

LADDER RAIL SPECIFICATIONS	STEP LADDER RAILS PART NO: CSL	EXT. LADDER RAILS PART NO: CSL3
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FITTING INSTRUCTIONS

PLEASE NOTE: CONDUIT IS FITTED ON DRIVERS SIDE.

IMPORTANT

Two methods of fitting this rack system have been incorporated in this fitting instruction.

Method 1:

Assembly on vehicle - therefore Step 13 is excluded.

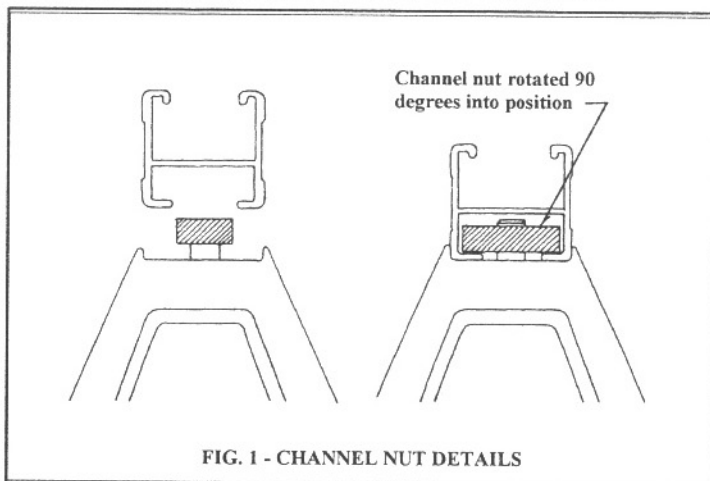
Method 2:

Pre-assembly on floor or Jig

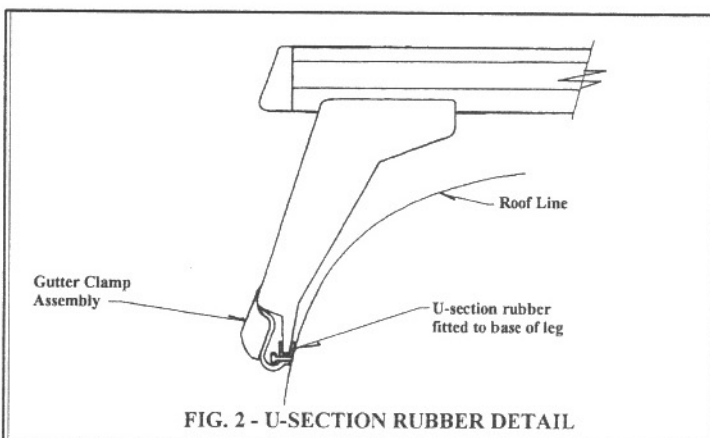
Then fit vehicle

Therefore Step 3 is excluded.

1. Place cross bar upside down on suitable level surface. Loosen channel nuts on M10 bolt to the last two threads. Turn upside down and align with longitudinal slot on bar. Place at end of bar, with channel nut dropping down into slot. Turn M10 bolt to finger tighten channel nut (if low enough) will automatically turn 90 degrees into lock position (across bar section) refer Fig 1. If this does not happen, lower channel another thread. Repeat until in lock position.



2. Space the leg supports approximately 140 cm apart (at base of leg where leg sits into gutter). Rotate lower gutter clamp assembly to allow U-section rubber to be fitted to base of leg. LEAVE IN THIS POSITION. Place U-section rubber onto base of legs. Refer Fig 2.



3. (METHOD 1) Place cross bars on vehicle in positions indicated on drawings. Legs with spacers are fitted to rear bar. Before bolting ensure gutter clamp assembly is rotated out away from base of leg to minimise interference when placing leg into vehicle gutter.

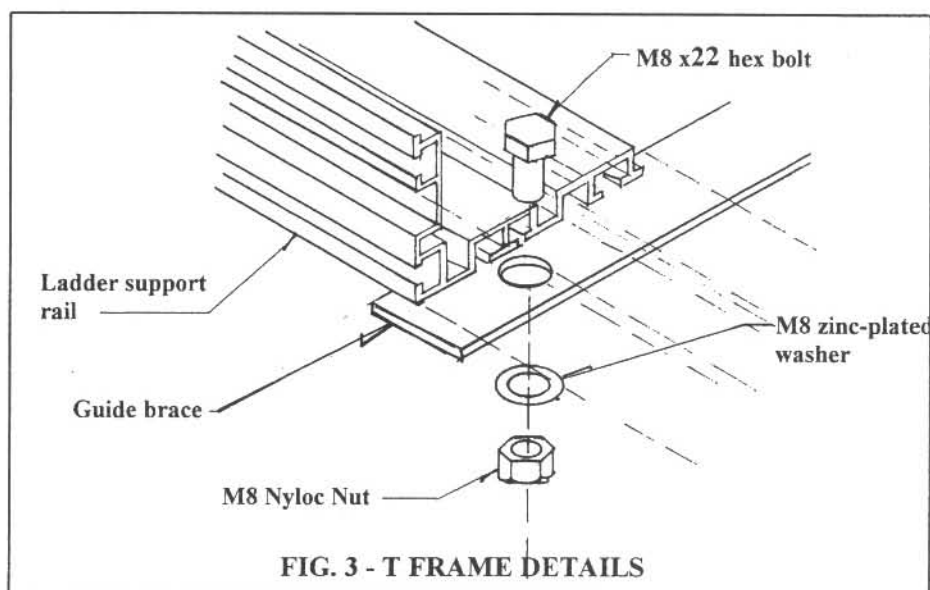
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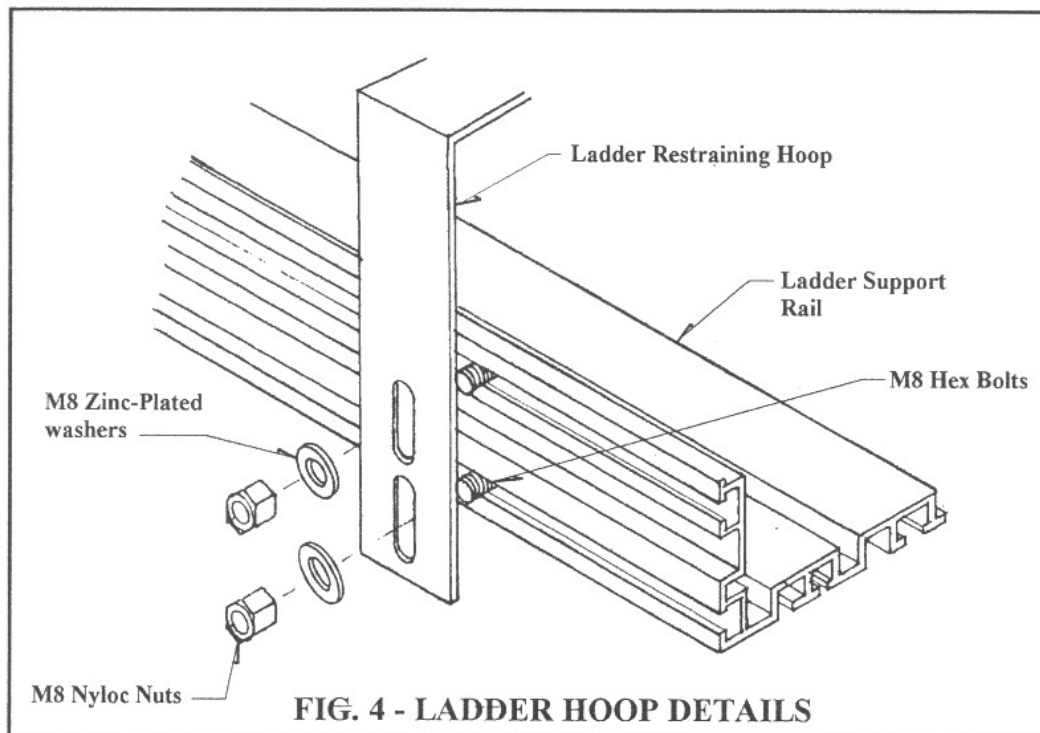
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4. Slide the following bolts into ladder support rails in approximate positions for the attachment of ladder hoops, guide brace and K brackets (Refer Ladder Rack Layout Plan).
 Rail A - Position E - Slide 3 x M8 x 22 hex bolt (for K brackets & hoop)
 Rail A - Position F - Slide 3 x M8 x 22 hex bolt (for K brackets & hoop)
 Rail B - Position E - Slide 1 x M8 x 22 hex bolt (for hoop)
 Rail B - Position F - Slide 1 x M8 x 22 hex bolt (for hoop)
 Rail C - Position E - Slide 1 x M8 x 22 hex bolt (for hoop)
 Rail C - Position F - Slide 1 x M8 x 22 hex bolt (for hoop)
 Rail C - Position H - Slide 1 x M8 x 22 hex bolt (guide brace)
 Rail D - Position E - Slide 1 x M8 x 22 hex bolt (for hoop)
 Rail D - Position F - Slide 1 x M8 x 22 hex bolt (for hoop)
 Rail D - Position H - Slide 1 x M8 x 22 hex bolt (guide brace)
5. Place ladder support rails ABC&D onto crossbars. For spacing refer to Ladder Rack Layout Plan T031/8. Attach guide plates using M8 x 22 bolts and M8 nyloc nuts and M8 flat washers. Slide roller wire trace bolts into bottom channels of rails A & D. Attach rear roller support brackets to rails A & D; ensure that roller wire trace is fitted evenly on rails. Tighten roller wire trace bolts. See Figure 6.
6. Rail A should be positioned back enough to allow bar support for conduit carrier (165mm). PLEASE NOTE- Alloy rollers should be placed into roller support plates before locking tabs are tightened.
7. Attach guide brace utilising 2 x M8 x 22 bolts and M8 nyloc nuts and M8 flat washers. Refer Fig 3.

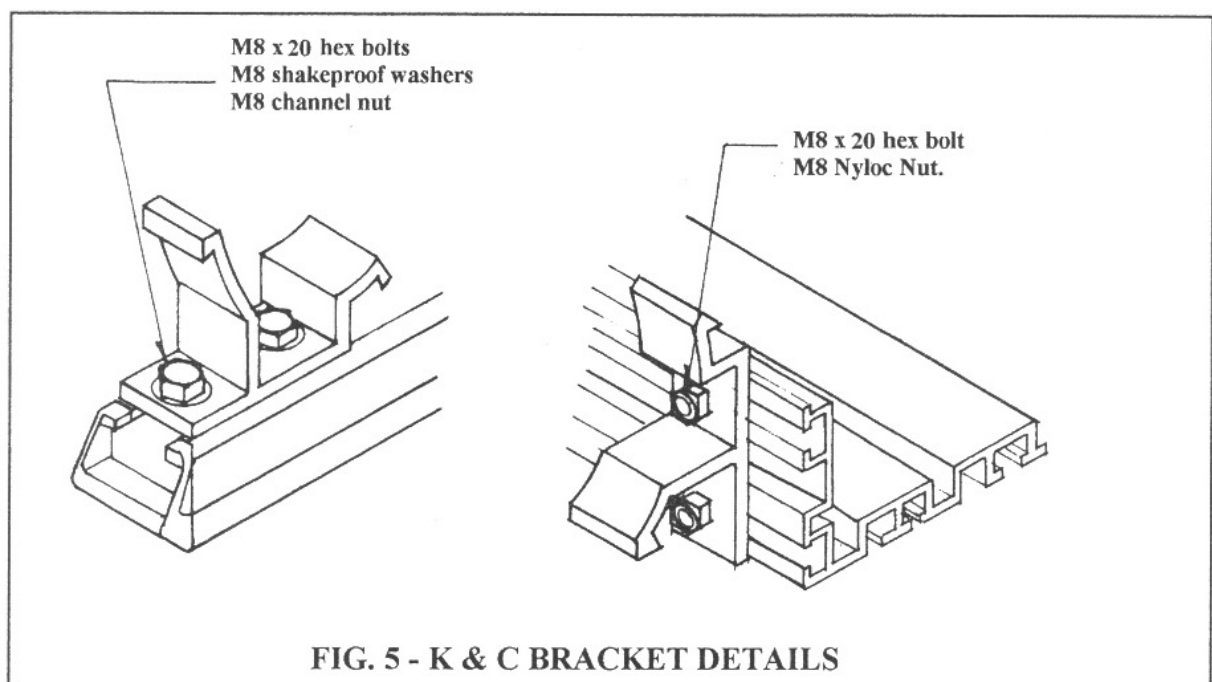
8. Attach and tighten locking tabs to cross bars using M8 x 22 hex bolts and M8 shakeproof washers and M8 channel nuts (10Nm torque). Refer T031/9 Section 5.

9. Attach ladder restraining hoops and tighten using M8 nyloc nuts & M8 flat washers - refer Fig 4.

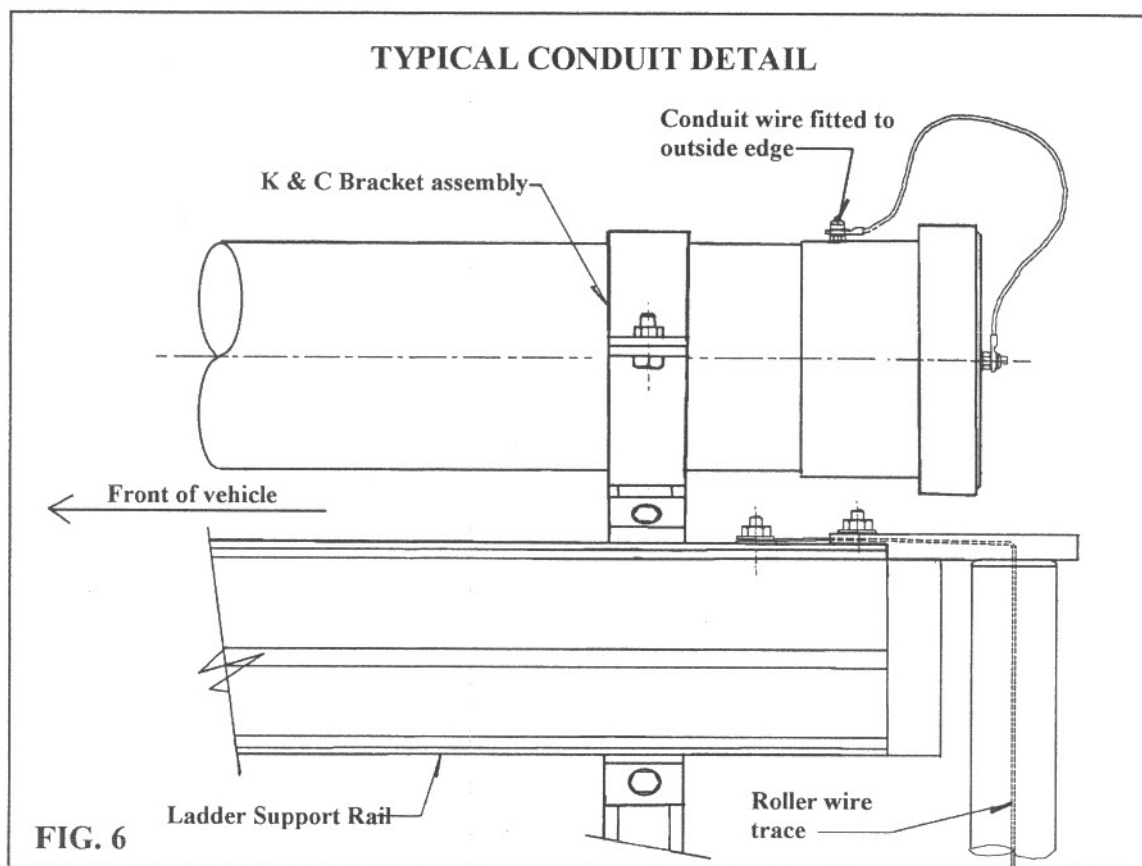




10. Attach one "K" bracket to front of ladder support rail A and one K bracket to the centre of ladder support rail A. K brackets are then mounted off front & rear carry bars to support conduit as well. Refer to Typical Details T031/9.
11. Place conduit tube in K & C brackets so that the end cap retaining wire anchor point is on the side facing out from the vehicle, then tighten 4 x bracket assembly using M8 x 30 hex bolts and nyloc nuts. Ensure warning sticker on conduit is clearly visible on rear right-hand side.



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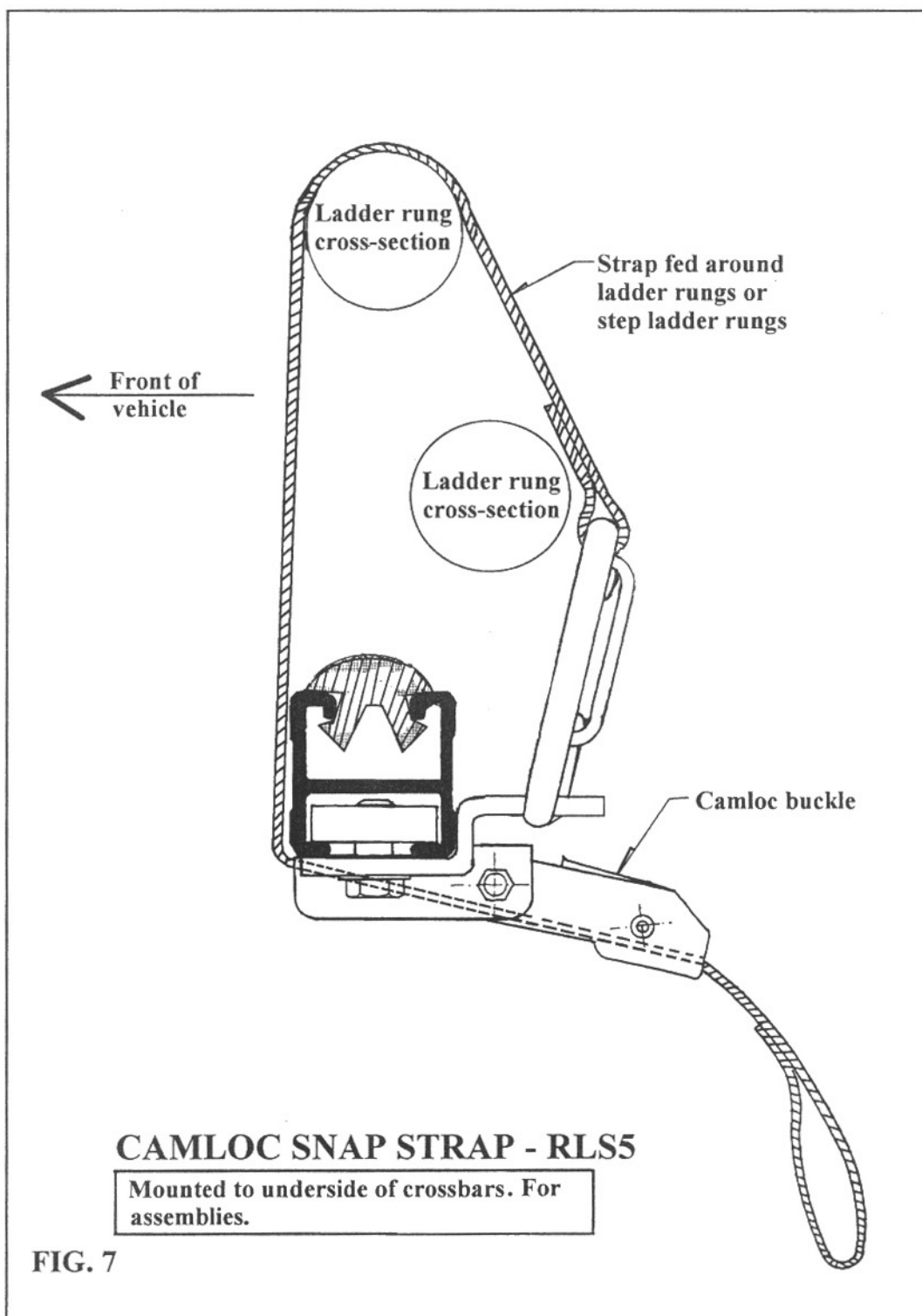


12. Attach cam lock webbing ladder straps to underside of rear cross bar and the hook plate to the underside of the crossbar (Refer Camloc strap detail Fig. 7). **PLEASE ENSURE CAMLOC STRAP DETAIL IS LEFT IN THE GLOVE BOX FOR THE DRIVERS REFERENCE.**
13. (METHOD 2). Lift assembled rack onto vehicle. Before lifting, ensure gutter clamp assembly is rotated out away from base of leg to minimise interference when placing leg into gutter. Positioning on vehicle is determined by rear leg, which should be 10cm from end of gutter, and the front leg should be positioned over the 'B' pillar. (Refer to side view diagram). Before rack is fully tightened, rear door should be open to check that ladder rollers or conduit do not interfere.
14. Tighten leg supports to cross bars (20 Nm torque) and gutter clamps to gutters M6 bolts (4 Nm torque).
15. Attach aerial mounting bracket to centre of front crossbar. See T031/8.
16. Regularly check tightness of all bolts and fittings associated with ladder rack.

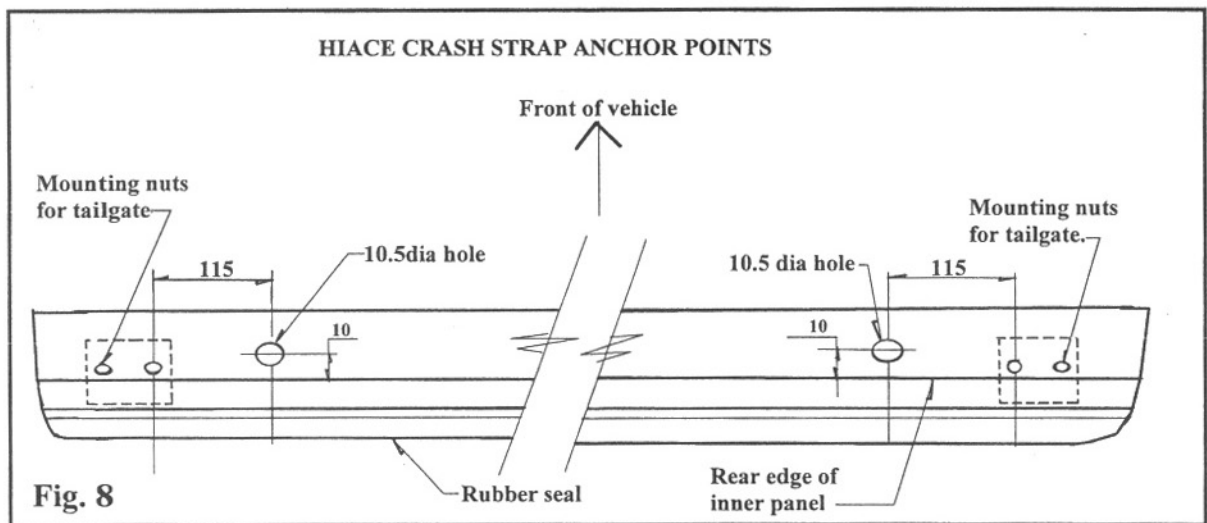
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NOTE: ACCESSORY FITMENT.

ONLY RHINO RACK APPROVED PRODUCTS SHOULD BE ATTACHED TO BAR SYSTEMS. LIST AVAILABLE FROM RHINO-RACK OR YOUR LOCAL DISTRIBUTOR. ONLY RHINO RACK APPROVED CARRIERS SHOULD BE FITTED ON RHINO BAR SYSTEMS. AS1415

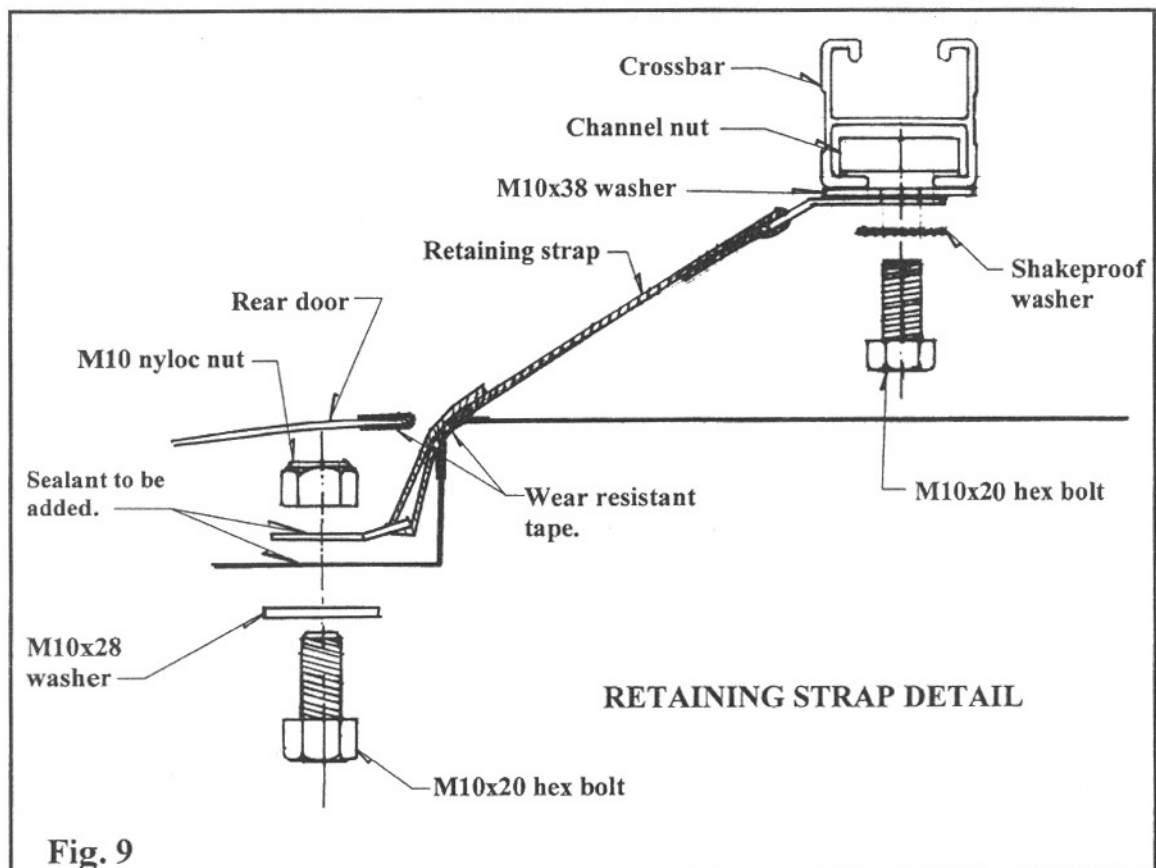


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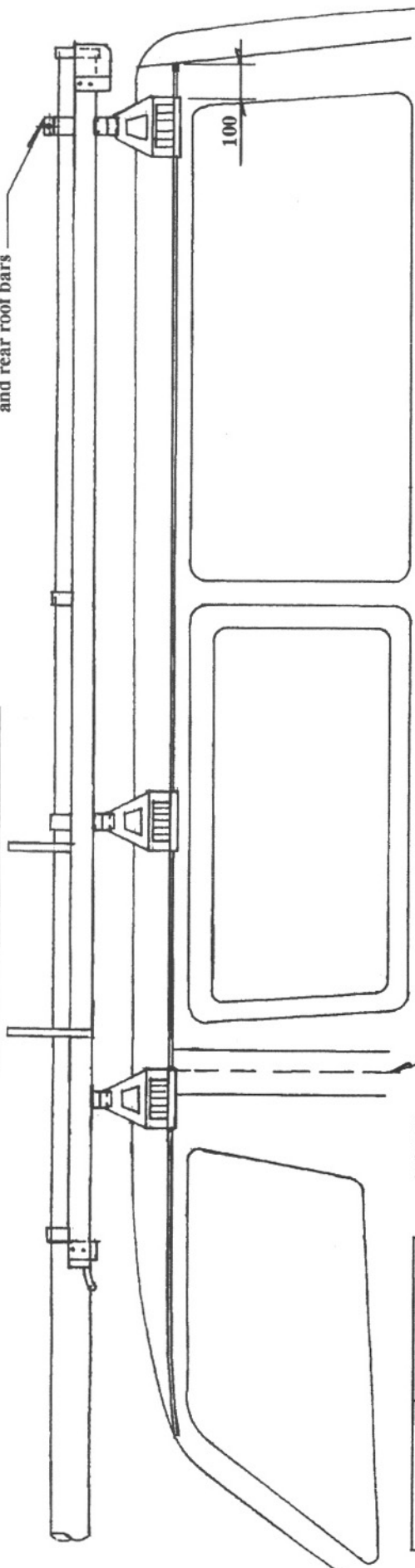
Crash Strap Fitment

1. Lift tailgate and mark out crash strap anchor points with felt tipped pen as indicated in Fig 8. Centre punch hole positions before drilling a 5mm pilot hole. Redrill holes with a 10.5mm drill.
2. Clean swarf with a vacuum cleaner, it is essential all swarf be removed thoroughly. Paint hole edges and surrounds with a generous amount of rust inhibitor such as gold galvanising paint or tecote. Apply silicon sealant around holes and nuts.
3. Attach crash straps to underside of rear crossbars, so they are perpendicular with hole positioning as shown in page 7. Open rear tailgate and attach wear resistant tape to edge of vehicle roof and edge of rear door. Ensure surface is clean prior to tape application. Push strap through tailgate gap and assemble as shown in Fig 9.



TOYOTA HIACE

Conduit supported off front and rear roof bars



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'B' Pillar

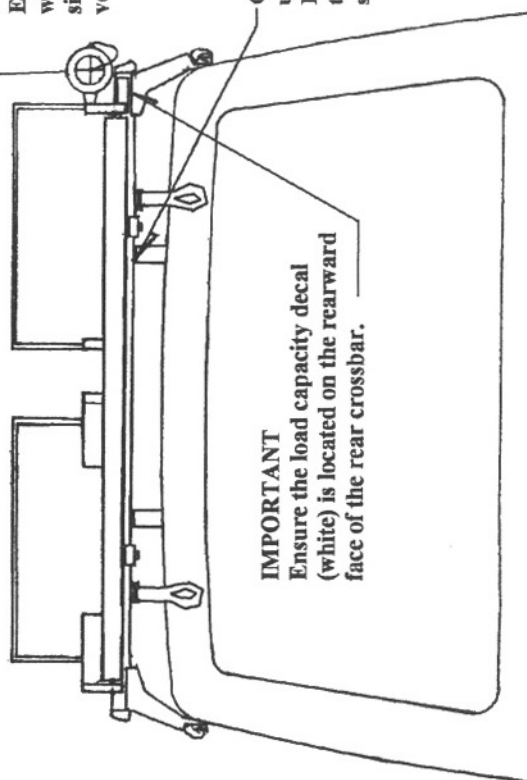
SIDE VIEW

Conduit supported at front of 3.0m support rail. See typical details.

Ladder restrain hoop

IMPORTANT:

Ensure end cap retaining wire anchor point is on the side facing out from the vehicle.



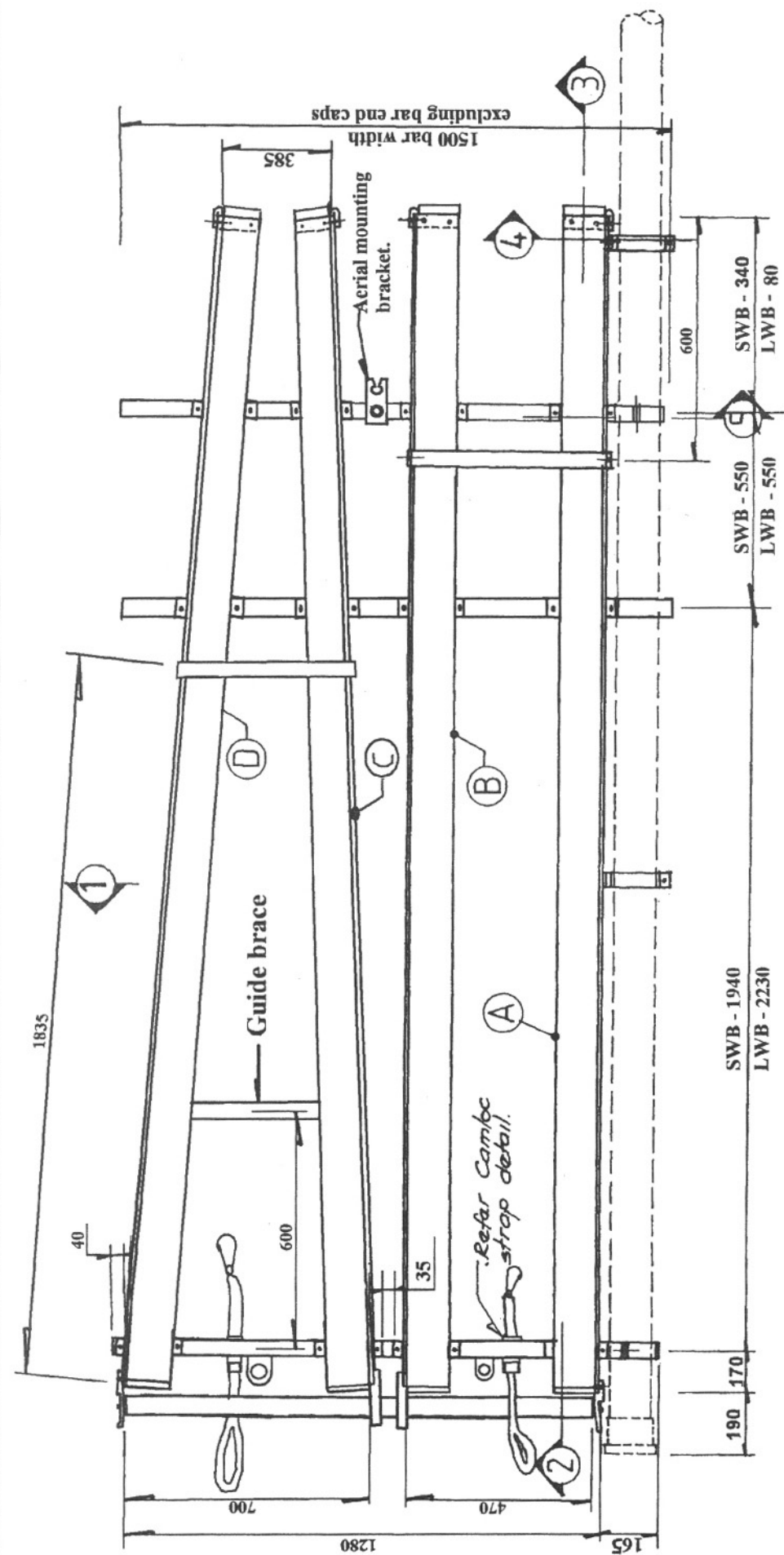
IMPORTANT

Ensure the load capacity decal (white) is located on the rearward face of the rear crossbar.

Crash straps fitted to underside of crossbar. Ladder strap hook plate to be fitted next to crash strap. "Typical"

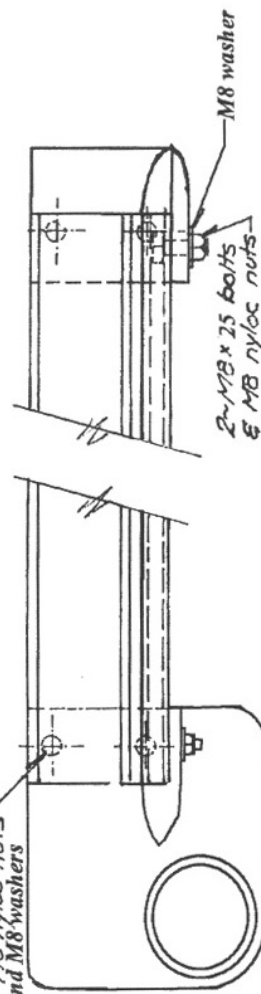
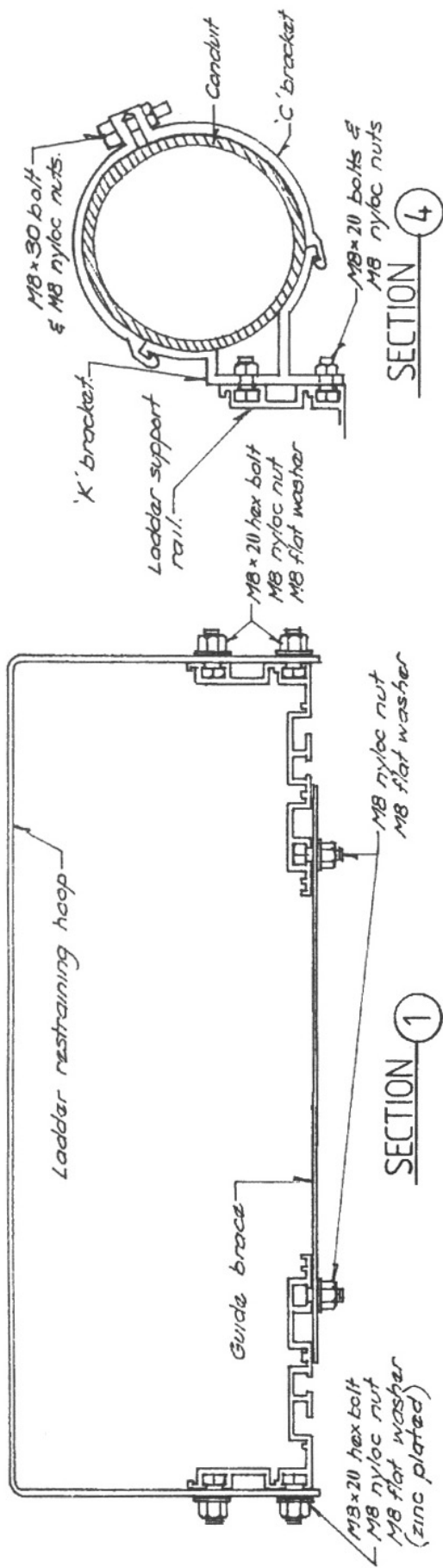
FRONT VIEW

REAR VIEW



LADDER RACK LAYOUT
TOYOTA HIACE

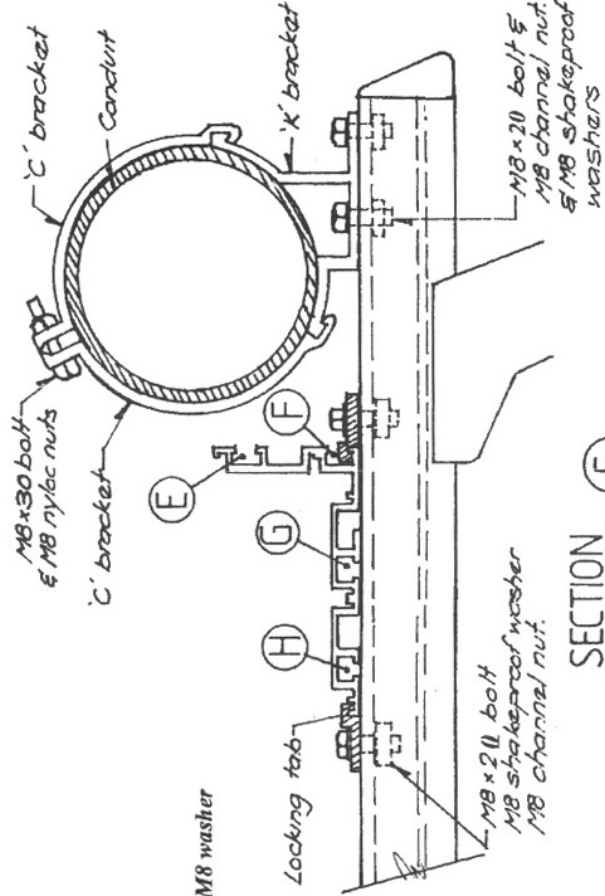
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SECTION 3



IMPORTANT: Ensure all nyloc nuts have a minimum of two threads protruding through the nyloc nut.



SECTION 5



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TYPICAL DETAILS

<h1 style="margin: 0;">RHINO RACK</h1> <h2 style="margin: 0;">CSL; CSL26; CSL3; CSL4.</h2>
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PREPARED BY: MARTIN FERRIER
 AUTHORISED BY ALAN MARSHALL

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PICKING SLIP FOR CSL, CSL3, CSL4, CSL26		CSL	CSL	CSL3	CSL3	CSL2.6	CSL2.6	CSL4	CSL4
LADDER RAIL SPECIFICATIONS			DBL		DBL		DBL		DBL
CODE	COMPONENT								
A	Ladder support rail 3.0m			2	4				
B	Ladder support rail 2.6m	2	4			2	4		
C	Ladder support rail 4.0m							2	4
D	Ladder roller 680mm alloy with plastic sleeve	1	2						
E	Ladder roller 470mm alloy with plastic sleeve			1	2	1	2	1	2
F	CSL Guide Plate Kit	1	2	1	2	1	2	1	2
G	Ladder Restrain Hoop	1	2	1	2	1	2	1	2
H	Guide Brace	1	2	1	2	1	2	1	2
I	Camloc Webbing Ladder Strap RLS5	1	2	1	2	1	2	1	2
J	Locking Tab sets (12)	1	2	1	2	1	2	1	2
K	CSL Front Rail Brace	1	2			1	2		

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Date	