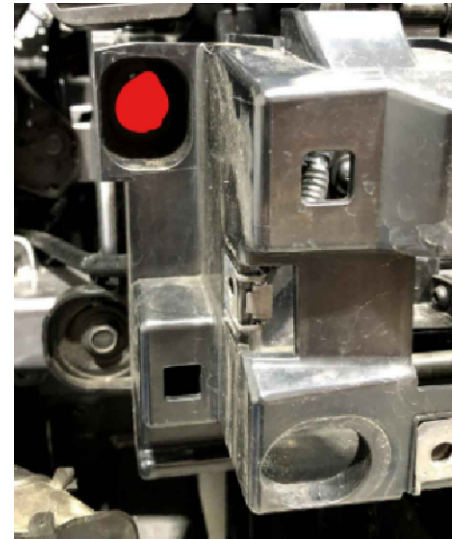


## Block 1: Preparing the Chassis



Release the clips at the bottom of the flare.

Then release the tab being pointed to with the yellow screw driver.



Remove the four 10mm hex head bolts releasing the lower middle brake ducts.

Release the barb from the inside.

The bumper can then be removed by pulling with force .



Remove the T30 torx screws along the top of the lower section.





## Block 1: Preparing the Chassis



Removing the middle air ducts will require the top cover to be pulled forward, releasing the plastic dowel.

Pry back the two fern tree style clips each side to remove the air ducts.

Keep in mind that they will be reinstalled later.



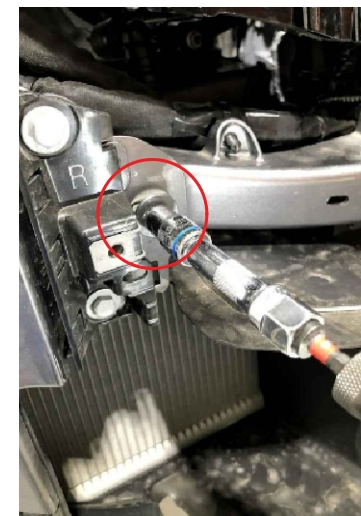
Remove the 10mm hex bolt from the front of the side radiator air ducts.

These can then be removed.

Remove the 10mm hex bolt circled in the image.

The fender can then be removed by carefully pulling.

Remove the lower aluminum cross member by releasing the 2 barbs and undoing the 10mm hex nut attaching to the radiator.



## Block 1: Preparing the Chassis



Remove the two M10 hex bolts circled in the image.

Undo the 10mm nut on the back of the aluminium square section shown in the next image.

This is best accessed through the wheel arch liner as shown.



Detach the cable located on top of the square section.

Remove the four 13mm bolts at the front of the chassis.

Use a hand ratchet as thread lock is used and the impact gun may cause damage.



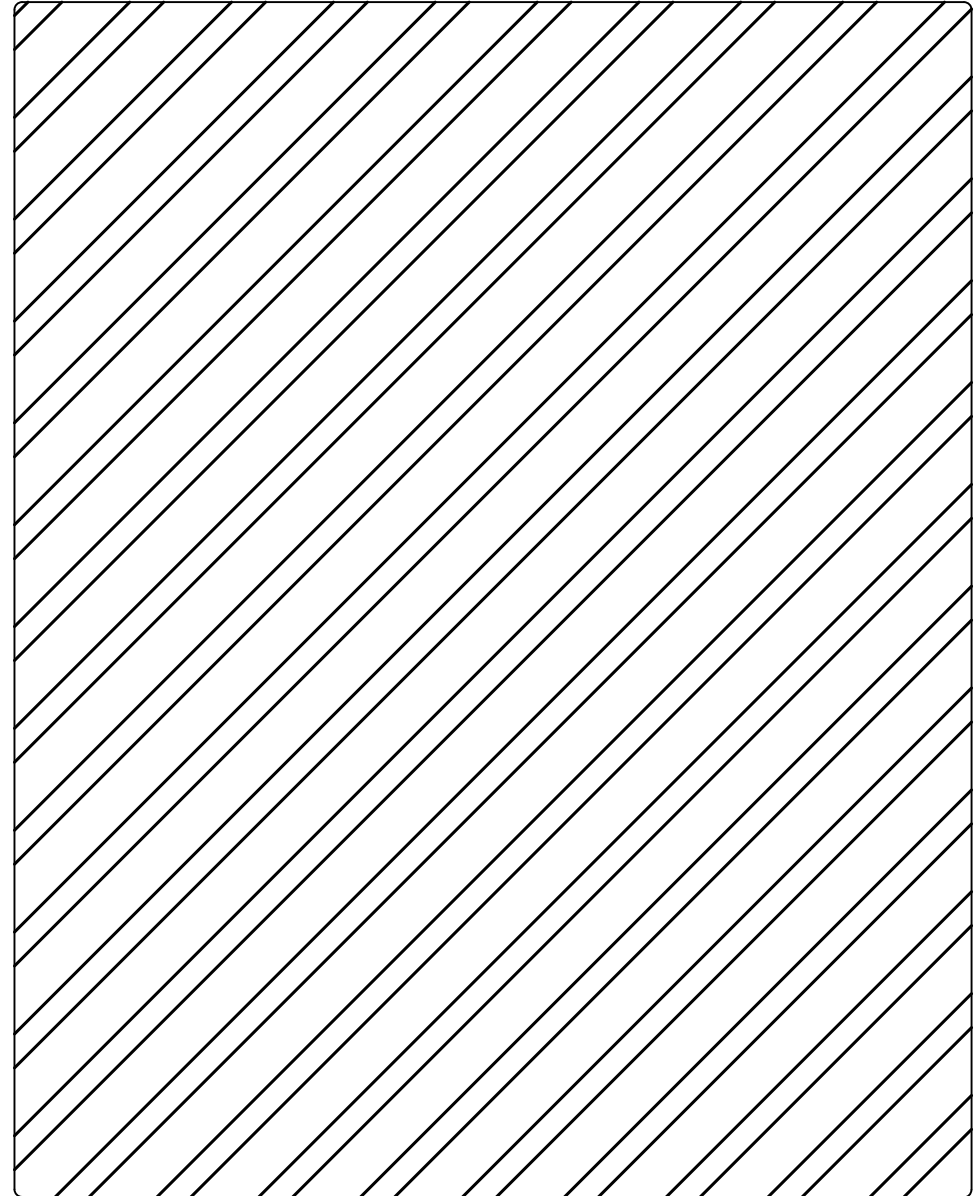
## Block 1: Preparing the Chassis



Remove the four bolts supporting the tubular lower section.

Then release the clips on either side of the radiator hose.


Block 1 Complete



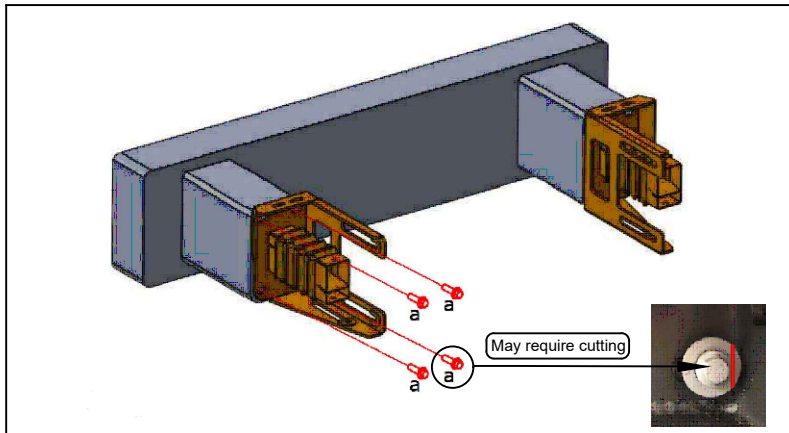
## Block 2: Install the Front Bar



### Step 1

FASTENING BOLTS			
	a	Flange Hex M10 X 30	08

Attach the chassis brackets as directed below.




Adjust the brackets such that the inner distance between them is 760mm.

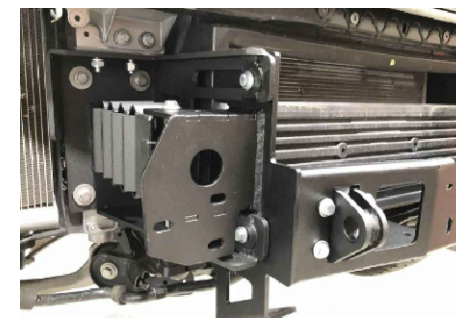
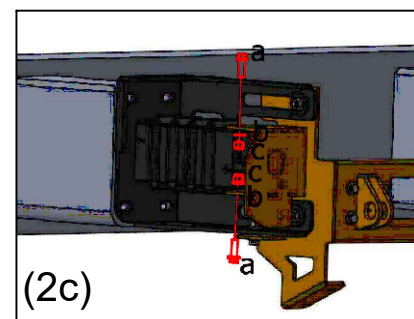
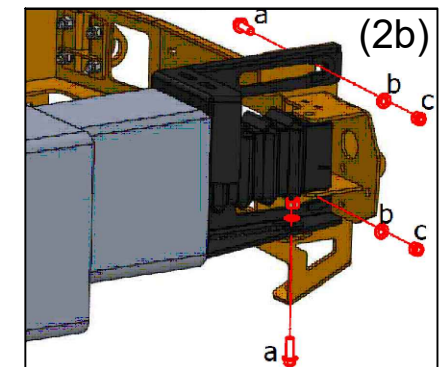
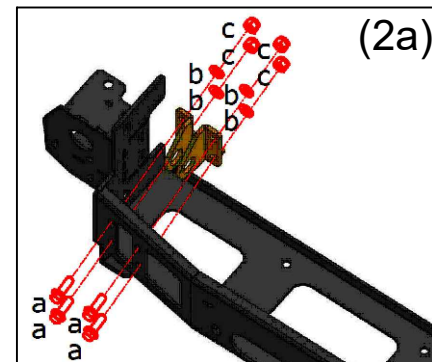
760mm



### Step 2

FASTENING BOLTS			
	a	Flange Hex M10 X 30	18
	b	M10 WASHER	18
	c	M10 NUT	18

Attach the winch cradle following the diagrams below.



## Block 2: Install the Front Bar



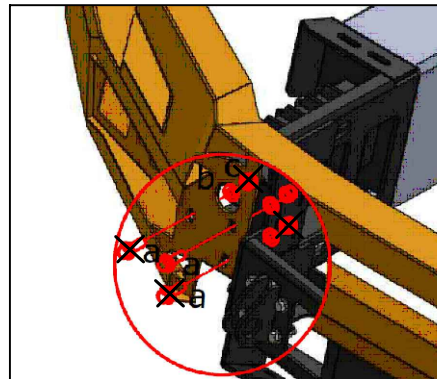
### Step 3

At this stage all bolts should be firm but not tight, such that the bar can be adjusted for alignment.

Remove the plastic trim from each side of the wing.



Install the bar using only one bolt on either side at this stage.



First adjust the bar back and forth to the correct position. Then make horizontal and vertical adjustments for alignment.

Remove the front bar and tighten all bolts on the chassis brackets and winch cradle in their new aligned positions.

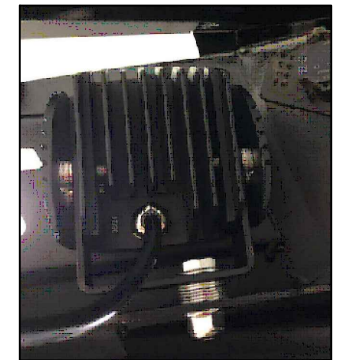
### Step 4

This component of the light wiring should be completed prior to reinstalling the front bar.

If a light bar is being installed, mount the bar in the center section of the bar using one bolt on either end.

Then mount the smaller 40w spot lights on either side of the bar.

These may require spacing up for better alignment with the cutout.

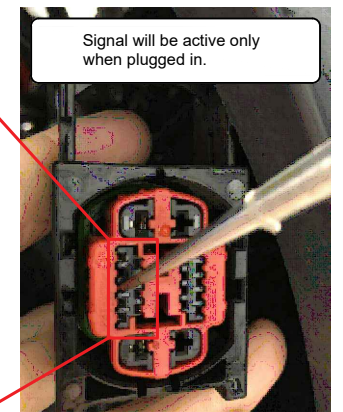
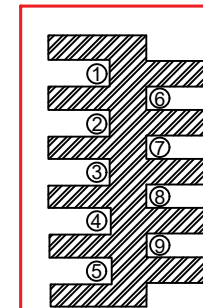


Find the orange headlight plug.

Triggers:

- (3) - Indicator
- (9) - High Beam

If this does not work a CAN BUS module will be required. These can be purchased at:  
<https://trailmax.com.au/shop/can-bus-trigger-module/>



## Block 2: Install the Front Bar

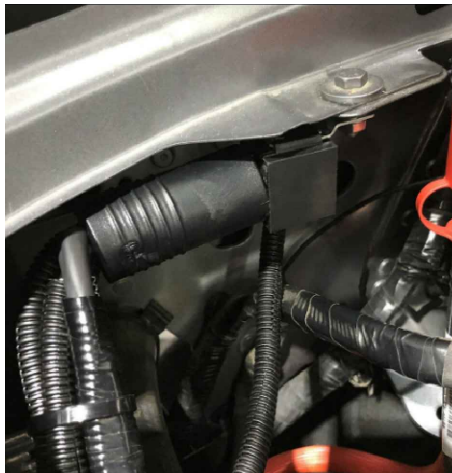
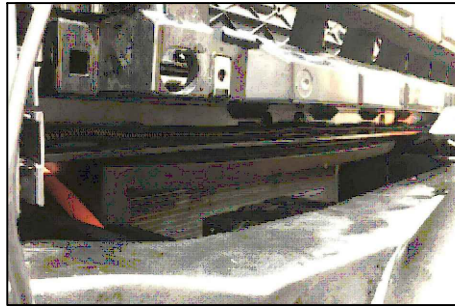


### Step 5

If a light bar is being installed, a third Deutch connector will have to be bridged onto the wiring harness.

The dual wiring harness can be run along the bottom of the top air duct.

Find a suitable position to mount the relay.

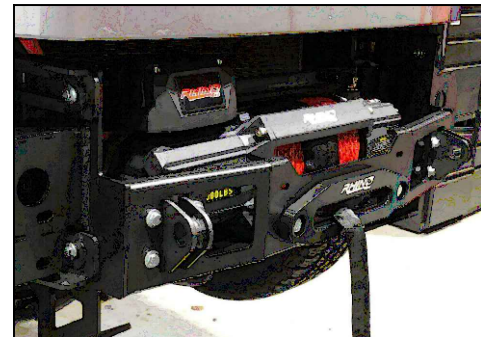


The remainder of the light wiring can be completed at a later stage in the installation.

Referer to Appendix 1.0 for guidance in wiring the high beam harness.

### Step 6

The winch must be mounted in the cradle prior to reinstalling the front bar.



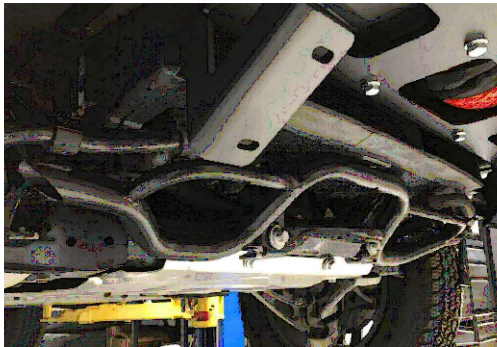
Feed the positive and negative winch wire through to the engine bay such that the winch wiring can be completed in the later steps.

## Block 2: Install the Front Bar



### Step 7

Remount the tubular section using only the two center bolts.



Trim the tab off the bottom of the flare.



Trim and reinstall the radiator ducts on both sides.



### Step 8

Trim off the lower section of the radiator surround.



Drill a hole in the air duct tab and secure to the radiator surround using a cable tie.



Trim the section marked on the brake air duct. Return the lower brake air ducts to their original position and press one fern tree clip back in position.

## Block 2: Install the Front Bar



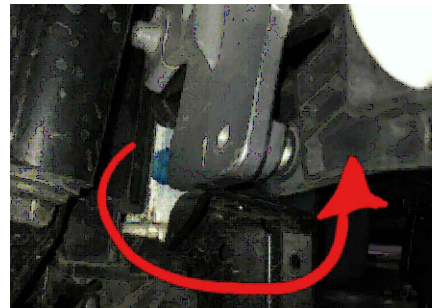
### Step 9

Remove the sensors individually, then pry the sensor housings from the factory bumper. It is important to note each sensor plug direction. The front face of the sensor housing may need smoothing out with a floppy disk.

Using double sided tape and sikaflex, reinstall the housing on the front bar as displayed in the image. They must be installed with the same orientation as factory.

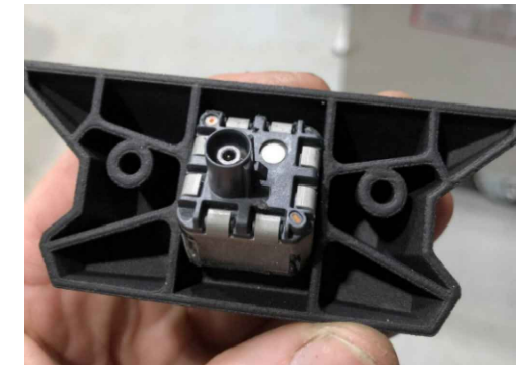


The bottom of the radiator surround is flipped to the opposite side of the bracket. The bolt is then inserted from the front side.



### Step 10

Install the camera into the relocation bracket, applying sikaflex at the top and bottom of the camera. Then fasten at the rear with the provided screws.



KIT FIJACION / FASTENING KIT			
	E	HEX 6 1.00 x 15	04
		Washer D6	08
		Nut 6 - 1.00	04
		HEX 8 1.25 x 25	02
		Washer D8	04
		Nut 8 - 1.25	02

Install the number plate into the cradle using the bolt kit and spacers provided.



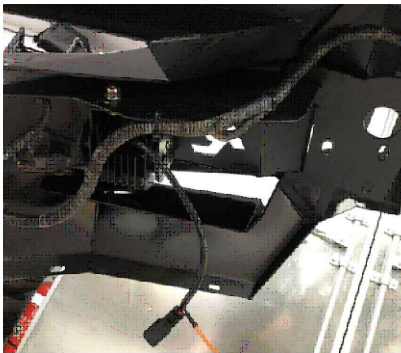


## Block 2: Install the Front Bar

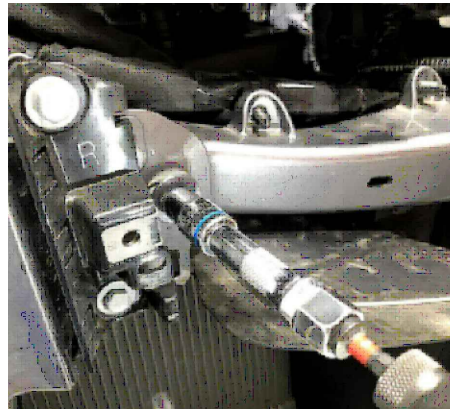


### Step 11

Install the sensors back into the now reattached housings on the bar. The holes and slots on the bar can be used for neater wire routing.



The bolts in the image to the right can be loosened providing slight adjustability of the fender. This may aid alignment with the Rhino front bar once it is mounted to the cradle.



### Step 12

Mount the light mounting bar before attaching the front bar. Ensure to attach the rubber under the light mount bar before attaching.



Mount the rear bracket for the bash plate mounting points, do not fully tighten at this stage.

Tap nut plates on the top side of the bracket, this will make fastening the bottom bolting points simpler.



## Block 2: Install the Front Bar







### Step 13





Install the bar and tighten the 3 bolts each side, install the grill to help with bar alignment. A gap of 15mm is required between the bar and factory fender, please see the red arrows marking this gap in the image below.

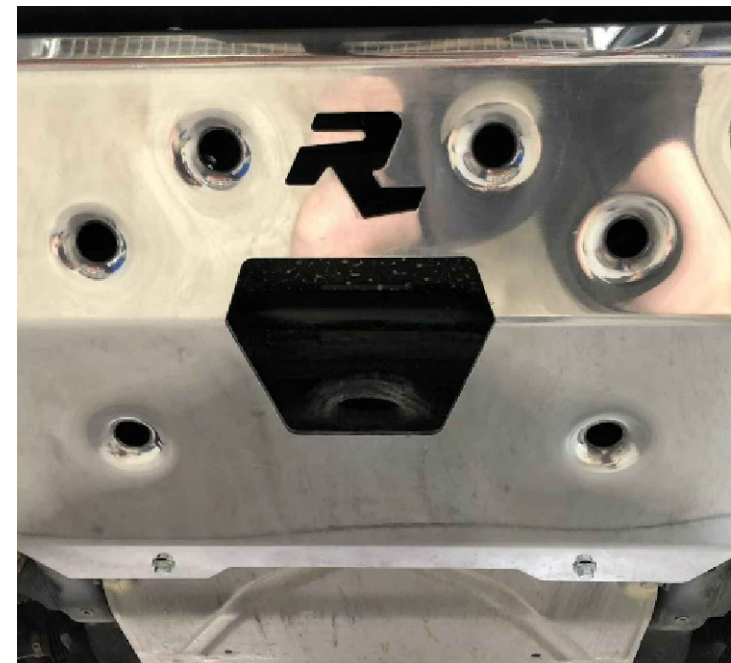


### Step 14

Install the bash plate as per the image below.

FASTENING BOLTS			
	a	M10 1.50 x 30	02
	n	Countersunk screw 8 1.25 x25	04
	o	Countersunk screw 10 1.50 x 30	02
	p	Threaded plate 10 1.50	04

	q	key with nut 8 1.25	04
	j	Allen Button 6-100 x 15	04
	k	Washer D6	08
	l	Nut 6-100	04



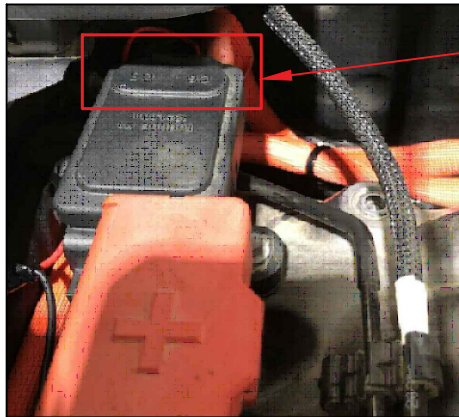
## Block 2: Install the Front Bar



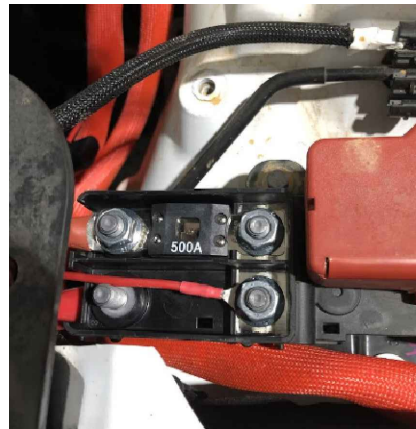
### Step 15

The winch and light wiring can now be completed.

Remove the black cover labeled C5 and C6 to find the positive terminal that can be used for both the light and winch installation.



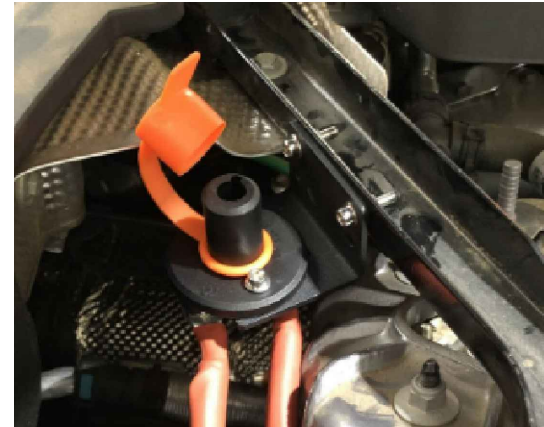
C5 and C6



The negative wire was attached to the earth on top of the strut. For the positive a 450/500Amp fuse to finish the circuit on C6.

### Step 16

The isolator switch was mounted onto the strut brace.



The free positive terminal at C5 can be used for the lights. A suitable earth point can be found on top of the suspension strut.

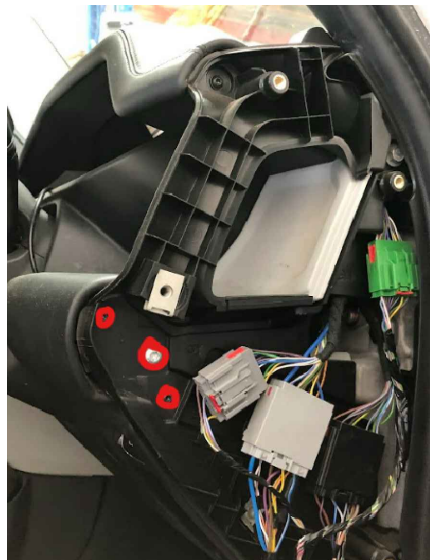
The high beam trigger located in step 4 can then be used as the relay trigger.

## Block 2: Install the Front Bar



### Step 17

Remove the plastic cover and cut a hole through the rubber grommet for routing the switch wires.



Undo the torx screws to remove the side panel as shown. Pull the center piece of trim to expose a torx bolt.



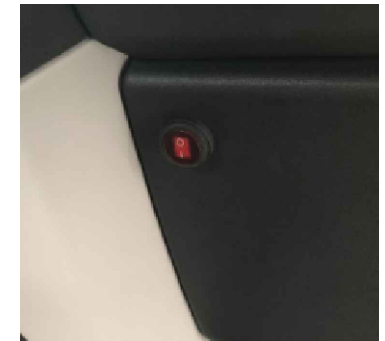
The trim underneath the steering wheel can then be removed.

### Step 18

Drill 4 holes in the lower trim as shown in the image below. Then using a oscillating tool cut between the holes providing a gap in which the switch can be mounted through.



After drilling through the trim to mount the switch it will appear as below.

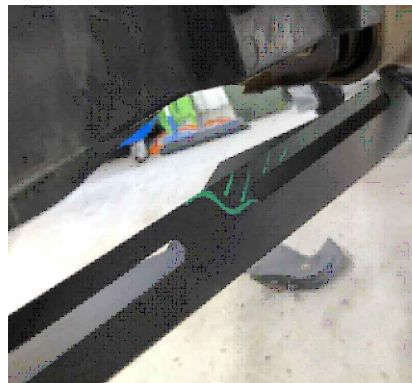


## Block 2: Install the Front Bar



### Step 19

The under wing cover plates may require cutting to sit neatly against the wheel arch liner or more of the wheel arch liner can be cut to suit.






Reinstall the wheel arch liner and trim to suit the under wing cover plates.



### Step 20

#### FASTENING KIT

FASTENING KIT			
	j	Allen Button 6-100 x 15	06
	k	Washer D6	12
	l	Nut 6-100	06

Install the under wing cover plates using the M6 fasteners. Use the M8 bolts to secure onto the bash plate.



## Block 2: Install the Front Bar

### Step 21

Re-install the headlight trim and grille.

Any plugs removed in previous steps should now be re-installed also.



### Step 22



Block 2 Complete

## Installation Complete

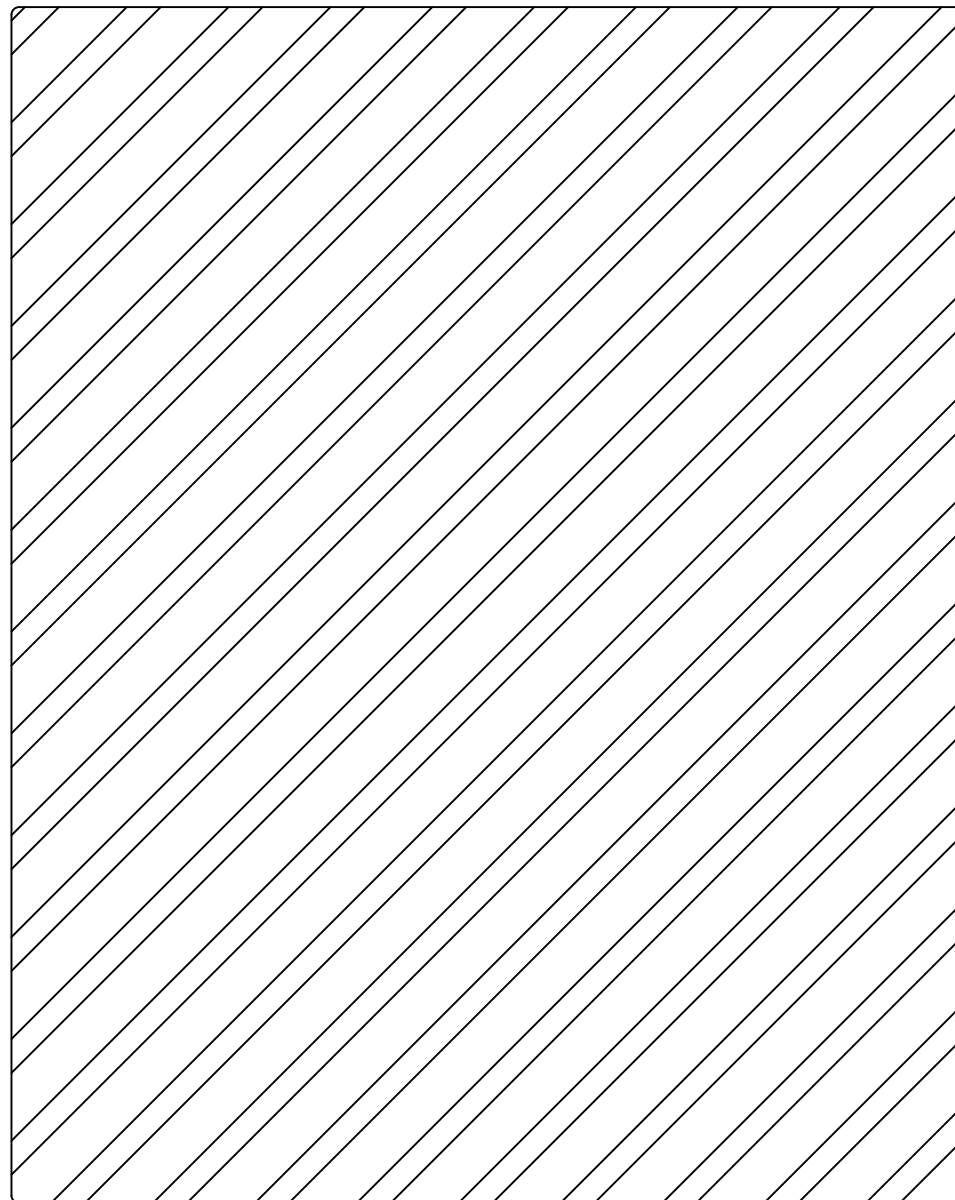
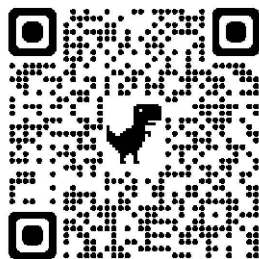


### Review



Thank-you for becoming a part of the Rhino 4x4 team, your support allows us to continue providing the 4x4 industry with quality products.

We are always looking for ways to make your experience with us even better, so please take the chance to share your thoughts on our product by accessing the survey below.



# Appendix 1.0 - Light Wiring Harness

