

**PRODUCT DETAILS:**

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<b>Part Number:</b>	QTVW228L	<b>Maximum Towing Braked:</b>	2500	kg
<b>ECU Number:</b>	N/A	<b>Maximum Towing Unbraked:</b>	750	kg
<b>Tail Harness Length Required:</b>	1200 mm	<b>Maximum Static Ball Load:</b>	100	kg
<b>TBM/Lug Part Number:</b>	21325			

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**FITTING DETAILS:**

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<b>Towbar Installation Time:</b>	90 Mins.	<b>RPA Disable/Other:</b>	YES
<b>Total Installation Time:</b>	130 Mins.		
<b>Bumper Cut Required:</b>	Yes		

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**Note:**

- Requires special tool to Dehouse/rehouse wiring terminals - Use Part # 05426 2mm JPT tool.

### TRAILBOSS RECOMMENDS THAT INSTRUCTIONS ARE READ AND UNDERSTOOD COMPLETELY PRIOR TO FITMENT.

#### BEFORE YOU START:

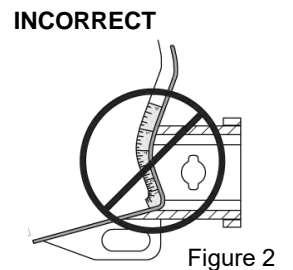
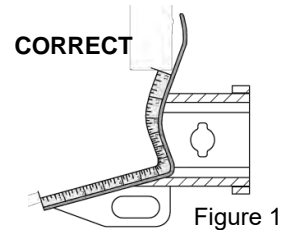
Check all hardware items have been included refer to assembly diagram.  
Please ensure this towbar is only fitted to vehicle models as per Trailboss application guide.

#### Bumper Cuts

Vehicle and bumper variations can and do occur during vehicle manufacture after initial towbar design. Fitment of towbar to vehicle and accuracy of bumper cut must be assessed prior to any bumper modifications made. Incorrect bumper cuts are not covered under Trailboss warranty.

**NOTE: Bumper cuts need to be approached with care, refer to notes below.**

- Bumper centreline – where the centreline of the bumper needs to be determined, the installer must assess centre point by measurement of bumper width or determining two symmetrical reference points to give centreline.
- Bumper edge – To assist with accurate bumper cut measurement, reference to the start of the bumper edge is now being commonly used.
  - Measure from bottom edge along bumper and around corner to the 70 mm point (Figure 1).
  - Do not measure from visible bumper front of corner, upwards (Figure 2).



#### Drilling

- For any required drilling during installation, ensure that the area is clear of fuel, electrical & other components that may be damaged.
- All holes drilled into metal body panels shall have all burrs & swarf removed then coated with a suitable rust preventative paint.

#### Bolts/Fasteners

- Ensure that all hardware is fastened to correct torque as specified in this fitting instruction.
- All fasteners supplied with this product are used to achieve a specified clamp loading. If replacement is required ensure that fasteners of the same grade and class are used.

**NOTE: Achieving correct torque is critical to proper installation and responsibility of the installer. Towbar failures attributed to tension issues from over tightening or under tightening are not covered by Trailboss warranty.**

#### Product Labels

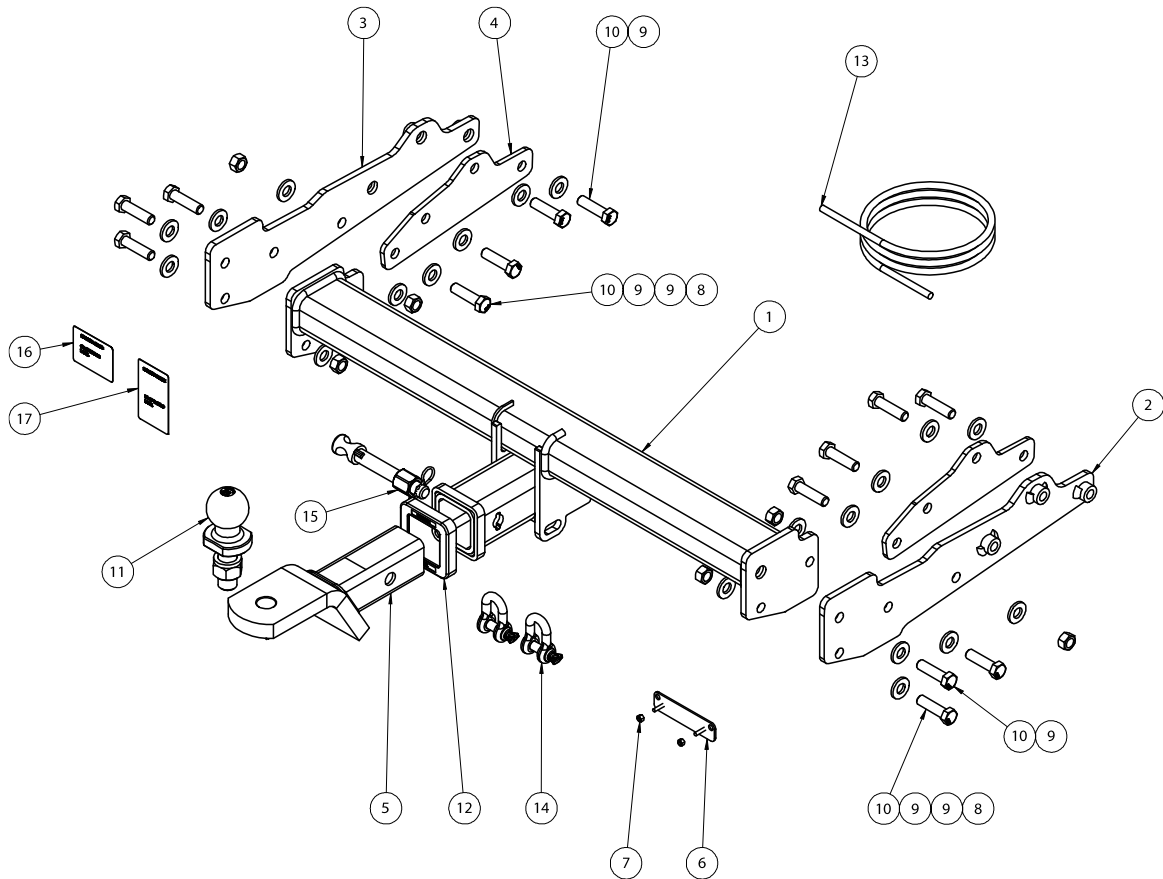
- a. Towbar load rating sticker provided with this product shall be conspicuously located on inside rear end of the driver's door.

### WARNING:

**Do not, drill, cut, weld or otherwise modify the towbar.**

**FOR TOWING PURPOSES ONLY - This towbar is designed and tested by Trailboss to adhere to ADR 62/02 which provides only for the expected load demands of towing.**

### **i** TOWBAR ASSEMBLY DIAGRAM

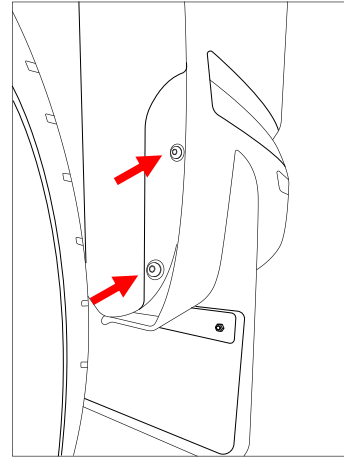


ITEM	DESCRIPTION	QTY
1	WELDED ASSEMBLY	1
2	SIDE ARM ASSEMBLY, LH	1
3	SIDE ARM ASSEMBLY, RH	1
4	WASHER PLATE	2
5	TRAILER BALL MOUNT	1
6	PLUG BRACKET	1
7	NUT NYLOC HEX HD M4x0.7P	2
8	NUT HEX HD M12x1.25P	6
9	WASHER PLAIN 1/2"	20

ITEM	DESCRIPTION	QTY
10	SET SCREW HEX HD M12x45x1.25P	14
11	HITCH BOX COLLAR COVER	1
12	TOWBALL 50mm	1
13	WIRING LOOM	1
14	SMART PIN SILVER	1
15	"D" SHACKLE 10mm	2
16	COMPLIANCE LABEL	1
17	DOOR RATING LABEL	1

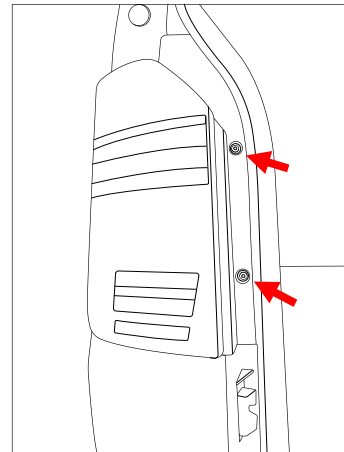
1. In wheel arch, remove 2 x torx screws.

Repeat for other side.



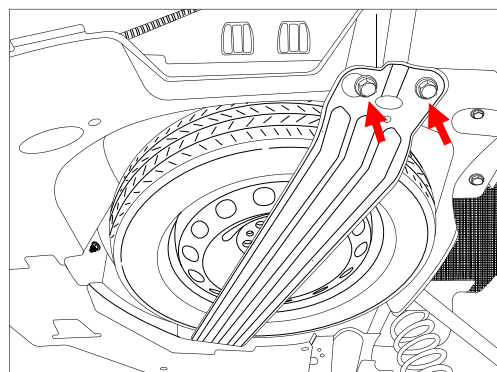
2. Open tailgate to expose the taillight mounting screws. Remove 2 x screws from taillight.
3. Remove taillight (push outwards) from vehicle ensuring to disconnect from wiring harness.

Repeat for other side.

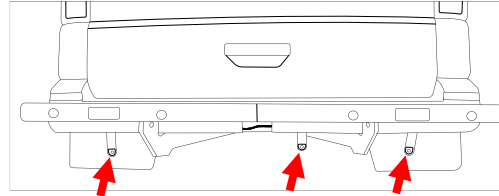


4. Under vehicle, remove spare wheel from the cradle, secured with 2 x bolts and allow the cradle to swing free.

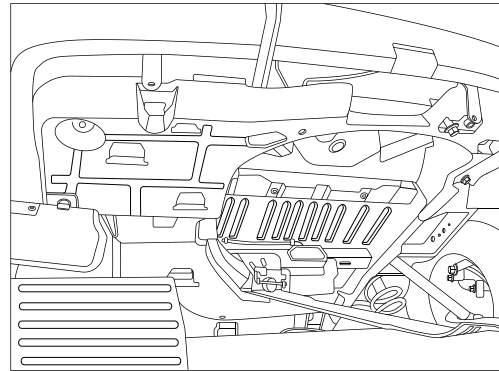
**NOTE: Be aware of crushing as the spare wheel is supported only by the cradle.**



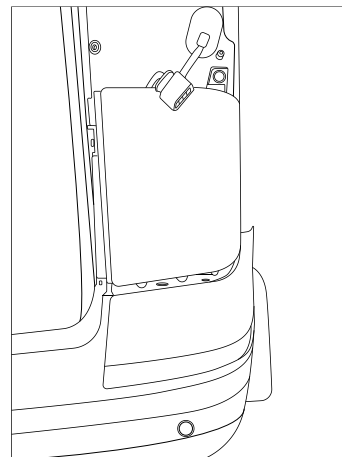
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5. Under vehicle remove 3 x scrivenets securing the bumper tabs.



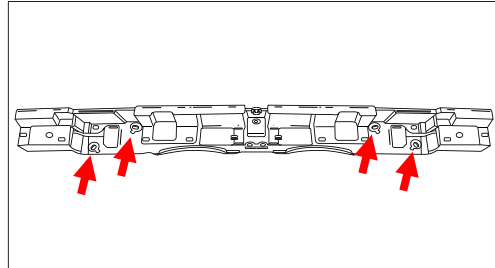
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6. Under vehicle remove the plastic cover secured with 9 x retaining fasteners. Keep all parts for re-installation.



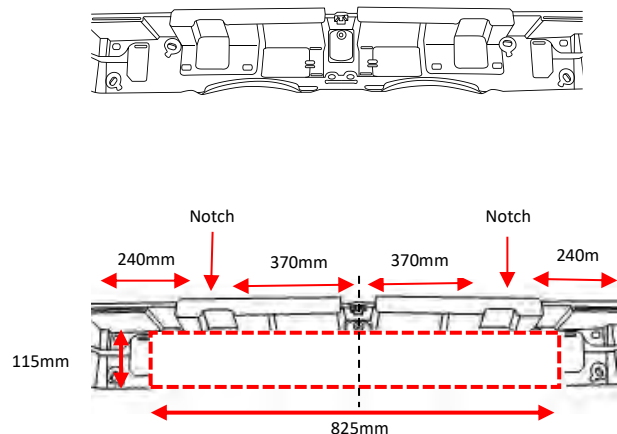
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7. Lift taillight covers, peel bumper away from the sides and remove bumper from vehicle. Ensure to disconnect 4 x plugs from the bumper sensors.



8. Remove factory impact beam by removing 4 x bolts. Keep in a safe place for re-assembly. Ensure to unclip the RPA harness from the impact beam if fitted.



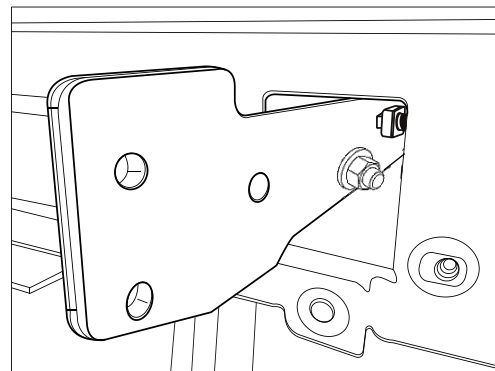
9. On the factory impact beam, cut across 825mm from each chassis rail opening and 115mm up from the bottom edge. This will provide relief for the towbar and support for the bumper. Make sure to cut around mounting holes on the impact beam. Notch the top side of the impact beam as shown on the image to provide clearance for the towbar side arms.



10. Position the side arm into the chassis rail ensuring that the flat side of the side arm is contacting the inner wall of the chassis.

With the washer plate positioned on the chassis rails outside face, sandwiching the chassis rail between the side arm, loosely secure using 4 x M12 x 1.25P G10.9 bolts complete with 1 x washer per bolt. Rear Most M12 x 1.25P G10.9 Bolt to be loosely secured with 1 x M12 x1.25P nut & 2 x washer.

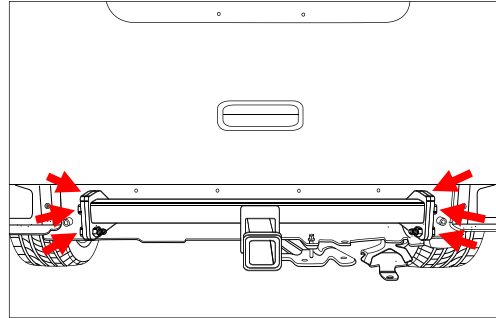
Repeat for other side.



11. Lift centre section of the towbar to the side arms and loosely secure each side with 2 x M12 bolts complete with 2 x washers and 1 x nut per bolt and 1 x M12 bolt complete 1 x washer.

Torque all fasteners to specifications listed below:

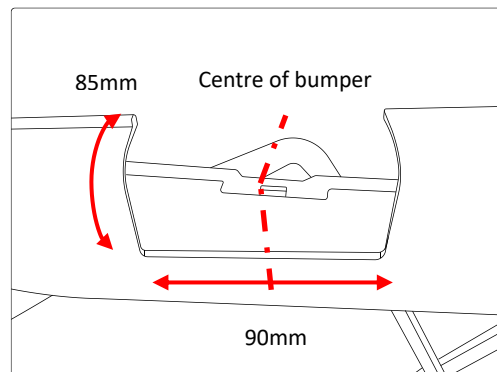
**M12 x 1.25P x G10.9: 125Nm**



12. For Bumper cut.

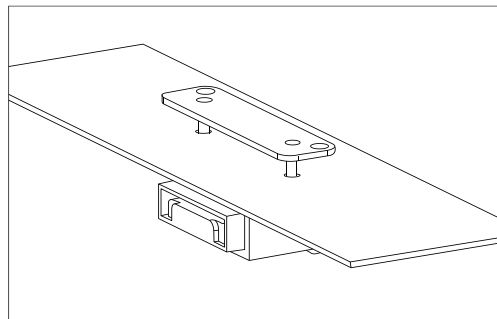
Determine the centre of the bumper, measure, mark off and cut out a section 90mm wide and 85mm long, measured from the bottom edge of the bumper.

Ensure that you do not cut through any sensors or wiring harnesses in the bumper.



13. For the plug bracket.

Find an appropriate position on the bumper, mark out and drill 2x  $\varnothing 5\text{mm}$  holes 69mm apart on bumper skin to support plug bracket. Feed bracket threads through drilled holes prior to reinstalling bumper.



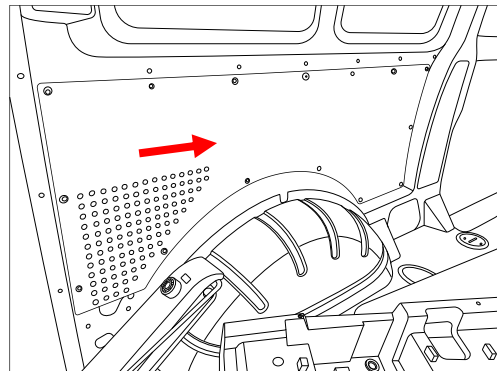
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### IMPORTANT

Due to possible vehicle variations, always confirm any noted vehicle colour wires with a multi-meter to ensure the correct function is identified before soldering or scotch locking. For vehicle wires denoted with two colours (example; RED/GREEN) the first colour will always be the main wire colour while the second colour is the thinner trace colour on the wire.

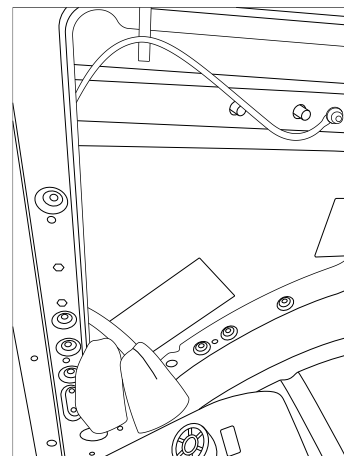
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14. Remove the 15x scrivets from the rear LHS cargo panel.

**Note: This step is for van only, For people mover location of the trailer prep connectors are in the same location. May require more trim removal.**



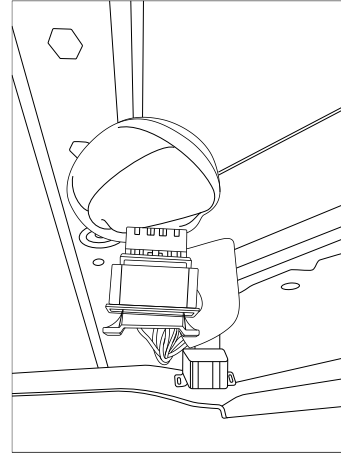
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15. Locate the vehicle trailer prep 8-way and 12-way connectors which are wrapped in foam LHS rear cavity.
16. Remove the blanking plug of the 8-way connector and discard.

**Note: If the vehicle is fitted with RPA the 12-way will have a harness connected to it.**



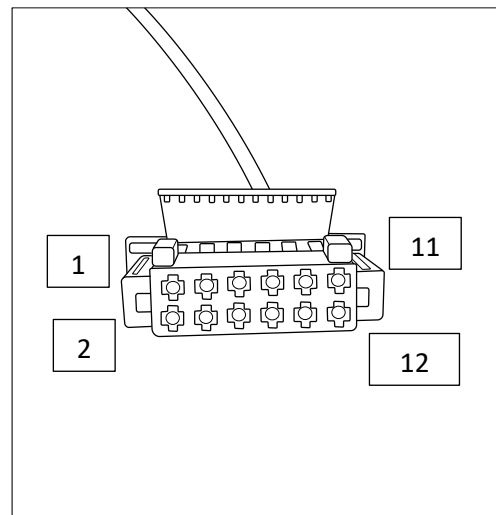


17. Unplug the 12-way connector.

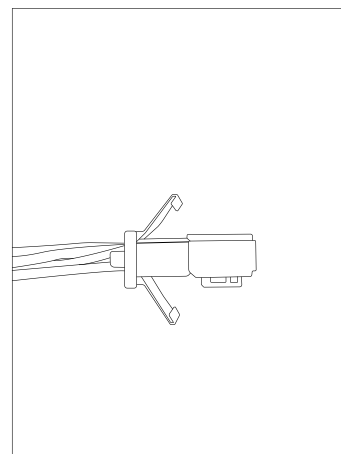


18. Take note of the wire positions ensure the wire colours and positions are as per table.

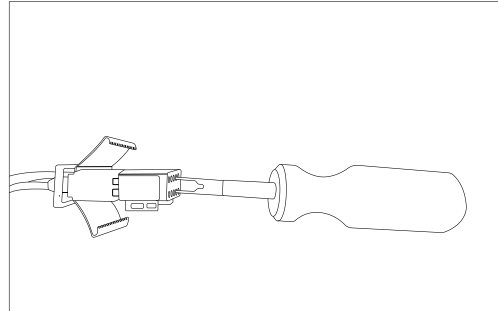
Cavity	Colour
1	Black/Yellow
2	Grey/Yellow
3	Grey/Brown
4	Grey/Red
5	
6	Purple/Yellow
7	
8	
9	Green/Yellow
10	
11	
12	



19. Using a jeweller's screw driver release the connector secondary tab on both sides.

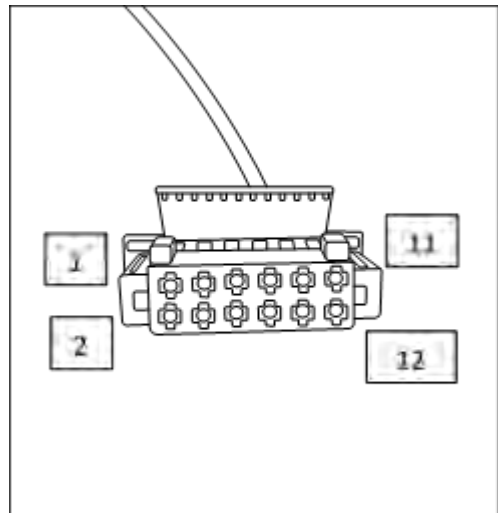


20. Using a terminal Extraction tool P/No: 05426 remove the terminals from the 12-way connector.

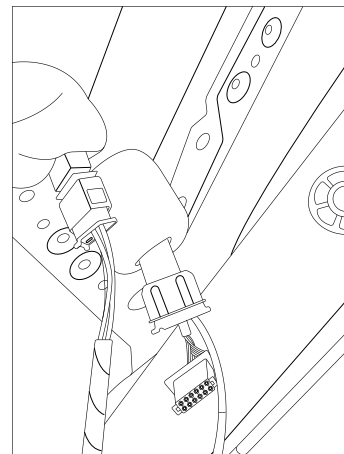


21. House the wires in the trailer patch as per the table below.

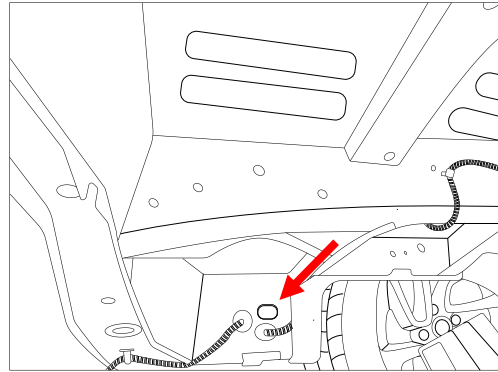
Cavity	Colour
1	Black/Yellow
2	Grey/Yellow
3	Grey/Brown
4	Grey/Red
5	Brown
6	Purple/Yellow
7	-
8	Black
9	Green/Yellow
10	Yellow
11	Green
12	Brown



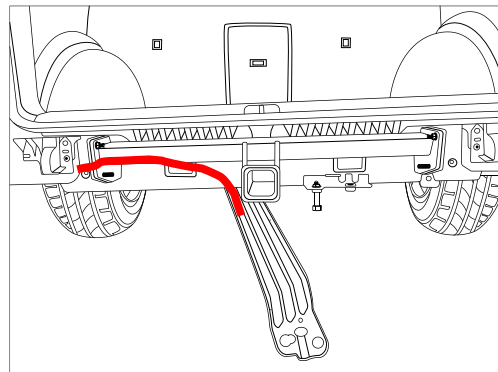
22. Plug the 12-way and 8-way trailer patch into the mating connectors.



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23. Locate and remove the LHS rear blanking grommet under the vehicle.

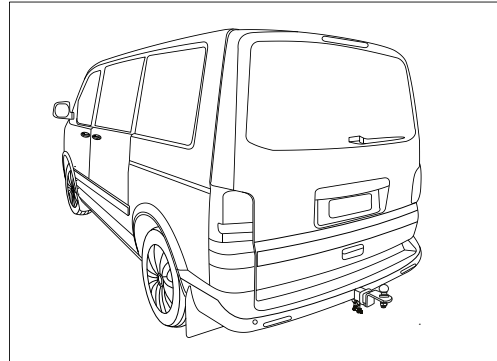


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24. Feed the tail (1200mm) blue connector towards the previously exposed hole.  
25. Slide the grommet to correct position allowing enough length for the trailer plug to be mounted.  
26. Secure the grommet using a cable tie.



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27. From inside the vehicle retrieve the blue connector and into the trailer patch mating connector.  
28. Secure the harness using supplied cable ties keep away from sharp edges and exhaust heat.

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29. Re-attach bumper by following Steps 1-7 and 14 in reverse.
  30. Test the function of the trailer patch using a trailer board.
  31. Place fitting instructions in the glovebox after fitment.





## CUSTOMER INFORMATION

PLACE THESE INSTRUCTIONS IN THE VEHICLE'S GLOVEBOX AFTER INSTALLATION

**THANK YOU FOR PURCHASING TRAILBOSS. WITH CORRECT MAINTENANCE AND CARE THIS PRODUCT WILL PROVIDE A LIFETIME OF TROUBLE-FREE OPERATION.**

### **TOWBAR MAINTENANCE AND CARE:**

1. Trailboss recommend that the towbar LUG or TBM (Trailer Ball Mount) Pull Pin and R-clip are removed and stored when not in use. Removal of LUG or TBM (Trailer Ball Mount) is advisable when not in use to assist with any of the following.
  - Ensure rear number plate is not obscured.
  - Allow maximum available departure angle and prevent any potential interference.
  - Prevent possible interference with vehicles reverse sensors or camera detecting a tow ball mount as an obstruction during reversing.
  - Removes towball mount as an obstruction for when moving around the rear of the vehicle.
2. Trailboss recommends routine inspection of your towbar to ensure trouble free towing.
  - Bolt security and tension should be regularly inspected and checked for correct tension. Replace any worn or defective parts with suitable grade & class fasteners. Inspection should be requested to coincide with vehicle major services.
3. It is the owner's responsibility to ensure towing and down ball weight capacities of the towing vehicle are not exceeded.
  - Towing and down ball weights allowable may differ according to model variations. Please refer to owner's manual or vehicle dealer to confirm exact rating for your vehicle model variant.
  - It is not uncommon for the vehicle tow rating to differ from the towbar rating. When this occurs, the lesser rating must be adhered to.
  - For vehicles fitted with enhanced vehicle functions that may be altered/changed when towing i.e Trailer sway mitigation, blind spot detection, adaptive cruise control etc. Please consult owner's manual to understand changes enabled when towing and after towing.

### **WARRANTY INFORMATION:**

Trailboss Towbars are covered by a Lifetime Warranty.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. For further details please contact customer service on 1800 812 017.

## PRO SERIES SILENT ANTI-RATTLE HITCH PIN

Your Trailboss towbar is equipped with a Pro Series Silent Anti-Rattle Hitch Pin technology to help reduce towbar tongue rattle in most driving conditions. Please ensure below instructions are understood and routine maintenance is carried out to ensure best towing experience.

Regularly inspect for wear and check the tightness of the Silent Anti-Rattle Hitch Pin. Follow instructions below to re-tighten the nut as necessary when movement and noise in the tow ball mount is noted.

- Before towing, ensure R-Clip is properly installed and hitch pin nut is installed and tensioned. Replacement parts are available from your Pro Series Distributor.

## TOWBALL MOUNT REMOVAL/INSTALLATION

### STEP 1

Insert Trailer Ball Mount (TBM) (a) into towbar hitchbox (b), aligning hole in TBM shank (c) with hole in hitchbox (d) (Fig. 1)

### STEP 2

Insert Silent Anti-Rattle Hitch Pin (e) through hole in hitchbox and hole in TBM shank (g); ensure the locators are inserted into the notches in the hitchbox (Fig. 2)

### STEP 3

Screw Silent Anti-Rattle Hitch Pin Nut (f) onto Smart Pin (g); tighten Smart Pin Nut until finger tight, ensuring TBM is restrained from up and down movement.

### STEP 4

Tighten Silent Anti-Rattle Hitch Pin Nut by turning nut a further 1/8th of a turn in the clockwise direction using a 24mm spanner (Fig. 4).

### STEP 5

Install Silent Anti-Rattle Hitch Pin R-Clip through the hole that provides best clearance or easiest access. (Fig. 5)

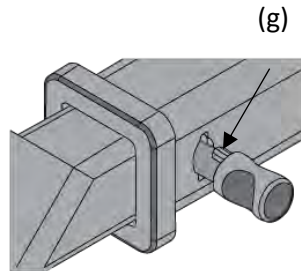
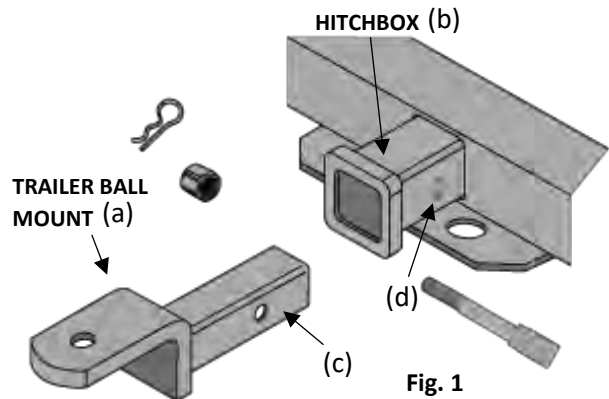


Fig. 2

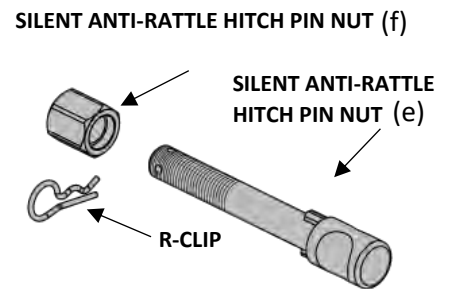


Fig. 3

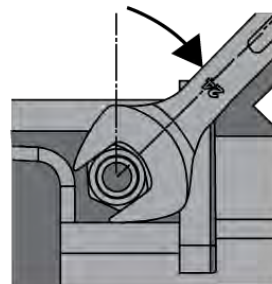


Fig. 4

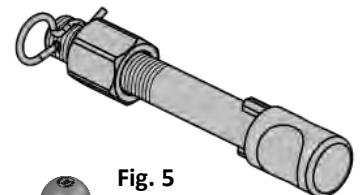


Fig. 5

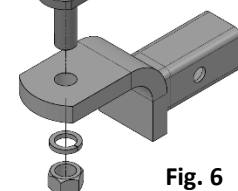


Fig. 6