

## Land Rover Defender 130" (L075) Fitting Instructions

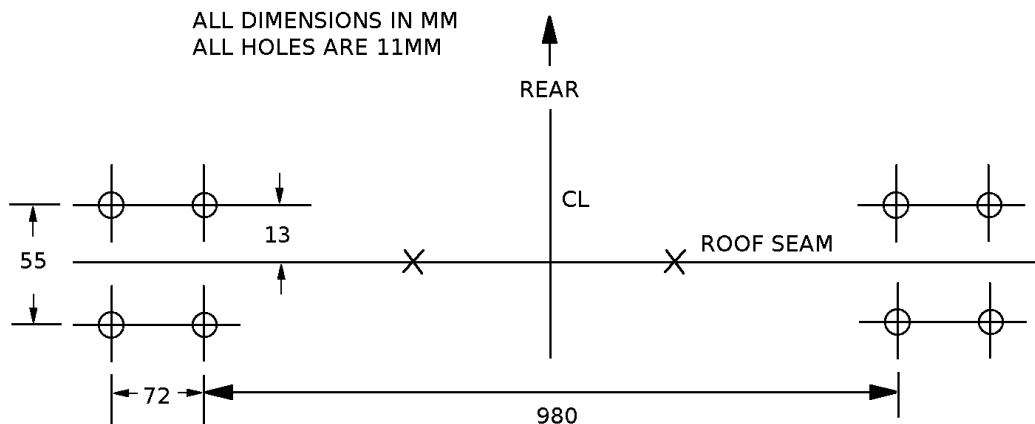
Unwrap the roll cage and unpack the individual fitting kits. At this point it is recommended that all components are checked against the assembly drawing on page 7 of these instructions. Should any parts or fixings be missing at this stage, or during installation, please contact your stockist.

The assembly process of this roll cage is separated into several different sections, each section having its own fitting kit containing all nuts, bolts, washers and fitting plates required:

<b>Section 1 – Preparing roof mountings</b>	<b>pg 1</b>
<b>Section 2 - Front chassis/body mountings</b>	<b>pg 2 - 4</b>
<b>Section 3 - Internal Hoop installation</b>	<b>pg 4 - 5</b>
<b>Section 4 - Completion of internal ROPS assembly</b>	<b>pg 6</b>

**Section 1** - The first step in installing the roll cage is to prepare the holes in the roof, where the external front section meets the internal rear section.

**1.1** - Using the dimensions shown in Fig 1.1, position masking tape over the relevant areas of the roof before marking hole centres of all 8 holes of the front leg roof plates. Drill these positions with a pilot drill before opening out to 11mm and removing masking tape. Care should be taken to ensure only the roof skin is penetrated, not the headlining.



LAND ROVER 90/110/130 FRONT LEG FOOTPLATE POSITIONS

Fig 1.1

**Section 2** - The next step in installing the roll cage is to prepare the two mounting points beneath the front wings of the vehicle.

**2.1** – With the bonnet raised and using the template on page 8, position the folded edge along the inner wing top, and the rear edge against the bulkhead. With this position determined, remove the template and position masking tape over the relevant areas. It is important to ensure the masking tape does not cover the join from ‘outer wing’ to ‘wing top’ as these panels will need to be separated. Reposition the template and mark the oval cut out on the masking tape.

**2.2** – Remove front wing eyebrows and outer wing (split wing)

**2.3** – Located in the top corner of the outer wing skin is a gusset pop riveted to the wing itself. Drill these spot welds and remove the gusset. The upper hole circled in Fig 2.3 should be slotted to match the other 3 holes located down the wing flange.



**Fig 2.2**



**Fig2.3**

**2.4** – Using an air saw or similar, cut the ‘outer wing’ and ‘wing top’ to the marks drawn from the template. . Remove masking tape. Additional clearance may be required depending on vehicle build tolerances. It is also recommended that rubber edging strip is positioned along both trimmed surfaces

**2.5** –On the vehicle there is a lower flange that runs rearwards under the doors. The edge of this flange should be cut away completely from just rearward of the hole for the retaining strap, all the way back to the hinge pillar. Leave 6mm (0.25”) on the top of flange, i.e. cut 6mm (0.25”) away from the bend. The corresponding material can now be cut out of the wing flange also.



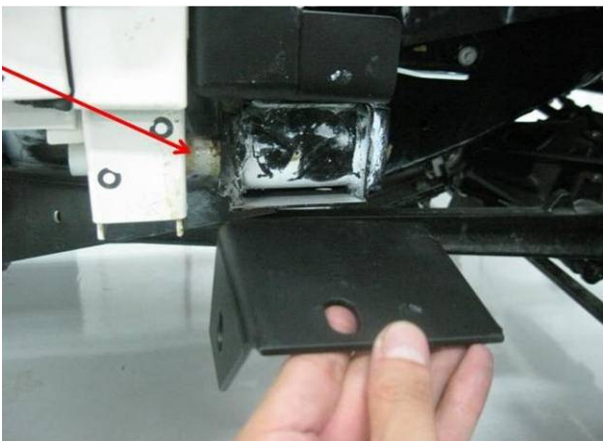
**Fig 2.5a**



**Fig 2.5b**

**2.7** – To allow fitment of the lower chassis outrigger bracket you will first need to remove the long bolt that passes through the outrigger from front to rear. At this point you may find a selection of washers between the outrigger and the bulkhead, or on more recent vehicles a tube welded to the outrigger. If washers are present they should be removed to create sufficient clearance for the bracket. If a welded tube is present then it must be trimmed down to allow the bracket to drop into position.

**2.8** – The bolt can now be reinserted loosely, it will be tightened fully when the wing is back in position.



**Fig 2.7**



**Fig 2.8**

**2.9** - Replace the spire clips in the front bulkhead ('A' Post) with the 'J' nuts provided in the kit.

**2.10** – Lift the front legs into position one at a time, slotting the upper screen rail together.

**2.11** - Loosely secure the legs with eight M8x25mm hex head screws and M8 spring and penny washers down the front bulkhead. Insert the two M10x25mm hex head screws with flat washers and Nyloc nuts through the front leg chassis bracket at the bottom of each leg. Note the bolts should point upwards to ensure correct fitment and avoid outrigger.

**2.12** - Bolt the wings back onto the vehicle using the existing mounting positions as well as the new chassis mounting on the outrigger.

**2.13** – All under wing bolts should now be fully tightened, including the chassis cross member bolts.

**Section 3** - The next section of the roll cage to be installed is the internal B hoop.

**3.1** – If a rear canvas hood is fitted, the front hoop must be removed to allow access to the rear window.

**3.2** – Slide front seats fully forward and fold backrest against dashboard. Remove rear seats and rubber floor mats.

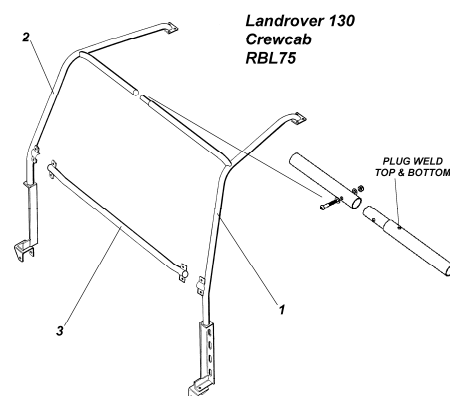
**3.3** – Unbolt inner check strap and remove body mounting. Original bolts should be repositioned and tightened. Remove B Post inertia reel from the rear of the seat riser, positioning the 7/16th bolt supplied in fitting kit into the original position and tightening. Remove the two outermost button head screws from the floor pan just behind the front seats. Remove the upper seat belt mountings from the B pillar.

**3.4** – Remove rear section of roof lining.

**3.5** – Seal around each of the 8 holes in the roof with sufficient sealant (Wurth PU 08901001). Install the 4 x rear bolts and fasten internal nuts and washers. During this process the front legs should be eased together to ensure the two halves of the upper screen rail butt together. At this point the screen rail should be drilled and cross bolted as illustrated in Fig 3.5b. The loser cross rail should now be loosely bolted into position



**Fig 3.5a**



**Fig 3.5b**

**3.6** – Replace rear section of roof trim.

**3.7** – Slide open rear compartment window.

**3.8** – Manoeuvre the 'B' hoop into the vehicle as described below.

- Starting from the left hand side of the vehicle, lay the main hoop horizontally with the right hand foot entering the left rear door, and the left hand foot sitting over the rear buck.
- Rotate the hoop around so the right hand foot passes out through the rear compartment sliding window and the left hand foot has entered the vehicle.

- Maintaining the left hand foot inside the vehicle, draw the right hand foot inward through the rear sliding window and lift the hoop forwards towards the dashboard.
- Keep the left top corner of the hoop down against the left hand seat, whilst raising the right hand top corner of the hoop up towards the right hand side of roof.
- Lower both feet down towards the floor and tilt the hoop until it stands vertically.
- The hoop should now be orientated correctly within the vehicle.

**3.9** – The forward facing brackets at shoulder height should be located against the seat belt mounts. Position the two spacers on the outside of the B hoop mountings and loosely bolt into position using the original bolts.

**3.10** – The lower hoop angled floor brackets should be pushed forward against the riser of the vehicle. It may be necessary to support the floor brackets in their most forward position.

**3.11** - Drill the 4x 11mm holes through the roof brackets into the headlining. Remove the upper seat belt mounts and tilt the hoop rearward. Increase the 4 x roof lining holes to 25mm diameter taking care not to damage the roof skin.

**3.12** – Cut the 4 x 25mm roof spacers to a length of around 48mm. However, this dimension is specific to each spacer due to vehicle tolerance. Repeat steps 3.9 and 3.10 to reposition the B hoop.

**3.13** – Insert the remaining 4 x roof bolts and fully tighten.

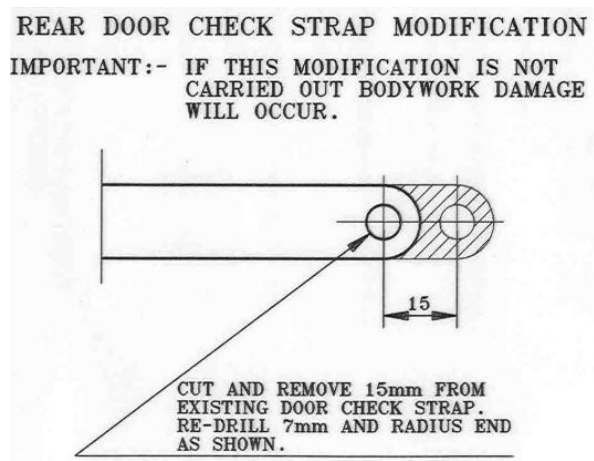
**3.14** – Position the main hoop feet to achieve a 5mm gap between the outside edge of the feet and the rubber matt retaining angle. All 4 floor hole positions should be drilled to 12mm, passing through aluminium floor and steel chassis plate.

**3.15** – Insert the 4 cavity spacers between the chassis outrigger brackets and floor, ensuring alignment with the holes previously drilled. Once aligned, insert the M12 bolts from inside the vehicle and fully tighten.



## **Section 4** – Completion of internal ROPS assembly

- 4.1 – Position the under body bracket assemblies between the two chassis outriggers and bolt using existing holes. Once installed, drill the 4 outer holes through the floor of the vehicle to 11mm.
- 4.2 – Remove upper rear seat belt mountings from C post.
- 4.3 – Locate the rear legs loosely into position followed by the lower cross rail.
- 4.4 – Locate the upper cross rail and add the two longitudinal cant rails. Please note these rails are handed.
- 4.5 – Insert the upper seatbelt bolt through the additional support and fully tighten.
- 4.6 – Fully tighten all bolts of the roll cage. This should be completed gradually, moving around each joint in turn until all bolts are tightened.
- 4.7 – Re install rear seats and rubber floor mats. The floor mats should be carefully trimmed around B hoop tubes. The original door check strap will need to be modified as per fig 4.7



**Fig 4.7**

- 4.8 – If a rear canvas hood was removed, this should now be installed along with any other accessories removed during the installation process.

