



TOWBAR INSTALLATION INSTRUCTIONS

PART NUMBER 03400RW

MERCEDES BENZ V-CLASS 447 CL4



PRODUCT DETAILS:

| | | | | |
|-------------------------------|----------|---------------------------|------|----|
| Part Number: | 03400RW | Maximum Towing Braked: | 2500 | kg |
| ECU Number: | WLE70027 | Maximum Towing Unbraked: | 750 | kg |
| Tail Harness Length Required: | 1800 mm | Maximum Static Ball Load: | 250 | kg |
| TBM/Lug Part Number: | 21161 | | | |
| Wiring Part Number: | WLL90027 | | | |

FITTING DETAILS:

| | | | |
|---------------------------|-----------|---|-----|
| Towbar Installation Time: | 60 Mins. | Hayman Reese SmartCODE Solution Required: | YES |
| Wiring Installation Time: | 60 Mins. | RPA Disable/Other: | YES |
| Total Installation Time: | 120 Mins. | | |
| Bumper Cut Required: | Yes | | |

Note:

- Please refer vehicles owner's manual for proper operation and understanding of towing features enabled when coded.



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ENSURE THAT INSTRUCTIONS ARE UNDERSTOOD PRIOR TO FITMENT.

i BEFORE YOU START:

Hayman Reese recommends that instructions are read completely prior to fitment. Check all hardware items have been included refer to assembly diagram. Please ensure this towbar is only fitted to vehicle models as per Hayman Reese application guide (www.haymanreese.com.au).

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 Hayman Reese 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

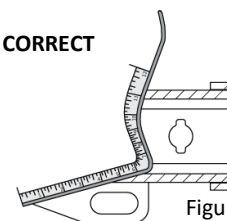


Figure 1

INCORRECT

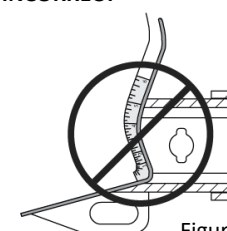


Figure 2

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 the body panels shall have all burrs & swarf removed then coated with a suitable rust preventative paint.

Bolts/Fasteners

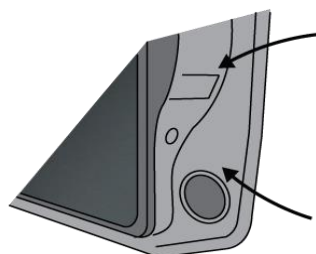
- Ensure that all hardware is fastened to correct torque as specified in this fitting instruction.
- All fasteners supplied with this product are used to achieve a specified clamp loading. If replacement is required ensure that fasteners of the same grade and class are used.



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 Hayman Reese warranty.

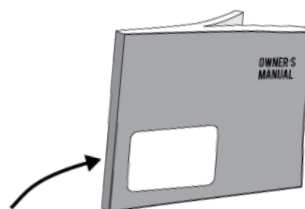
Product Labels

- a. Towbar load rating sticker provided with this product shall be conspicuously located on inside rear end of the driver's door.
- b. Powertrain Control Module (PCM)/Body Control Module (BCM) upgrade warning label will be provided in towbar kit for vehicles as required. Affix warning label in door and owner's handbook.



Place **Load Rating sticker** inside driver's door here

Place **Vehicle PCM/ BCM upgrade warning label** in door AND on front cover of owner's service handbook



WARNING:

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

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

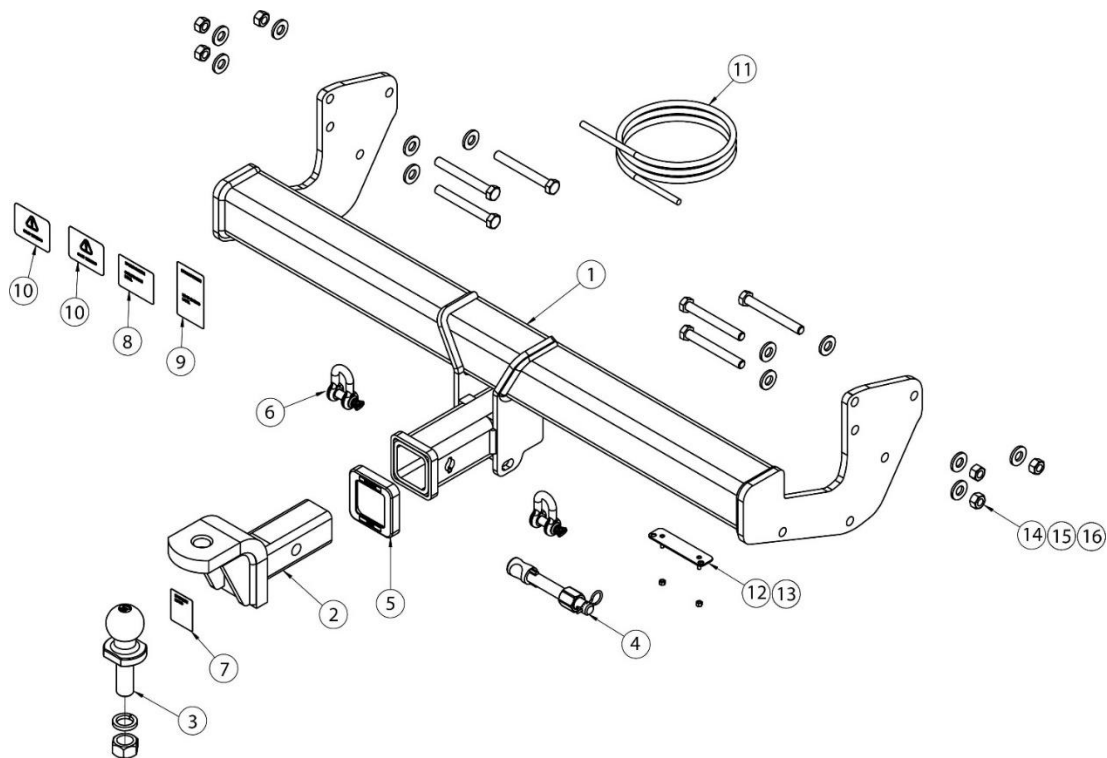


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TOWBAR ASSEMBLY DIAGRAM



| ITEM | DESCRIPTION | QTY |
|------|---------------------------|-----|
| 1 | MERCEDES BENZ V-CLASS | 1 |
| 2 | TRAILER BALL MOUNT | 1 |
| 3 | TOWBALL 50mm | 1 |
| 4 | SMART PIN GOLD | 1 |
| 5 | HITCH BOX COLLAR COVER | 1 |
| 6 | "D" SHACKLE 10mm | 2 |
| 7 | HAYMAN REESE LOGO STICKER | 1 |
| 8 | COMPLIANCE LABEL | 1 |
| 9 | LOAD RATING LABEL | 1 |
| 10 | CAN MODULE WARNING LABEL | 2 |
| 11 | WIRING LOOM | 1 |
| 12 | PLUG BRACKET | 1 |
| 13 | NUT NYLOC HEX HD M4x0.7P | 2 |
| 14 | NUT HEX HD M12x1.25P | 6 |
| 15 | WASHER PLAIN M12x27x3.0 | 12 |
| 16 | BOLT HEX HD M12x120x1.25P | 6 |

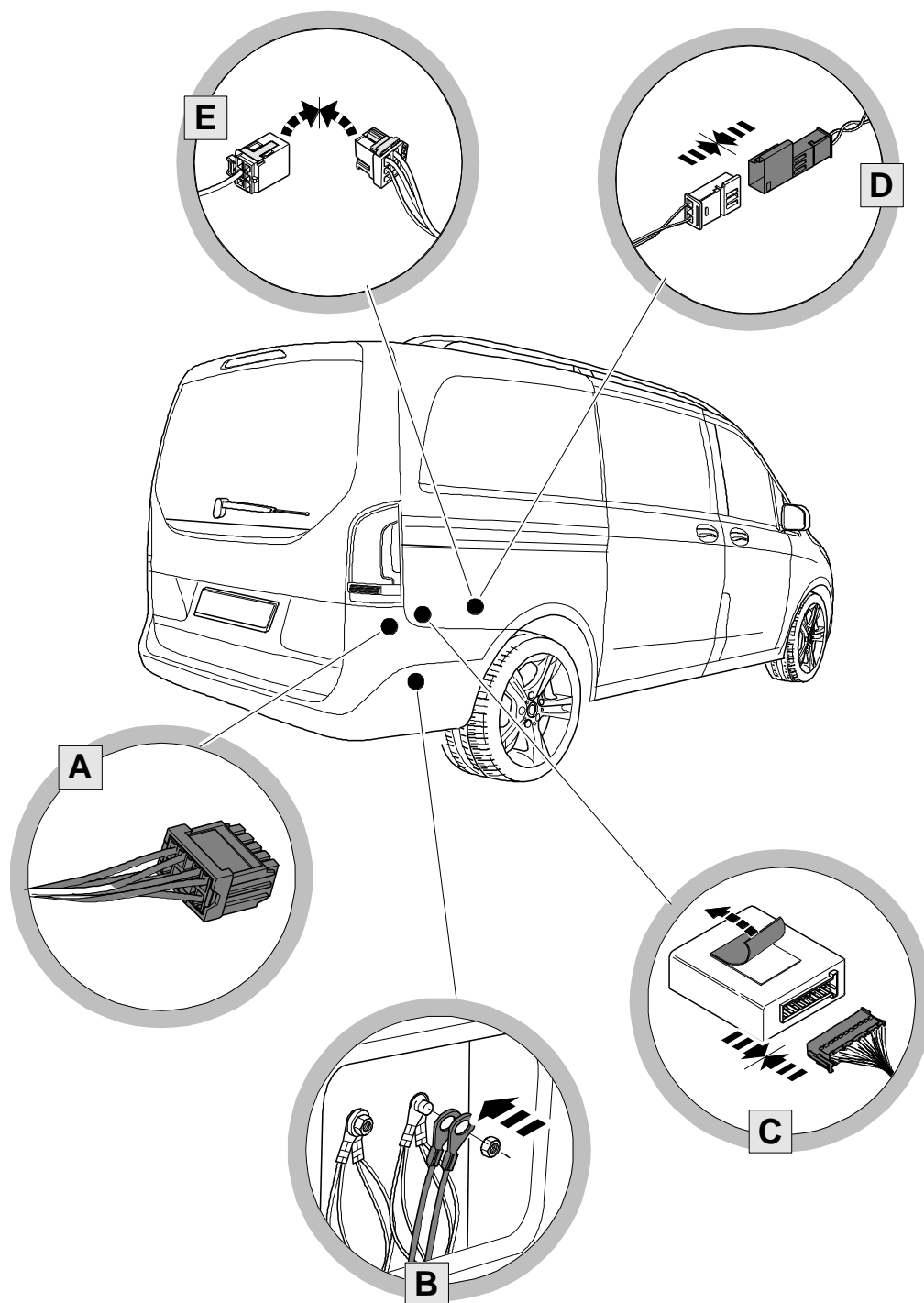


TOWBAR INSTALLATION INSTRUCTIONS

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i WIRING ASSEMBLY DIAGRAM

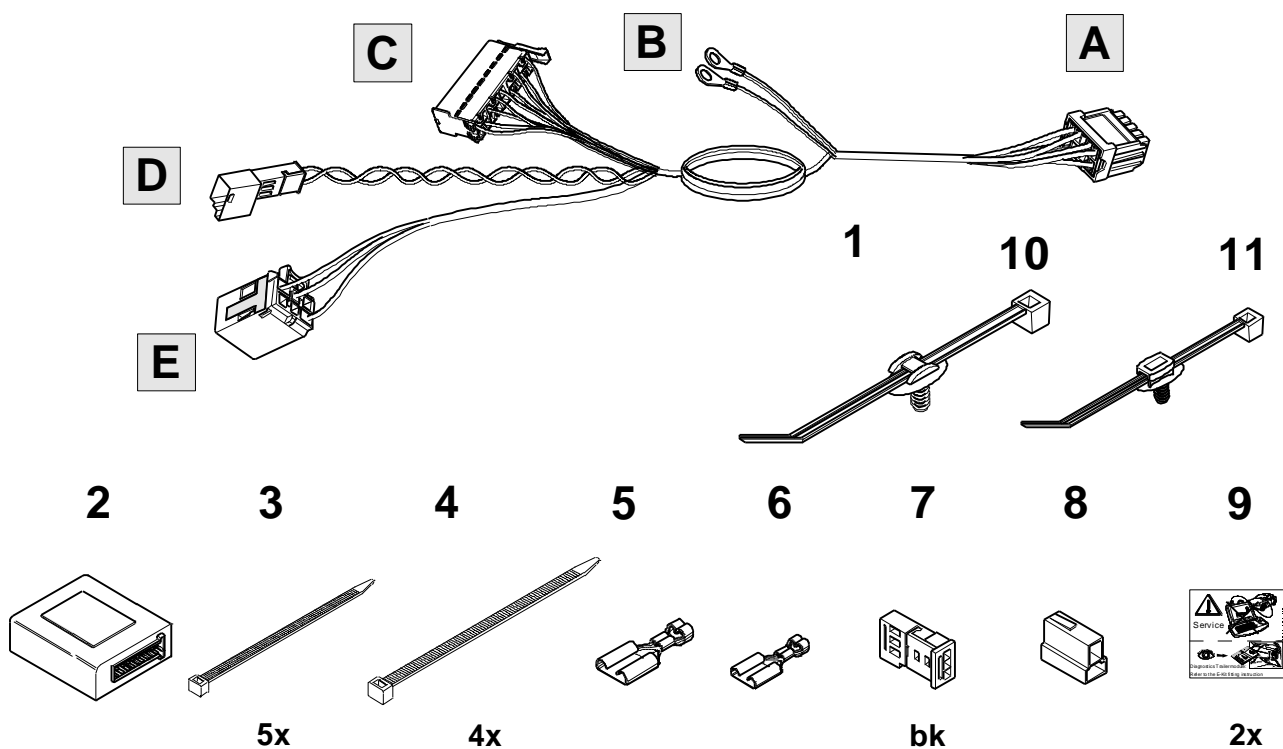




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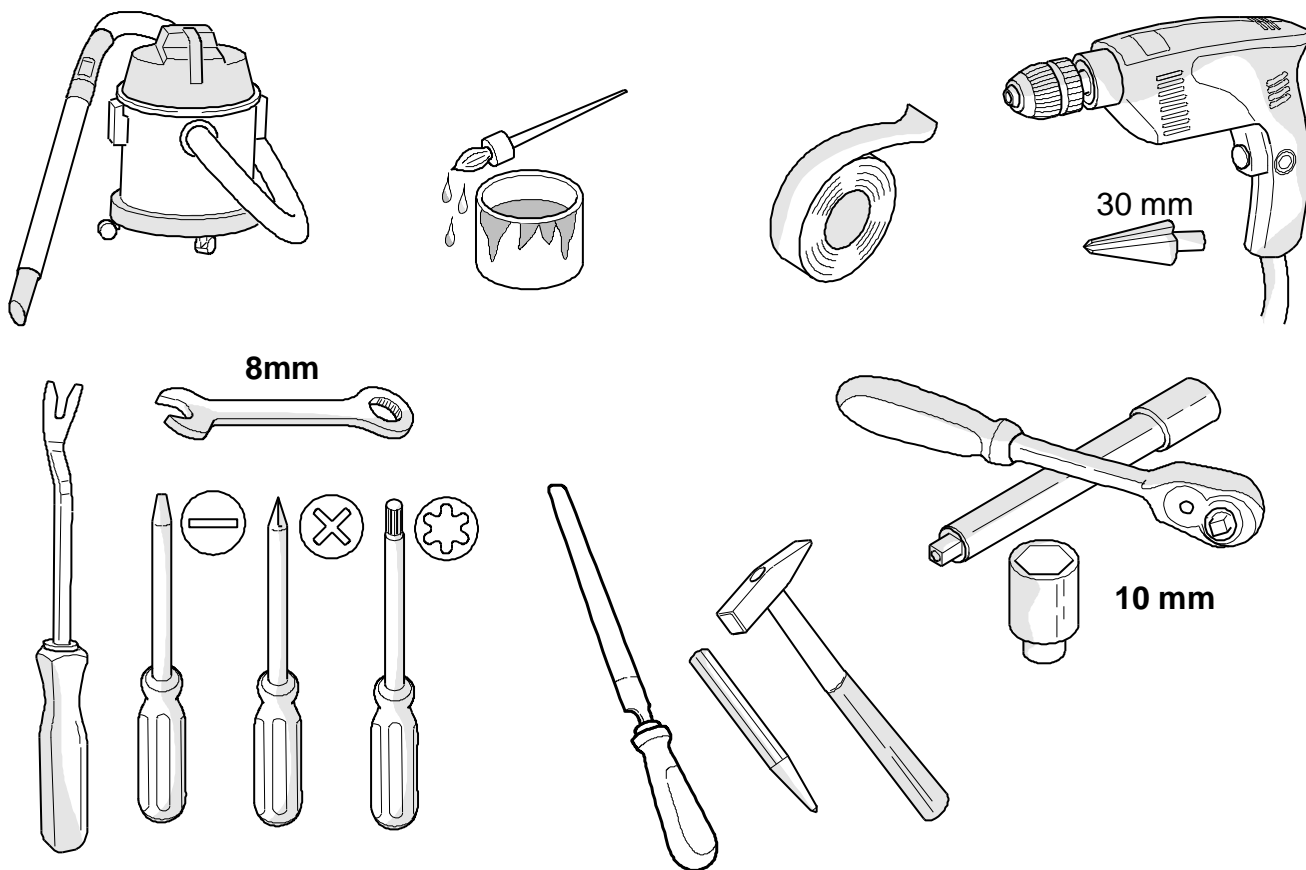
| ITEM | DESCRIPTION | QTY |
|------|--|-----|
| 1 | Main wire harness | 1 |
| 2 | ECU (WLE70027) | 1 |
| 3 | Cable band – Small | 5 |
| 4 | Cable band – Large | 4 |
| 5 | Terminal – Large (Brake Prep Connector) | 1 |
| 6 | Terminal – Small (Brake Prep Connector) | 1 |
| 7 | 2P Socket CAN wires (Black) | 1 |
| 8 | 2P Socket Brake Prep (White) (Brake Prep Connector) | 1 |
| 9 | ECU Label | 2 |
| 10 | Tightening band with pin | 1 |
| 11 | Tightening band with pin | 2 |



TOWBAR INSTALLATION INSTRUCTIONS

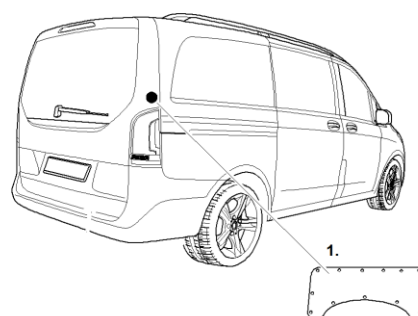
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This step is for Van only.

- Remove the RHS interior trim panel by removing 13 x scrivenets.



This step is for People mover only.

- Refer to figure 1.
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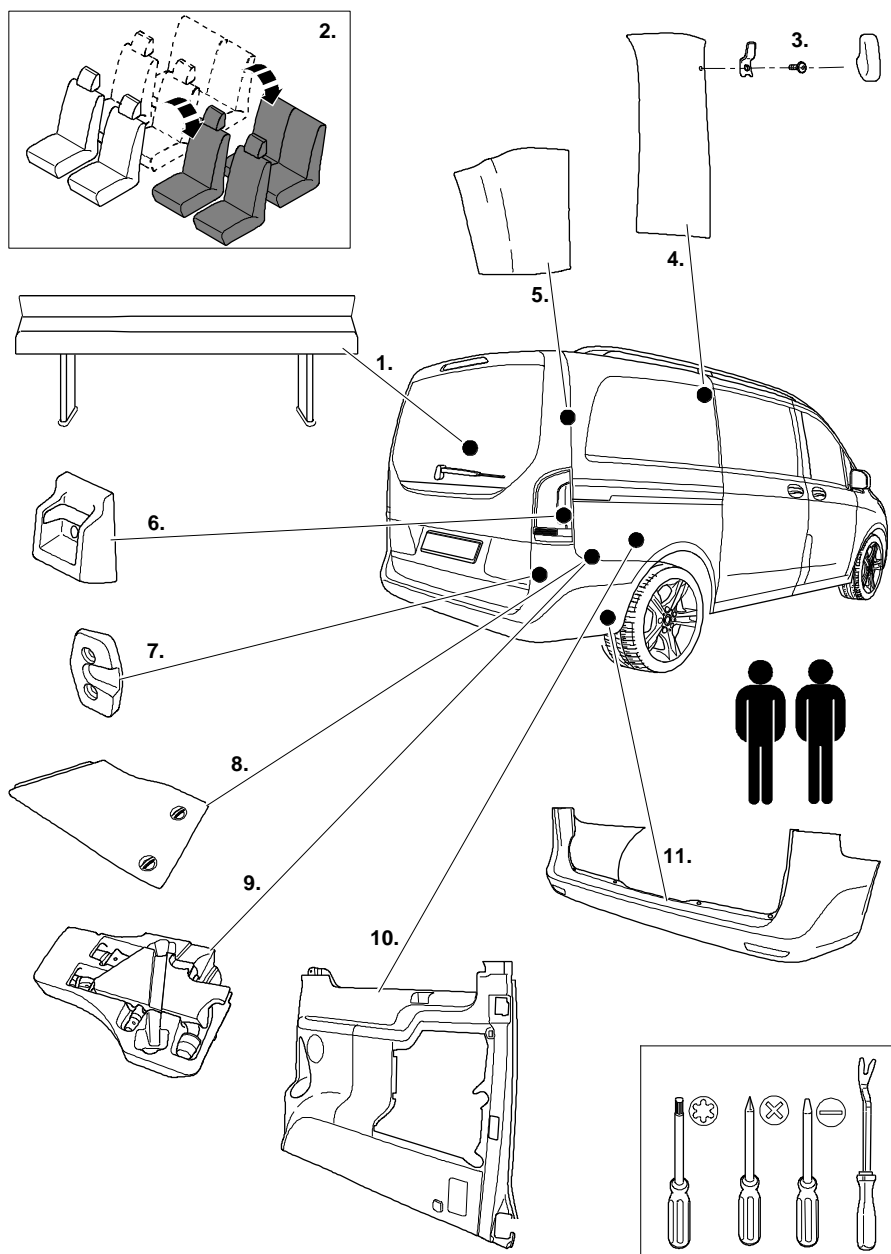


TOWBAR INSTALLATION INSTRUCTIONS

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1. People mover only (fig1)



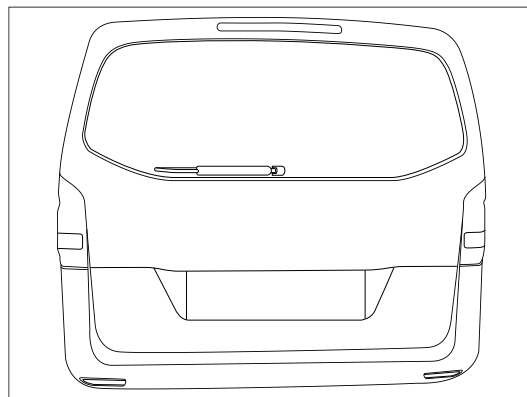


TOWBAR INSTALLATION INSTRUCTIONS

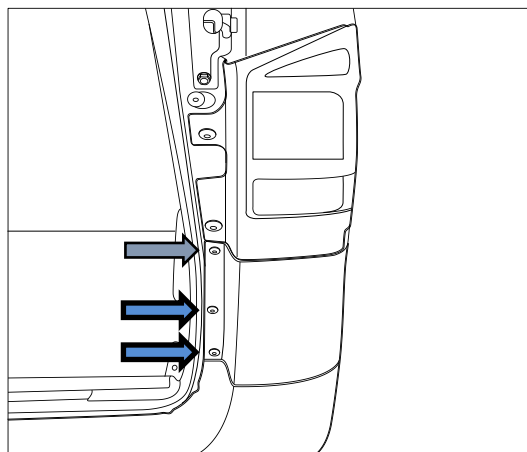
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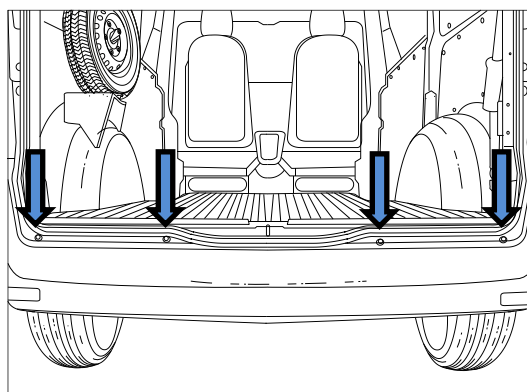
1. Release the tail gate to expose rear cabin of the vehicle.



2. Underneath the tail light, remove 2 x Torx Screws and 1 x Push Rivet. Repeat for opposite side.



3. Remove 4 x Torx Screws located on the top of the bumper.



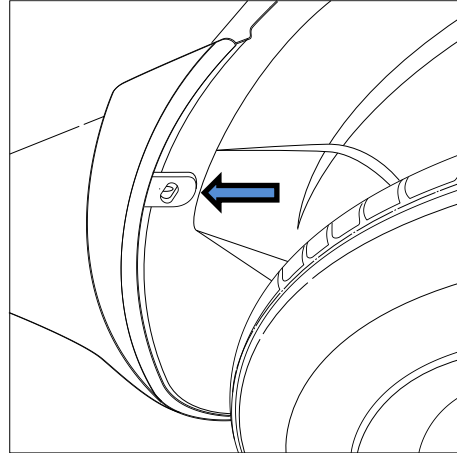


TOWBAR INSTALLATION INSTRUCTIONS

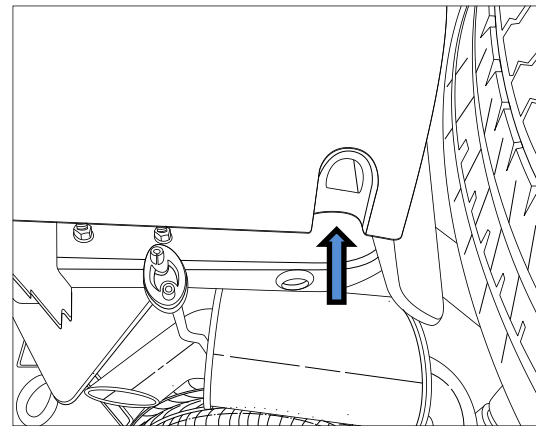
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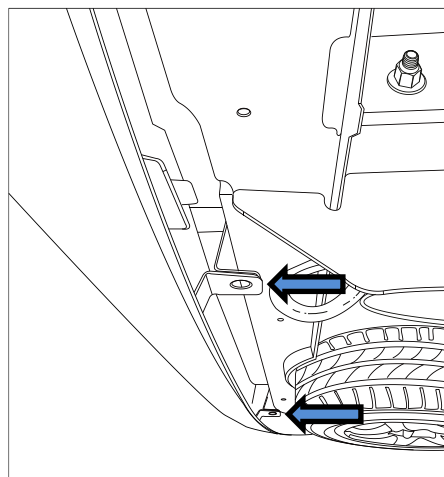
-
4. On the inside of the guard liner, remove 1 x Push Rivet. Repeat for opposite side.



-
5. On the underside of the bumper near the wheel arch remove 1 x Push rivet. Repeat for opposite side.



-
6. Remove 2 x Push Rivets on the underside of the bumper.



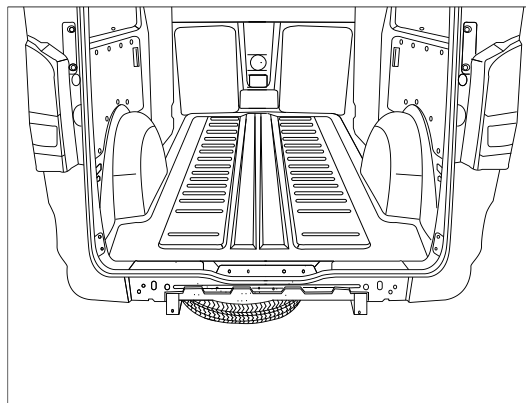


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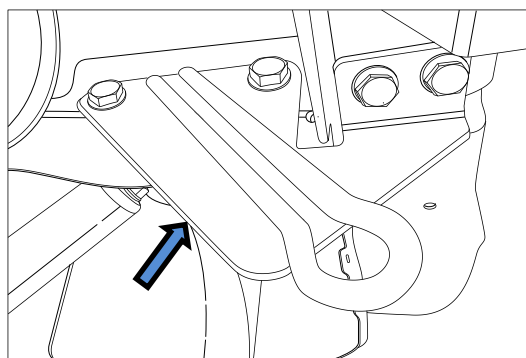
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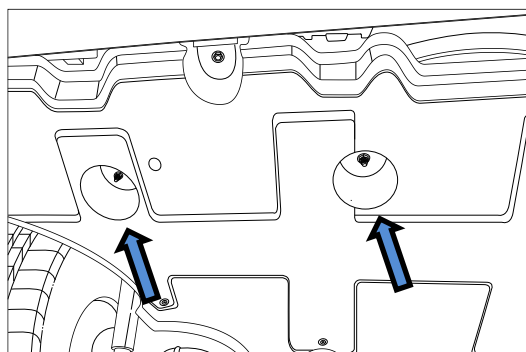
-
7. Carefully remove bumper by peeling away at each edge. Store in a safe place for re-attachment.



-
8. Remove and discard factory shipping hook.



-
9. If fitted, detach plastic under tray by removing 2 x Plastic Nuts.



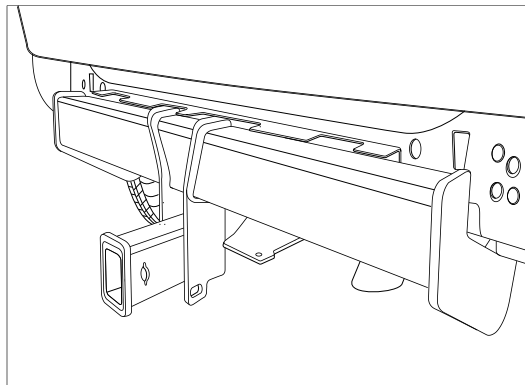


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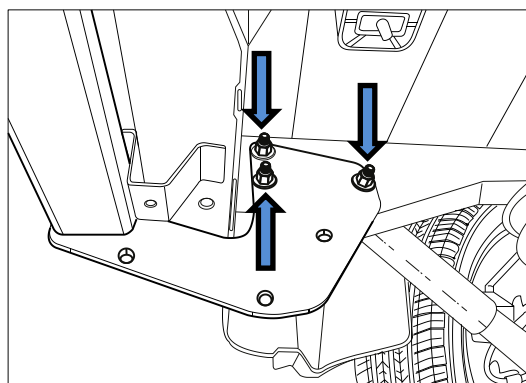
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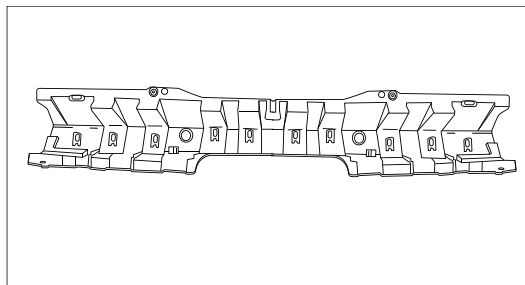
-
10. Offer Towbar to vehicle. Loosely secure it using 6 x M12 x 1.25P Set Screws with accompanying flat washers and nuts.



-
11. Torque all fasteners to the following specification:
M12 x 1.25P x G10.9 : 140Nm



-
12. On the inside face of the bumper remove and discard internal reinforcement.



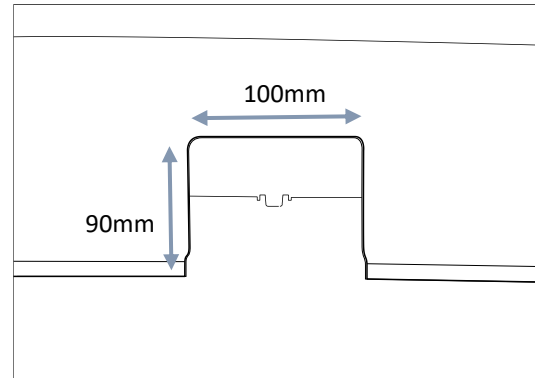


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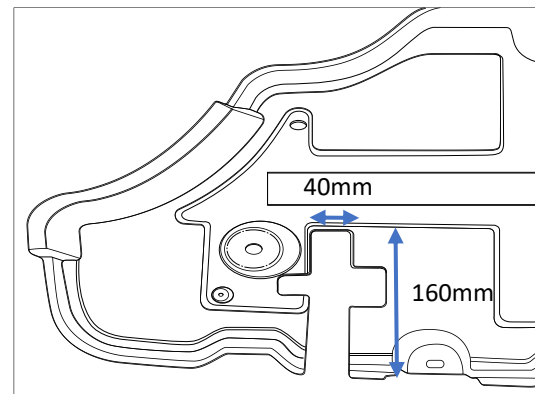
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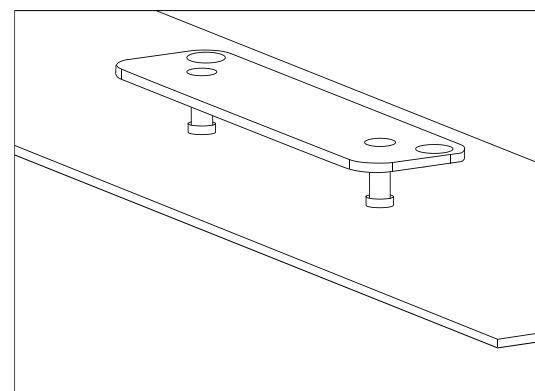
13. Locate the centre of the bumper and cut approximately 90mm up **ON THE SURFACE** of the bumper edge and 50mm wide on either side of the centre line.



14. If your vehicle is fitted with a plastic under tray. Cut a relief 160mm long and 40mm wide in line of the passenger side arm of the towbar. Start from the rearward edge of the trim.



15. Mark out and drill 2x $\varnothing 5$ 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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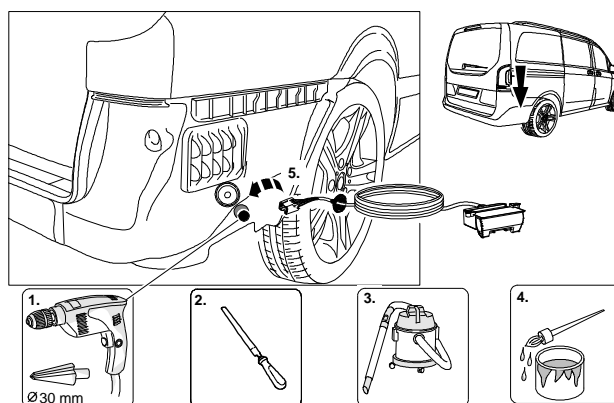
IMPORTANT

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.

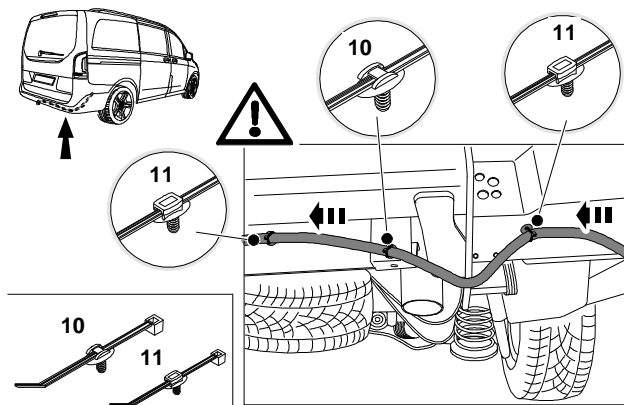
16. Remove the small vehicle grommet and drill out to $\varnothing 30\text{mm}$ using a step drill.

Note: Remove all sharp edges and spray rust inhibitor.

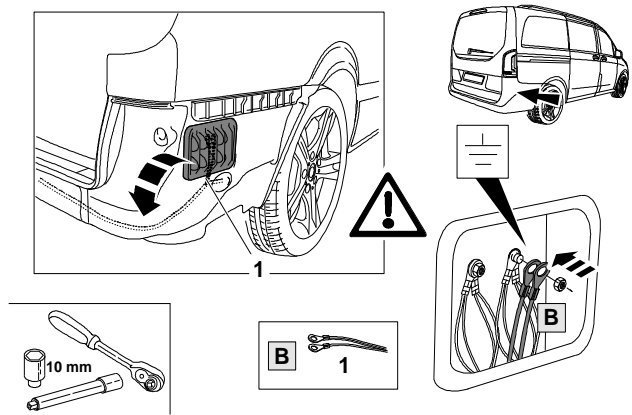
17. Feed the tail harness (1800mm) blue connector through the previously drilled hole, slide the grommet to desired location and secure with supplied cable tie, ensure enough length is left to mount the trailer plug.



18. Route the tail harness towards the centre of the vehicle.
19. Secure the tail harness the supplied fir tree clip cable tie items (10) and (11).

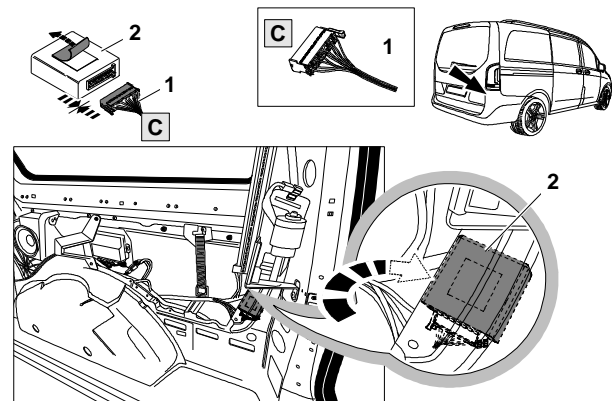


20. Remove the RHS air vent.
21. From inside the vehicle feed the trailer patch ring terminals (B) into the air vent cavity.
22. Connect the trailer patch ring terminals (B) to factory ground point.

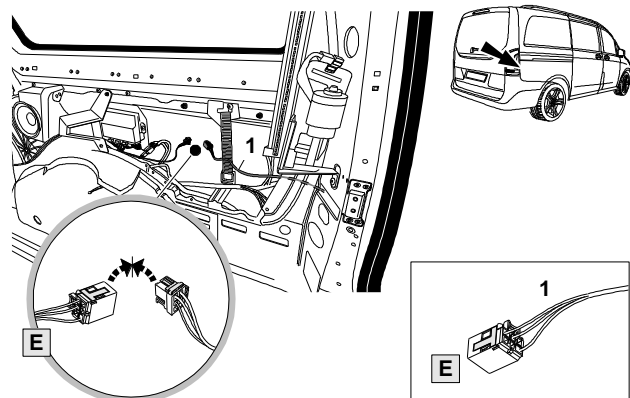


23. Connect the trailer patch ECU 18-way connector (C) to ECU (WLE70027)
24. Remove the adhesive tape protector off the ECU and place the ECU on a flat surface.

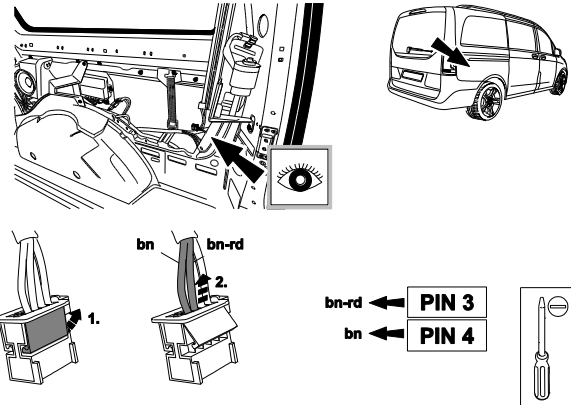
Note: Apply pressure to ECU and ensure good adhesion.



25. Locate the vehicle trailer pre-wire 6-way connector (E) and plug the trailer patch mating connector

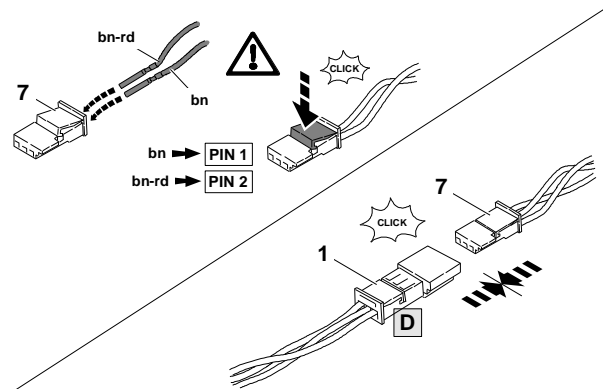


26. Locate the trailer 10-way connector.
27. Using a jeweller screw driver release the secondary tab.
28. Using a small jewellers screwdriver press down on the terminal tab to release following terminals:
 Pin 3 = Brown/Red
 Pin 4 = Brown

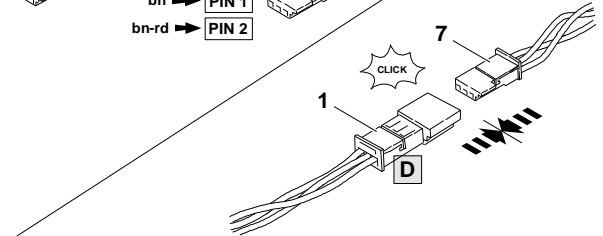


Note: Ensure the terminals do not contact each other.

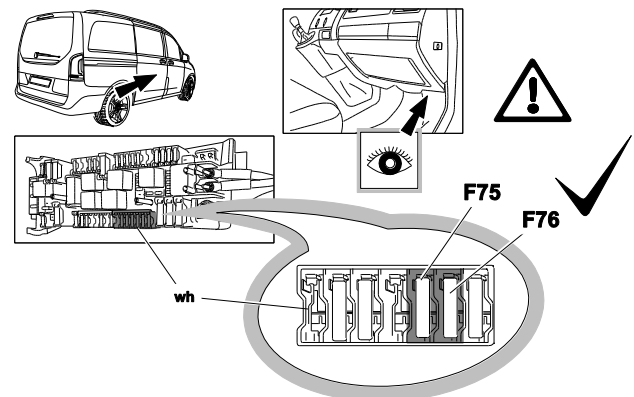
29. Locate the 3-way black F. Connector (item 7) and insert the wire as per below.
 Pin 1 = Brown
 Pin 2 = Brown/Red
 Close the secondary locking tab.



30. Locate the trailer patch 3-way black M. connector (D) and connect to the 3-way F. connector (7).



31. **Factory Fuse location:**
32. Position F75 Protects a module, while position F76 protects power input to a harness.
 Following fuses need to be used:
33. F75 – 20A fuse
34. F76 – 15A fuse



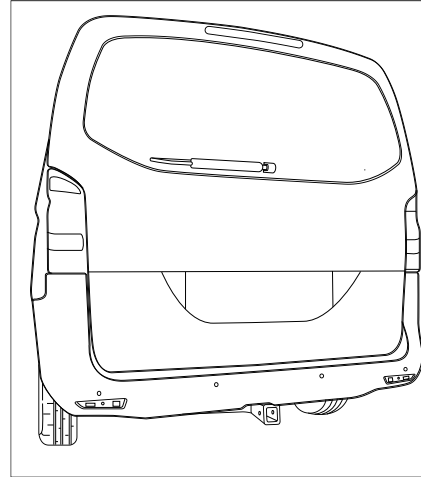


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35. Re-attach bumper by following steps 1-9 in reverse.



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36. Ensure the little LED light on top of the trailer ECU is green. (If no light, turn ignition on to wake up CAN).
 37. Secure harness with cable tie.
 38. Replace all removed parts in reverse order.
 39. The next step is coding of the vehicle. Pay attention to the "SmartCODE" instruction page.
 40. Once vehicle is coding test the functionality using a test board.
 41. Place fitting instructions in glovebox after fitment.
-



CUSTOMER INFORMATION

PLACE THESE INSTRUCTIONS IN THE
VEHICLE'S GLOVEBOX AFTER INSTALLATION

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

i TOWBAR MAINTENANCE AND CARE:

1. Hayman Reese recommend that the towbar LUG or TBM (tow ball Mount) Pull Pin and R-clip are removed and stored when not in use. Removal of LUG or TBM (tow 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. Hayman Reese 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.

i WARRANTY INFORMATION:

Hayman Reese 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 visit www.haymanreese.com.au/warranty or contact customer service on 1800 812 017 or info@haymanreese.com.au.



CUSTOMER INFORMATION

PLACE THESE INSTRUCTIONS IN THE VEHICLE'S GLOVEBOX AFTER INSTALLATION

HAYMAN REESE SMART PIN

Your Hayman Reese towbar is equipped with Smart 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.

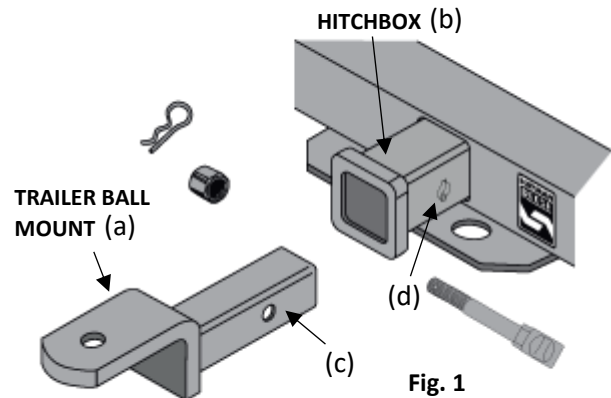
i Regularly inspect for wear and check the tightness of the Smart Pin Nut. Follow instructions below to re-tighten the nut as necessary when movement and noise in the tow ball mount is noted.

- Before towing, ensure R-Clip is properly installed and Smart pin nut is installed and tensioned. Replacement parts are available from your Hayman Reese Distributor.

TOWBALL MOUNT REMOVAL/INSTALLATION

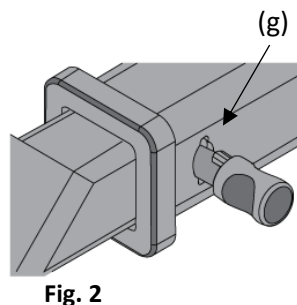
STEP 1

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



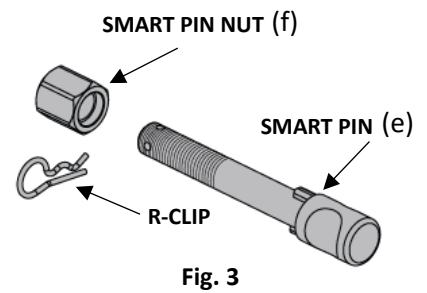
STEP 2

Insert Smart 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)



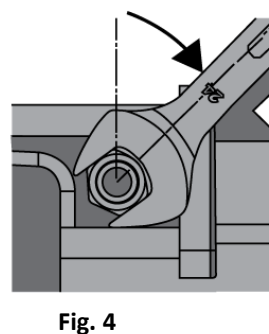
STEP 3

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



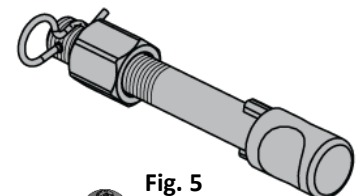
STEP 4

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



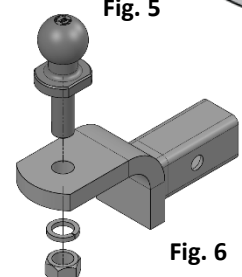
STEP 5

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



STEP 6

Install towball onto TBM and tighten to **350 Nm** using a calibrated torque wrench (Fig. 6).



Appendix



WARNING: This vehicle requires a system setting to ensure the trailer wiring and control module are correctly recognised. This process (referred to as 'coding') must be carried out to enable correct vehicle functionality when trailer is connected. Towing features enabled by correct control module and coding support OE functionality as set by OE manufacturer. Please read the vehicles owner's manual for proper operation and understanding.

Coding can be carried out using the Hayman Reese SmartCODE (HRSC) using the following steps. Note, if HRSC is unavailable, vehicle coding can be carried out by OE manufacturer as needed.

Before you start:

- **Ensure the HRSC software is up to date using the HAYMAN REESE SMARTCODE PC APP.**
 - **Ensure the vehicle battery is fully charged**
 - **Use of a battery support unit (BSU) is advised during the coding process.**
 - **Ensure towbar, wiring loom and ECU are correctly installed as per Hayman Reese fitting instructions.**
1. Locate the OBD2 port under the drivers footwell on the right-hand side and plug in the HRSC.
 2. Close all doors and turn the ignition on
 3. Follow the directions on the screen of the HRSC
 4. Once the vehicle has been coded successfully proceed to the "clear codes" tab
 5. Remove disconnect HRSC from OBD2 port.
 6. Check the dash to make sure there are no warning faults.
 7. Check the operation of trailer lights and ensure the Reverse Park Assist (RPA) is disabled and 'trailer on' icon is active where available.

For technical support and further information on Hayman Reese SmartCODE tool and coding process contact your nearest Hayman Reese stockist.

Australia: 1800 812 017

New Zealand: 0800 237 886