THE CRUSER COMPANY.





TIME REQUIRED: 10 HOURS (APPROX)

PEOPLE REQUIRED: 1-2 (ONLY TO LIFT BAR ON)

TOOLS & EQUIPMENT REQUIRED:

- SOCKET SET
- SPANNER SET
- RUBBER MALLET
- DRILL
- 16MM DRILL BIT
- OSCILLATING MULTI TOOL (FOR BUMPER CUT OTHER TOOLS CAN BE USED)
- MASKING TAPE
- SHARPIE / MARKER
- SOLDERING IRON
- SOLDER
- 7 CORE WIRE
- HEAT SHRINK
- TAPE MEASURE
- 600MM RULER
- GREASE
- LOCTITE
- SIKAFLEX

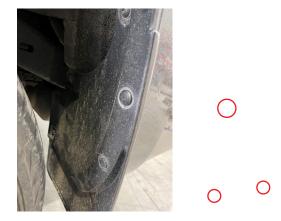
PARTS INCLUDED:

- REAR BAR
- 2X CARRIER BASE
- 2X LATCH DROP DOWN MOUNTS
- 1X TYRE UPRIGHT
- 1X TYRE STUD PLATE / INNER SLIDE
- 1X INLINE JERRY HOLDER (OR APPROPRIATE CARRIER THAT WAS OPTIONED)
- 2X FRONT OF WING TO CHASSIS PLATES
- 2X CHASSIS CLAMP INNER PLATES
- 2X CHASSIS CLAMP OUTER PLATES
- 2X LATCH BASE
- 2X LATCH HANDLE
- 4X MACHINED STAINLESS STEEL LATCH "T" PINS
- 2X STAINLESS STEEL LATCH HOOK AND PLATE
- 2X STAINLESS STEEL RECTANGLE LOGO PLATES (FOR LIGHT CUTOUTS)
- 1X STAINLESS STEEL LOGO PLATE (FOR TOW BAR CUTOUT)
- 2X STAINLESS STEEL SQUARE LOGO PLATES (FOR END OF WING BOLT PATTERN)
- 6X SMALL ALUMINIUM SHIMS
- 1X NUMBER PLATE HOLDER (CONSISTS OF 2X ALUMINIUM PARTS)
- 1X NUMBER PLATE LIGHT
- 1X PAIR OF ROADVISION BR200 SERIES TAIL LIGHTS

HARDWARE INCLUDED:

- 4X 10MM CIRCLIPS (FOR LATCH)
- 2X M10 STAINLESS EYELET BOLTS W/ WASHERS (FOR LATCH)
- 2X MACHINED STAINLESS 90° THREADED ROD (FOR LATCH)
- 4X M8 BUTTON HEAD BOLTS (LATCH BASE)
- 8X M8 REGULAR WASHERS (LATCH BASE)
- 12X M8 NUTS (LATCH BASE, WING BRACE PLATE)
- 16X M8 GOLD LARGE DIAMETER WASHERS (WING BRACE PLATE)
- 4X M10 BUTTON HEAD BOLTS (LATCH HOOK/PLATE)
- 16X M10 WASHERS (LATCH HOOK/PLATE, LATCH PIN)
- 10X GOLD LARGE DIAMETER M10 WASHERS (CHASSIS CLAMPS, FRONT BOLTS INTO NUT STICKS)
- 12X M10 NUTS (CHASSIS CLAMPS, LATCH HOOK/PLATE)
- 8X M8 30MM BOLTS (WING TO CHASSIS PLATES)
- 4X M10 100MM BOLTS (CHASSIS CLAMPS)
- 4X M10 50MM BOLTS (BUMP STOPS AND FRONT CHASSIS MOUNT)
- 2X M10 NUTS ON STICKS (FRONT CHASSIS MOUNT)
- 7X M14 50MM BOLTS (MAIN CHASSIS MOUNTS, WHEEL STUDS)
- 12X M14 30MM BOLTS (LATCH DROP DOWN, TYRE UPRIGHT, TYRE SLIDE)
- 15X M14 NUTS (WHEEL STUDS, LATCH DROP DOWN, TYRE UPRIGHT, TYRE SLIDE)
- **28X M14 LARGE GOLD WASHERS** (LATCH DROP DOWN, TYRE UPRIGHT, TYRE SLIDE, MAIN CHASSIS MOUNTS)
- **16X M5 15MM BOLTS** (STAINLESS LIGHT PLATES, TOW BAR COVER, WING END PLATES, NUMBER PLATE HOLDER, NUMBER PLATE)
- **8X M5 LARGE WASHER** (PLATE HOLDER, NUMBER PLATE)
- **24X M5 REGULAR WASHERS** (STAINLESS LIGHT PLATES, TOW BAR COVER, WING END PLATES)
- **16X M5 NUTS** (STAINLESS LIGHT PLATES, TOW BAR COVER, WING END PLATES, NUMBER PLATE HOLDER, NUMBER PLATE)
- 15X M6 SOCKET HEAD BOLTS (JERRY HOLDER MOUNTING)
- 15X M6 SPRING WASHER (JERRY HOLDER MOUNTING)
- 30X M6 REGULAR WASHER (JERRY HOLDER MOUNTING)
- 15X M6 NUTS (JERRY HOLDER MOUNTING)
- 2X LARGE BEARINGS (CARRIER STUB)
- 2X SMALL BEARINGS (CARRIER STUB)
- 2X BEARING CAPS (CARRIER STUB)
- 2X BEARING SEALS (CARRIER STUB)
- 2X CROWN NUTS (CARRIER STUB)
- 2X M16 WASHERS (CARRIER STUB)
- 2X SPLIT PINS (CARRIER STUB)
- 2X GOLD SAFETY PINS (LATCH HOOK)
- LIGHT HARDWARE WILL BE INCLUDED IN LIGHT PACKAGING

LOCTITE SHOULD BE USED ON ALL BOLTS



Gently pry the corner of the factory tread plate until it unclips. Remove the factory tread plate from the bumper.

Remove the bolts along the back edge of the bumper under the tail gate.

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Remove the clips on the tailgate side of the bumper wings. Do this on both sides.



Remove the bolts and clips from the bottom edge of the bumper at the back.



Pull the factory bumper off the vehicle.



Remove the factory tie down points that are underneath the chassis.



STEP 8

Drill the factory holes that are underneath the end of the chassis rail. Use the 16mm drill bit to do this. Paint the raw metal to prevent rust.



STEP 9

Remove the spare tyre from underneath the vehicle. Use the tools in your factory tool kit to do this.

Once the tyre has been removed, you will need to remove the cross member that holds the factory spare tyre. The cross member is bolted on with 3x bolts each side that go into the inner side of the chassis rail. There is also one bolt in the centre (aligns the guide), this will also need to be removed. The cross member should now come off.

Sit the rear bar on the vehicle. Install the 4xM14 50mm bolts and 2xM10 50mm bolts that hold the bars to the vehicle. The M14 bolts will go into the same holes that the factory tie down points used (use heavy duty gold washers). The M10 bolts will go into the holes drilled out in step 8 (use heavy duty gold washers). You will also need to slide the M10 nuts on sticks into the chassis rail to meet the M10 bolts. It is usually easiest to get the M10 nuts on sticks in through the large side opening on the back of the chassis rail.



Do not completely tighten any bolts at this stage.

STEP 11

Line the bar up with the body line. The top edge of the rear bars wing should be parallel with the body line / bumper seam.

Once you are happy with the bars alignment, assess the number of shims required between the bars chassis mounts and the chassis itself to maintain this angle. Then install shims.



STEP 12

Measure the bar to the body (left, right, back and forth). Position the bar so that it is central on the vehicle. The bars chassis mounts are oversized / slotted to allow adjustment during this step.

When satisfied with the bars location on the vehicle, appropriately tighten the bolts on the chassis mounts. The bar will now be tightly held in place.

Install the chassis clamps to the vehicles chassis rail. The clamps need to be fitted to the chassis rail at the back of the rear wheel arch. Each chassis clamp consists of two parts, an inner flat part, and an outer folder part. Slide the flat part up on the inside of the chassis rail and position the other folded part on the outside of the chassis rail so that you can pass the m10 100mm bolts through both parts. Install and fasten the 2xm10 100mm bolts to each clamp (above and below the chassis rail). When doing this, ensure each bolt has a washer on the bolt head side and the nut side. The chassis clamp is designed to slightly bend as the clamp is tightened. Ensure the folds align as per photo below:



STEP 14

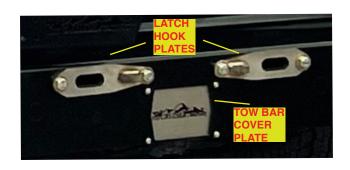
Install tail lights. To do this, open the Roadvision BR200 series tail lights. Fit the tail lights into the light buckets on the rear bar and use the supplied hardware to fix in place. Ensure the supplied rubber seal is used behind the light and do not over tighten.

Install the stainless steel latch hooks. Install these parts on the bar so that the hooks face inwards. These parts have adjustment up and down, at this stage centre the latch hook plate on the bar base and tighten. Use the m8 button head bolts with m8 washers on the bolt head and nut side and m8 nuts.

Install the tow bar cover plate. Slide the tow bar cover plate up between the tow bar and rear bar so that the stainless plate blocks the view of the tow bar. Align the 4x holes on the corners and use the m5 hardware to fix the cover plate in place.

Install the corner logo plates on the bar base. These are the stainless steel rectangular plates that are installed if additional reverse lights are not optioned. These need to be fitted to the bar corners and fixed in place with m5 hardware.

Install the wing end plates. These are bolted on using m5 hardware.

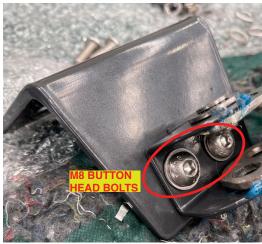




Bolt the latch base to the latch drop down. Use the m8 button head bolts to do this. This is an adjustable part, centre it in its range of adjustment at this stage and tighten. Please note that the latch drop downs do have a left and a right side. Ensure the latch base and latch drop down are orientated the same way before tightening in place.



HIGHLIGHTED AREA SHOWS LATCH DROP DOWN AND WHERE IT MOUNTS.

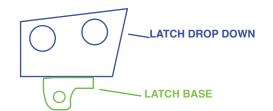


CORRECT ORIENTATION:

example is of a drivers side part

TOP VIEW

THIS SIDE FACE TOWARDS CENTRE OF BAR



Bolt the latch drop down to the carrier arm base. Use 2x M14 30mm bolts on each carrier arm. Face the bolt head down towards the bar. Appropriately tighten.



Fit the carrier arm bases to the rear bar.

- 1) Pack the large and small bearings with grease
- 2) Sit the carrier arm base upside down
- 3) Sit the large bearing into the sleeve on the carrier arm base
- 4) Gently tap the bearing seal into place (this will also hold the large beairng in place)
- 5) Place the arm onto the stub on the rear bar
- 6) Place the small bearing over the stub and into the top of the carrier arm sleeve
- 7) Place the large m16 washer on top of the small bearing
- 8) Install the castle nut and tighten (do not over tighten)
- 9) Install split pin
- 10) Gently tap dust cap on (50x50x2 steel square tube will fit over the dust cap and allow you to tap it on without denting it).

Once the carrier arms are installed, carefully close the carrier arms and check to see if the latches align with the stainless latch hook/plate and the bolts pass through the holes in the bar base. Adjust latches up/down if needed.

STEP 17

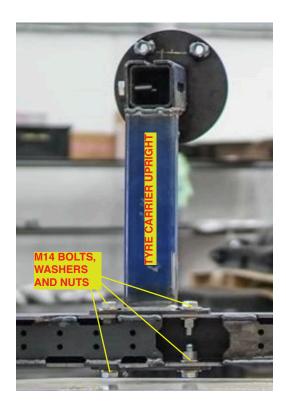
Install latch handle.

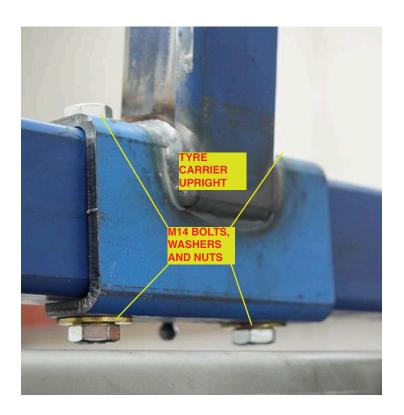
- 1) Slide stainless latch handle into the latch base that is already fitted to the carrier arm
- 2) Ensure logo is facing the right way up.
- 3) Slide the machined pins through the latch base and latch handle (place a m10 washer on either side the washers included with the eyelet bolts can be used).
- 4) Fit circlips to the machined pins to hold it in place and prevent the latch handle and base from seperating.
- 5) Install threaded cross pin through latch handle.
- 6) Thread eyelet into threaded cross pin.
- 7) Grease contact points.
- 8) Adjust eyelet to control latch tension.

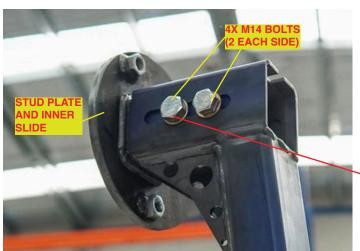


Install the tyre carrier upright. Place the tyre carrier upright onto the drivers side carrier arm base so that the bolt holes in both parts align. Fit 4x M14 30mm bolts with heavy duty gold washers and nuts and tighten appropriately.

Once the tyre carrier upright is fixed in place, install the stud plate and inner slide to the top of the tyre carrier upright. To do this, first slide the part inside of the tyre carrier upright and ensure it is orientated so that the tyre will sit flat against the back of the vehicle and not on an angle (the part is purposfully angled for this reason). Then install 4x M14 30mm bolts (2 each side) with heavy duty gold washers and nuts. Nuts should face the inside and you will need to tighten the deeper two nuts first as these will become inaccessable once the outer most bolts and nuts are installed. You may need to adjust this slide when you install your wheel.



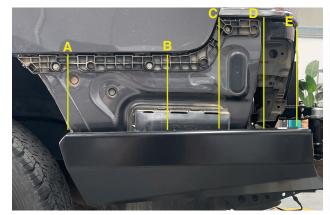




TIGHTEN INNER BOLTS PRIOR TO OUTER. YOU WILL LOSE ACCESS ONCE OUTER BOLTS ARE INSTALLED.

Cut the bumper wings to fit with the newly installed rear bar.

- 1) Cut the bumper in half so that it is easier to work with and remove corner reflectors.
- 2) Apply masking tape to the centre section of the side wing to avoid marking it.
- 3) Measure points marked in FIGURE 1 (A,B,C,D,E) from the bumper seam to the top of the rear bar.
- 4) Mark the measurments (A,B,C,D,E) onto the plastic bumper wing.
- 5) Use a ruler to join the marks and draw a straight line across the bumper.
- 6) Mark another line 20mm higher than the line marked in the previous step. This new line is the cut line (it is 20mm higher to give clearance for the pinchweld bulb seal).
- 7) Use an oscillating multi tool to carefully cut along the marked line.
- 8) Cut out the internal structure that used to hold the reflector. Only the shell of the bumper needs to remain.
- 9) Cut the tailgate side of the bumper wing by following the measurments shows in FIGURE 2.
- 10) On facelift models, you will also need to clearance above the stub (FIGURE 3). Neatyly trim the required amount of material from this area and then install pinch weld on the cut edge.
- 11) Install pinchweld with the rubber bulb seal on the large cut that meets the top edge of the rear bar.
- 12) Install regular pinchweld on the cut edge that faces inwards (tailgate side of the wing).
- 13) Reinstall bumper wing on vehicle.
- 14) Trim mudflaps as shown in FIGURE 4 and reinstall top section on the vehicle. New mudflaps can be mounted to the front wing braces.



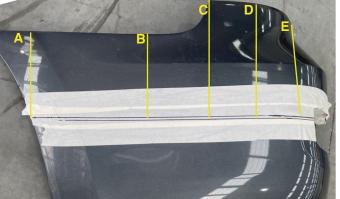


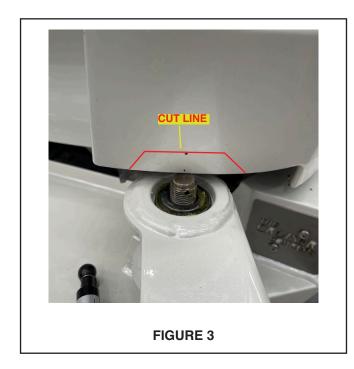
FIGURE 1

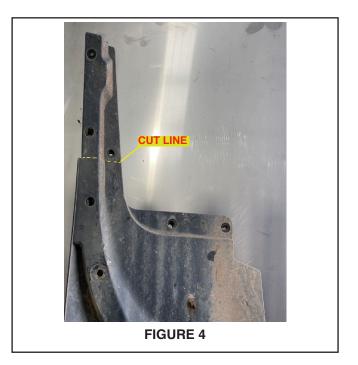






FIGURE 2





Install the jerry can holder to the passenger side carrier arm base.

- 1) Sit the jerry holder on the arm and align the bolt holes in both parts.
- 2) Install 2x m6 bolt, washer and nut combos on the top edge to hold the jerry holder in place.
- 3) Install all m6 bolts loosely.
- 4) Adjust the jerry holder in-board or out-board as desired.
- 5) Tighten in place.

STEP 21

Fit the spare tyre to the tyre carrier and tighten. Adjust stud plate and slide for tyre offset if needed. Also install the number plate bracket if you're wanting to run the number plate inside the rim. Fit the number plate light to the number plate holder.



Wire the tail lights and number plate light. To do this, solder 7 core wire to the back of each tail light plug and then tap into the back of the trailer plug.

STEP 22

If the vehicle has sensors, punch out the sensor cutouts in the rear bar and press fit / sikaflex the factory sensors into the rear bar. Depending on the model, the sensor loom may need to be extended (these wires can be cut and soldered).

STEP 23

Should you choose to run mudflaps, they can be fitted to the front wing brace. Holes have been pre-cut for this purpose.





STEP 24

Make any minor adjustments necessary.