TOWBAR INSTALLATION INSTRUCTIONS

PART NUMBER QTLD0010L

LDV T60 MAX B1 CL4

PRODUCT DETAILS:

Part Number:	QTLD0010L	**Maximum Towing Braked:**	3500	kg
ECU Number:	04837	**Maximum Towing Unbraked:**	750	kg
Tail Harness Length Required:	1200 mm	**Maximum Static Ball Load:**	350	kg
TBM/Lug Part Number:	21201			

FITTING DETAILS:

Towbar Installation Time:	45 Mins.	**RPA Disable/Other:**	YES
Total Installation Time:	90 Mins.		
Bumper Cut Required:	Yes		

Note:

- WLT019 RPA tail to be used

49-75 Pacific Drive Keysborough, VIC 3173
Phone: 1800 812 017
Email: enquiries@cequent.com.au

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).

CORRECT

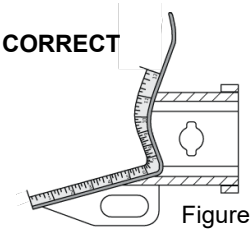


Figure 1

INCORRECT

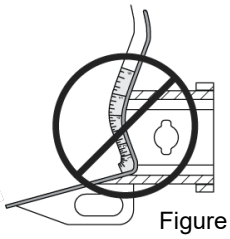


Figure 2

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.

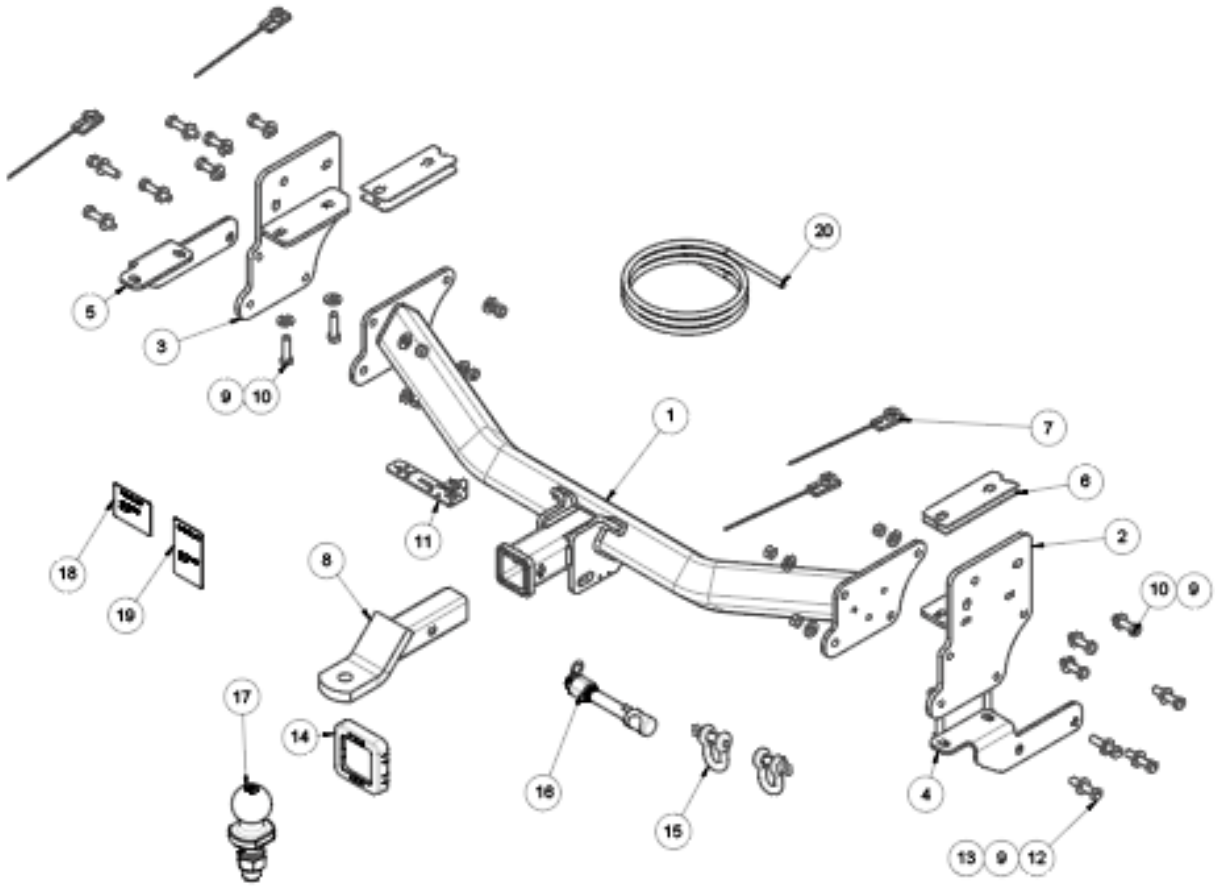
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Phone: 1800 812 017
Email: enquiries@cequent.com.au

TOWBAR INSTALLATION INSTRUCTIONS

PART NUMBER QTLD0010L

LDV T60 MAX B1 CL4

TOWBAR ASSEMBLY DIAGRAM



ITEM	DESCRIPTION	QTY
1	LDV T60 WELDED ASSY	1
2	SIDE ARM RHS	1
3	SIDE ARM LHS	1
4	STEP BRK - RHS	1
5	STEP BRK - LHS	1
6	SIDE ARM SPACER	1
7	NUT PLATE WIRE M12x1.75P	4
8	TRAILER BALL MOUNT	1
9	WASHER PLAIN M12x27x3.0mm	26
10	BOLT HEX HD M12x45x1.75P G10.9	10

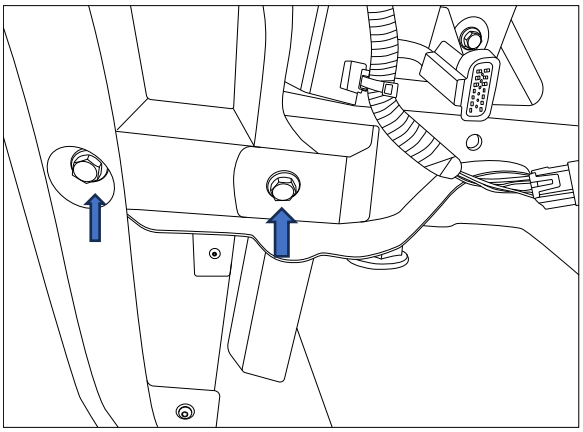
ITEM	DESCRIPTION	QTY
11	LARGE UNIVERSAL PLUG BRKT KIT	1
12	SCREW HEX HD M12x55x1.25P G10.9	8
13	NUT HEX HD M12x1.25P G10	1
14	HITCH BOX COLLAR COVER	1
15	D-SHACKLE 10mm	2
16	TOWBALL 50mm	1
17	SMART PIN GOLD	1
18	COMPLIANCE LABEL	1
19	LOAD RATING LABEL	1
20	WIRING LOOM	1

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1. Remove and retain the 2x bolts from bumper.

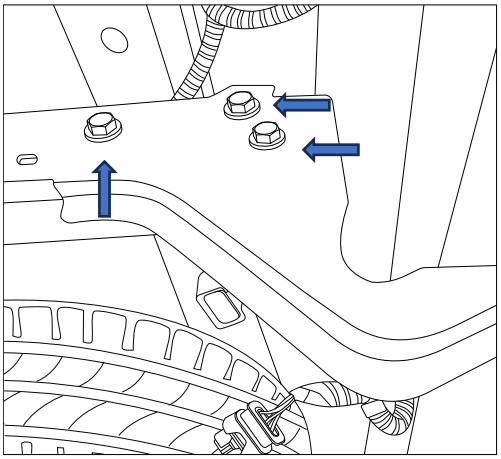
   Repeat for the other side.

   Disconnect the bumper harness.
   Pull the bumper rear ward from the vehicle to remove the bumper.



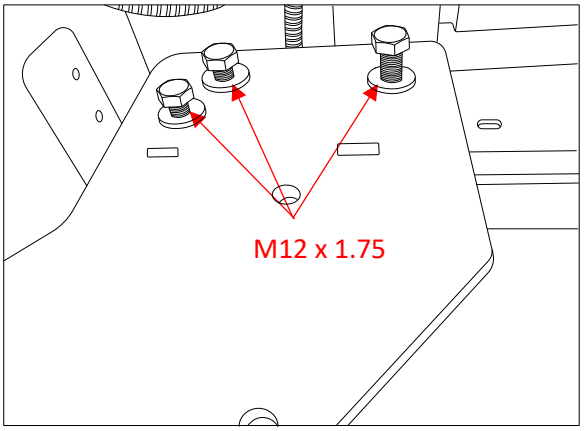
2. Remove and discard the 3x bolts from step bracket.

   Repeat for the other side.



3. Fit the side arm to the chassis and loosely secure with 3x washers and 3x bolts.

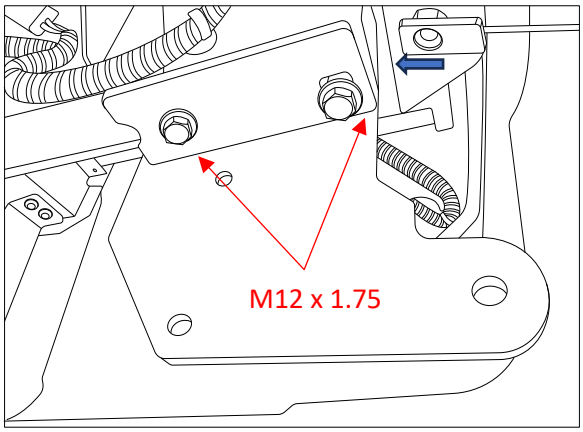
   Repeat for the other side.



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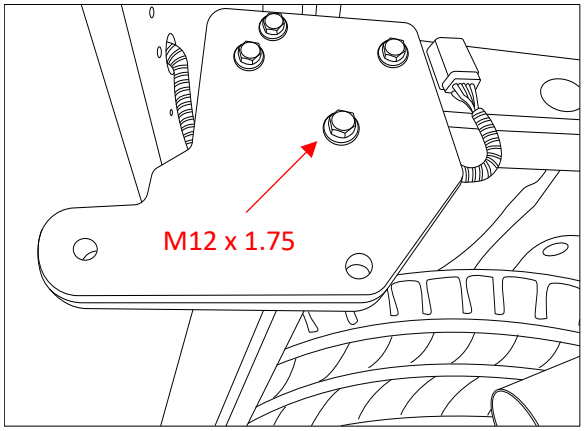
4. Insert 2x nut plates in chassis frame and loosely secure them with 2x washers and 2x bolts.

   Repeat for the other side.



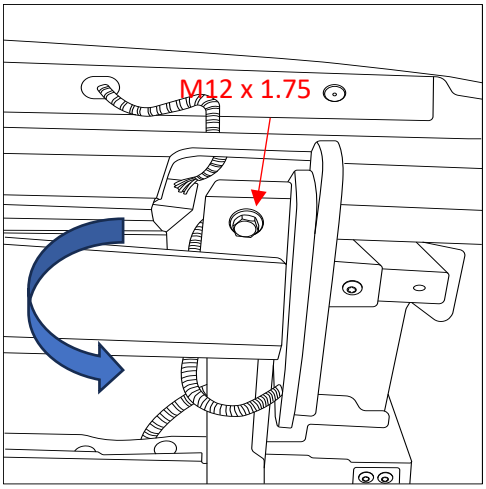
5. Fit the cross tube between the side arms and loosely secure it 1x bolt, 2x washers and 1x nut.

   Repeat for the other side.



6. Tilt cross tube down and torque the bolt into 109 Nm

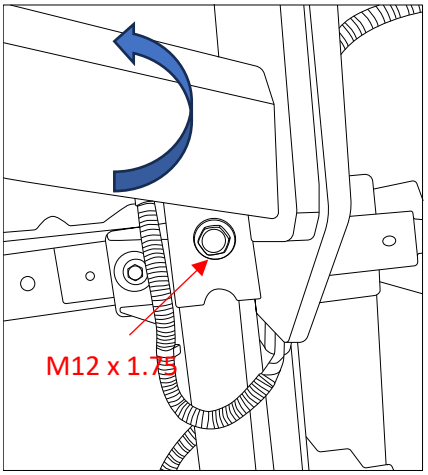
   Repeat for the other side



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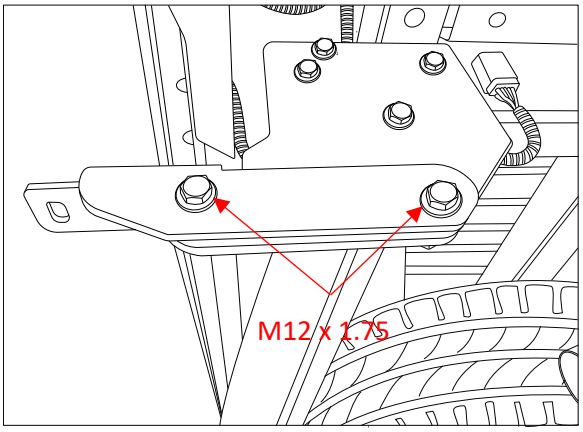
7. Tilt cross tube down and torque the bolt into 109 Nm

   Repeat for the other side.

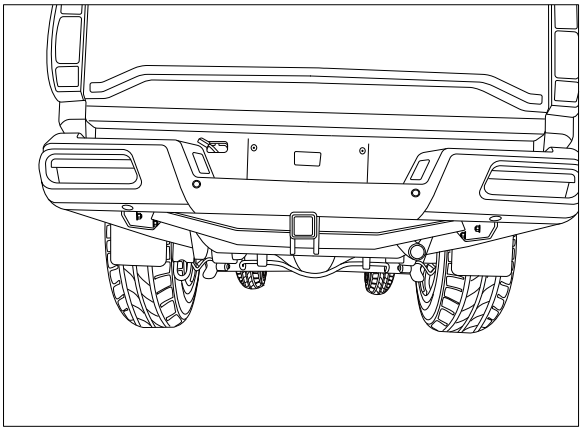


8. Fit the step bracket to the side arm and secure with 2x bolts, 4x washers and 2x nuts.

   Repeat for the other side.



9. Fit and center the bumper to the vehicle

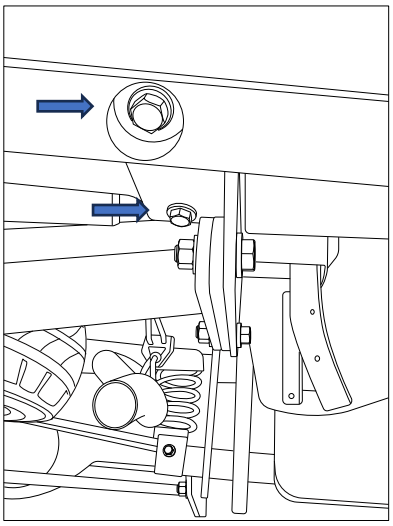


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10. Secure with 2x bolts retained from Step 1.

    Repeat for the other side.

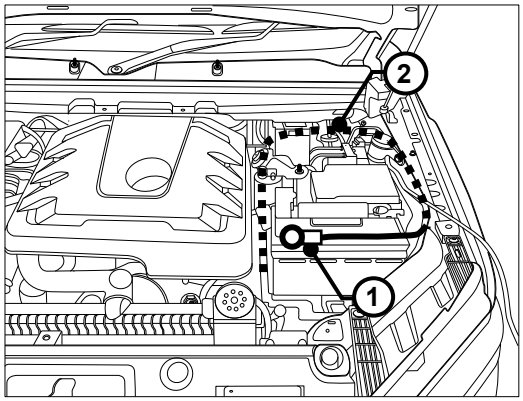
    Torque all fasteners as below
    M12 x 1.75 x 10.9 – 109 Nm
    M10 x1.5 x 8.8 – 44 Nm



IMPORTANT

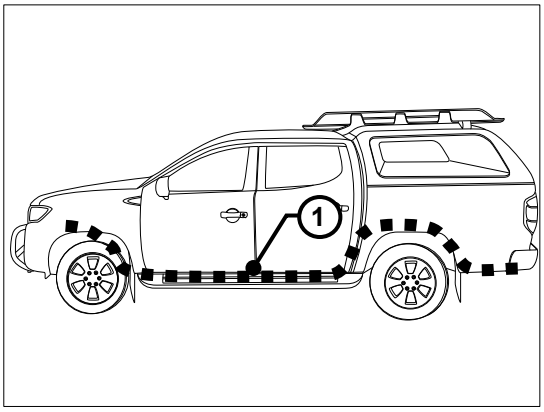
Due to possible vehicle variations, always confirm any noted vehicle colour wires with a multi-meter to ensure the correct function is identified before soldering or scotch locking. For vehicle wires denoted with two colours (example; RED/GREEN) the first colour will always be the main wire colour while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

11. Disconnect the negative battery terminal.
12. Attach the Power Harness (04825) ring terminal (1) to the battery positive post.
13. Route the Power Harness (2) along the edge of the engine bay and down the LHS Chassis.



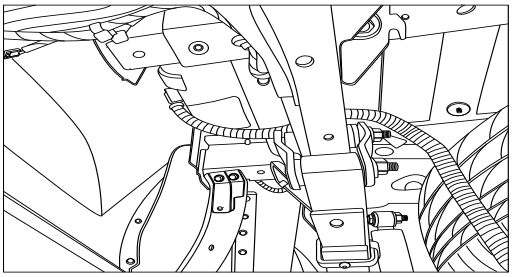
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14. Route the Power Harness (1) along the LHS Chassis rail towards the rear of the vehicle on the LHS, following the existing harness where possible. Cable tie every 600mm (not supplied).
15. At the rear of the vehicle connect the power harness to the trailer patch (101973-WL).

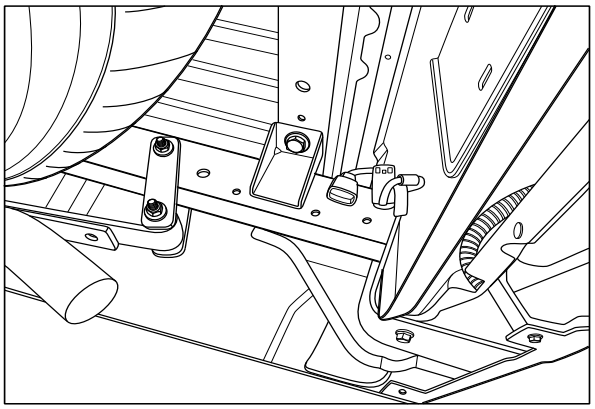


16. Connect the waterproof ECU (1) (04837) to the ECU connector (2) on the harness and mount in a suitable location in the rear left quarter panel using cable ties and cable tie mounts (not supplied).

    Note:
    Ensure excess wire length on the power harness is tied to the chassis rail.
    Ensure ECU connector pointing downwards.

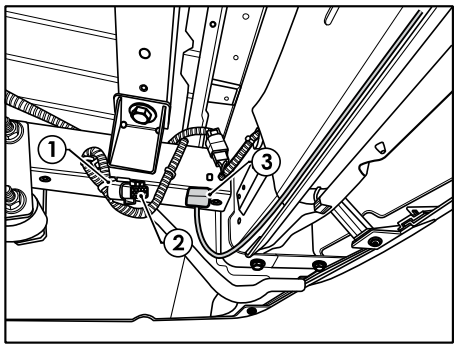


17. Route the trailer wiring harness connector (1) to the RHS chassis rail of the vehicle.



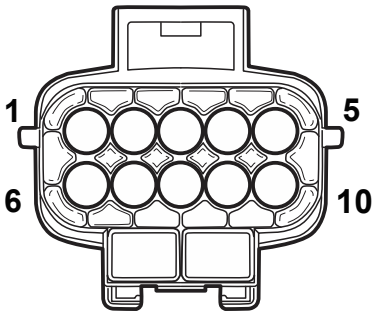
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18. On the rear RHS of the vehicle, locate the trailer 10-way pre-wire connector (1) remove and discard the 10-way blanking plug (2).
19. Connect the 8-way male connector on the extra patch supplied in the kit to the 8-way female connector (3) to trailer patch.



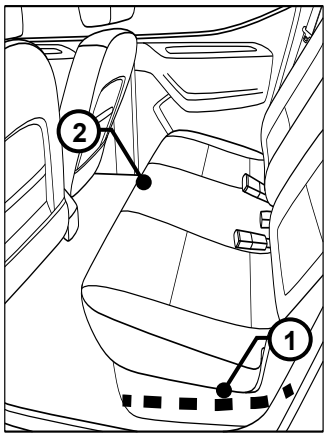
20. House the trailer patch male terminals as per table, secure supplied secondary lock, cap the empty cavities with supplied cavity blanking plugs.
21. Plug the trailer patch into the 10-way pre-wire connector

LDV T60 Max Plus Pre-wire Connector Pinout Table		
Cavity No.	**WIRE COLOUR**	**FUNCTION**
1	Green/Black	Right Indicator
3	Black/White	Reverse
4	Red/Black	Brake
7	Yellow/Black	Left Indicator
8	Brown/Black	Tail



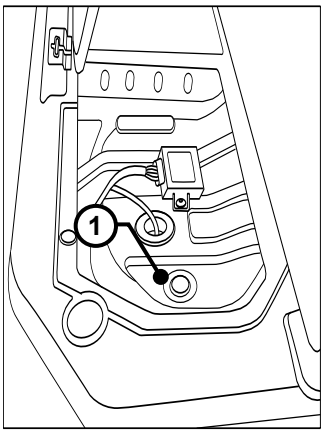
Rear View of Connector

22. Under the vehicle LHS, route the ground wire with the grommet (1) back down the LHS chassis rail towards the LHS passenger seat.
23. Fold the seat up by pulling the tab in the centre of the seat (2).



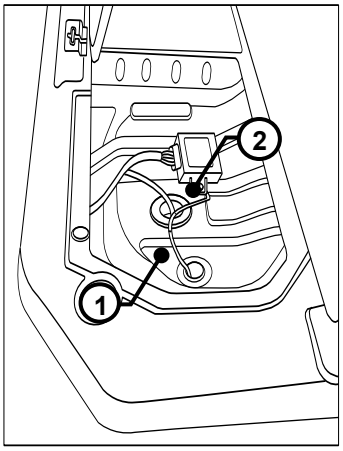
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24. Remove the LHS cover and remove the vehicle blanking grommet (1).



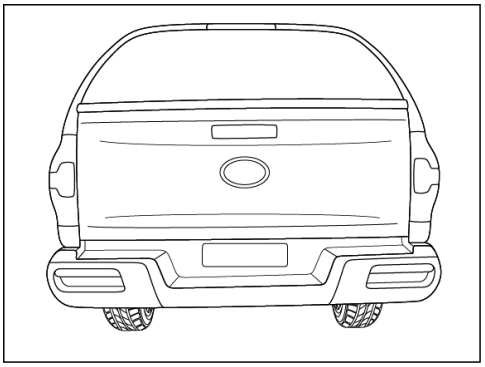
25. Route the ground wire (1) through the grommet hole and seat the grommet into the hole ensuring the grommet is seated correctly and provides a seal.
26. Attach the ground wire (1) to the chassis ground bolt (2).

Tech Tip: To make the routing easier, use a guide wire to probe down through the grommet hole, tape the ground wire to the guide wire under the vehicle and pull back up through the grommet hole.



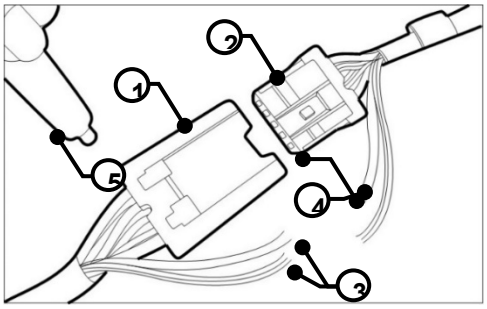
28. Secure tail (1200mm with RPA disable) harness to towbar.
29. Route tail harness up to trailer harness blue connector on the LHS.

Note: RPA disable harness must be used & connected otherwise entire system will not operate.



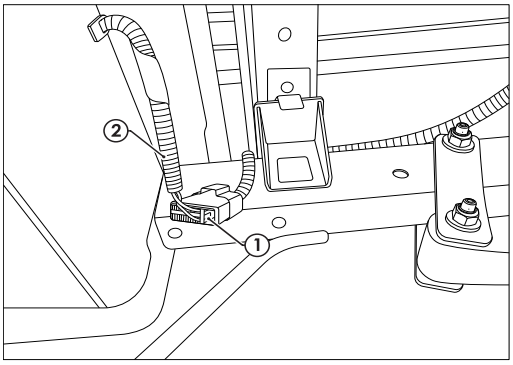
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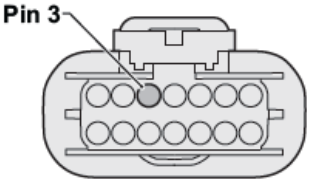
30. Connect the tail harness 8-way connector (1) to the trailer patch 8-way mating connector (2).
31. To enable RPA cut-off, crimp the tail harness GREY and GREY/BLACK wires (3) to the trailer patch matching WHITE and GREY/BLACK wires (4).
32. Apply silicone grease (not supplied) (5) to waterproof connector.



Step 33 – 37 for T60 only.

33. Tape back the loose WHITE and GREY/BLACK wires on the trailer patch using PVC tape.
34. Connect the tail harness (P/No: 04936) 8-way connector to the trailer harness 8-way mating connector. Apply electrical grease to waterproof the connector.
35. Extend the GREY and GREY/BLACK wires on the tail harness if necessary, route towards the LHS Rear RPA 12-way connector (1). Disconnect the connector (1).
36. Cut approx. 100mm slit of the wire covering (2) and cut the BLACK wire approx. 50mm from the back of the connector (1) on Pin 3 refer to the image of the connector.
37. Splice in the GREY and GREY/BLACK wires of the tail harness to either side of the previously cut BLACK wire and cover the joining spot with adhesive heat shrink and tape the wires back to the harness as necessary.





Rear View of Connector

49-75 Pacific Drive Keysborough, VIC 3173
Phone: 1800 812 017
Email: enquiries@cequent.com.au

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.

49-75 Pacific Drive Keysborough, VIC 3173
Phone: 1800 812 017
Email: enquiries@cequent.com.au

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 (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)

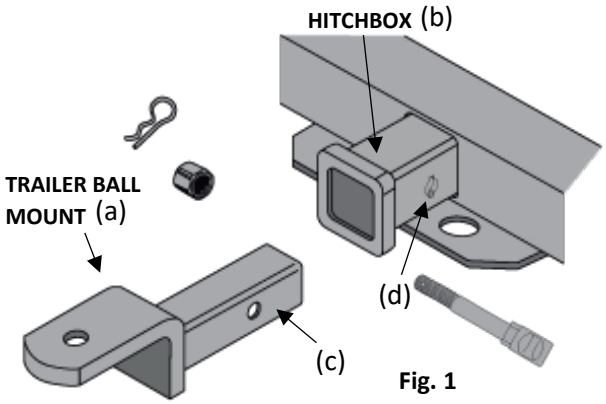


Fig. 1

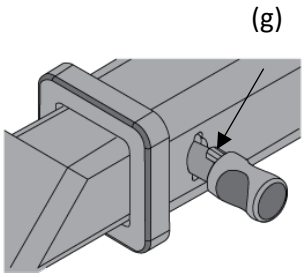


Fig. 2

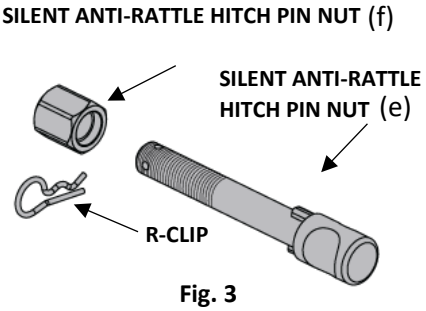
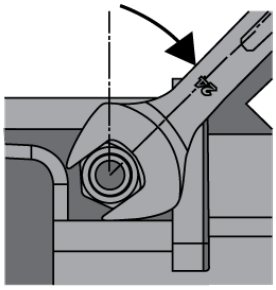
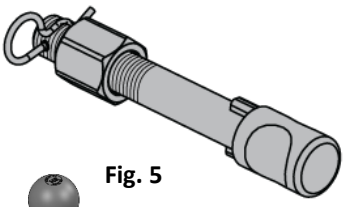
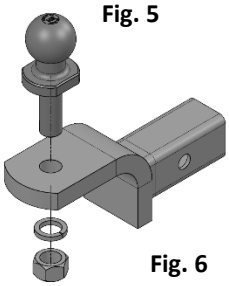


Fig. 3


Fig. 4


Fig. 5


Fig. 6

49-75 Pacific Drive Keysborough, VIC 3173
Phone: 1800 812 017
Email: enquiries@cequent.com.au