



TOWBAR INSTALLATION INSTRUCTIONS

PART NUMBER 03533RW

KIA CARNIVAL CAN CL4



PRODUCT DETAILS:

Part Number:	03533RW	Maximum Towing Braked:	2000	kg
ECU Number:	WLE70034	Maximum Towing Unbraked:	750	kg
Tail Harness Length Required:	1200 mm	Maximum Static Ball Load:	200	kg
TBM/Lug Part Number:	21126			
Wiring Part Number:	WLL90033			

FITTING DETAILS:

Towbar Installation Time:	60 Mins.	Hayman Reese SmartCODE Solution Required:	NO
Wiring Installation Time:	40 Mins.	RPA Disable/Other:	YES
Total Installation Time:	100 Mins.	Note:	
Bumper Cut Required:	Yes		Please refer vehicles owner's manual for proper operation and understanding of towing features.



Vehicle build date range: Aug 2024 - Onwards

If unsure if vehicle is fitted with CAN connector, please follow these steps:

- Tumble/fold the 3rd row seats forwards
- Remove the boot scuff panel
- Remove LHS D-Pillar trim
- Remove fastener
- Dislodge the LHS inside panel
- Check for CAN pre-wire connector: Image shown left



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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).

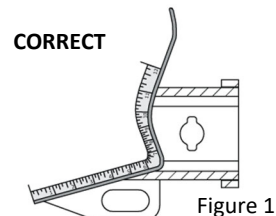


Figure 1

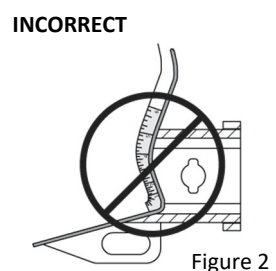


Figure 2

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

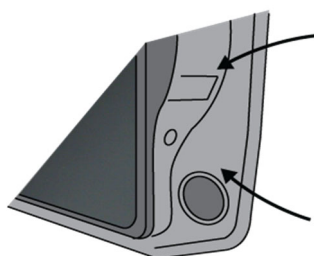
- Ensure that all hardware is fastened to correct torque as specified in this fitting instruction.
- All fasteners supplied with this product are used to achieve a specified clamp loading. If replacement is required ensure that fasteners of the same grade and class are used.



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.

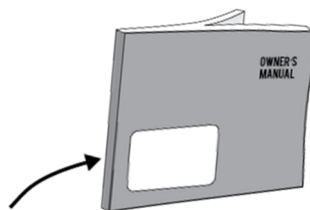
Product Labels

- 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.



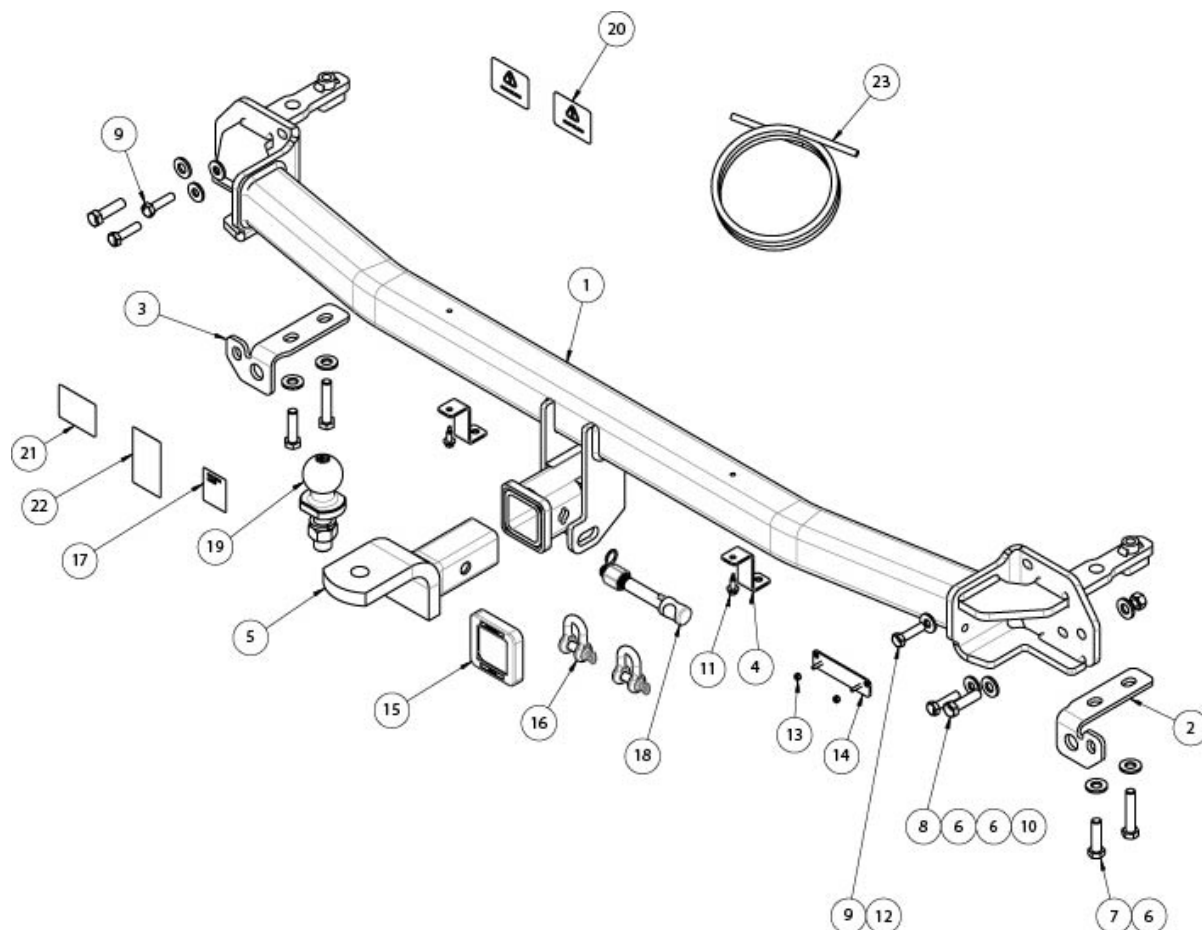
TOWBAR

INSTALLATION INSTRUCTIONS

PART NUMBER 03533RW

KIA CARNIVAL CAN CL4

TOWBAR ASSEMBLY DIAGRAM

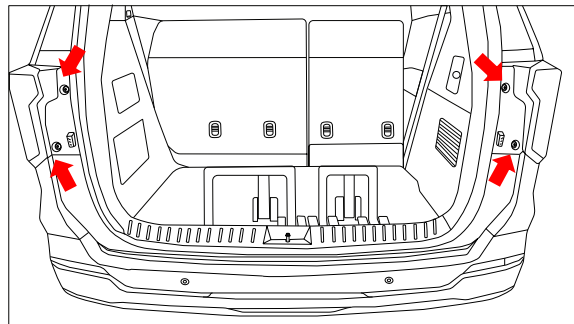


ITEM	DESCRIPTION	QTY
1	KIA CARNIVAL WELDED ASSEMBLY	1
2	SUPPORT PLATE, RHS	1
3	SUPPORT PLATE, LHS	1
4	BUMPER TAB	2
5	TRAILER BALL MOUNT	1
6	WASHER PLAIN M12x27x3.0mm	8
7	BOLT HEX HD M12x60x1.25P G10.9	2
8	SCREW HEX HD M12x45x1.25P G10.9	4
9	BOLT HEX HD M10x40x1.25P G10.9	4
10	NUT HEX HD M12x1.25P G8	2
11	TEK SCREW 14-20 HEX HD 22mm	2
12	WASHER PLAIN M10 X 25 X 3	4

ITEM	DESCRIPTION	QTY
13	NUT NYLOC HEX HD M4x0.7P G8	2
14	PLUG BRACKET	1
15	HITCH BOX COLLAR COVER	1
16	D-SHACKLE 10mm	2
17	HAYMAN REESE LOGO STICKER	1
18	SMART PIN ASSY GOLD	1
19	TOWBALL 50mm	1
20	CAN MODULE WARNING LABEL	2
21	COMPLIANCE LABEL	1
22	LOAD RATING LABEL	1
23	WIRING LOOM	1

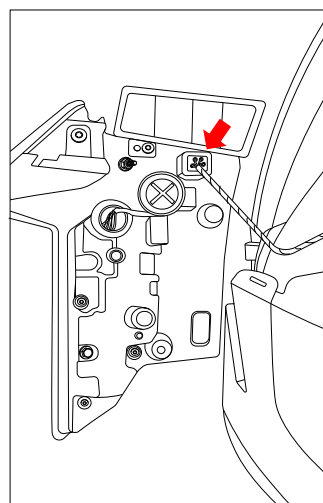
1. Open tailgate, open 4x covers to expose the taillight screws.

Remove 4 x hex head screws.



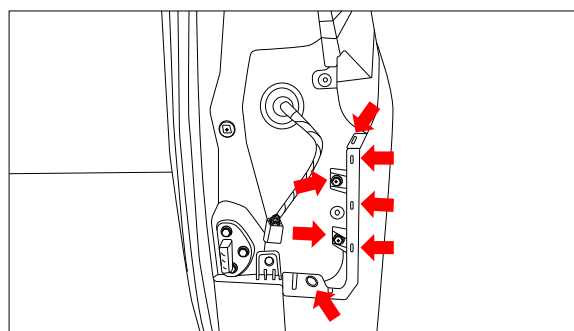
2. Remove the taillight by pulling rearwards, disconnect from the plug and set aside.

Repeat for other side



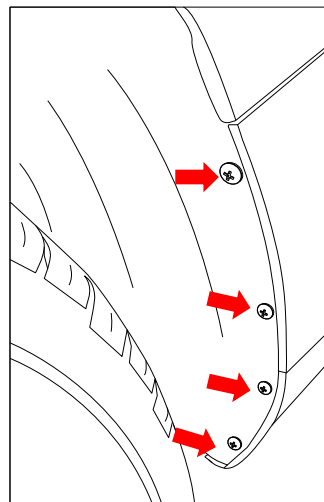
3. In the taillight cavity, remove 1 x scrivet.
4. Unclip the bumper from the top and the rear and then to assist with the bumper removal, remove the 2 x screws.

Repeat for other side

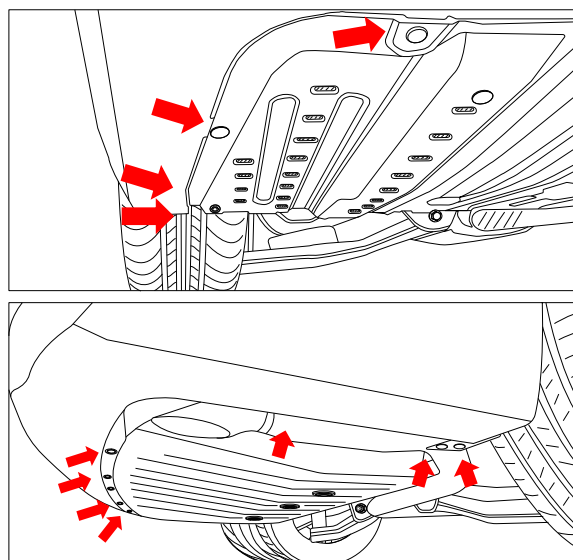


5. In wheel arch remove 4x screws.

Repeat for other side.

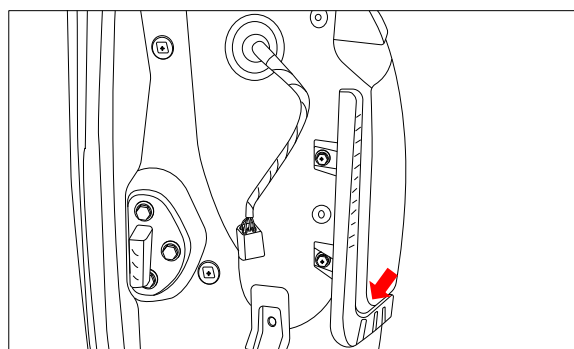


6. Along the underside of the bumper, remove 11 x screws.



7. Peel bumper away from the sides and remove from vehicle. Disconnect from the 2x wiring looms located on the LH side.

Note: The 2x Hex bolts were removed (step 4) to assist with the release of a bumper clip as indicated.





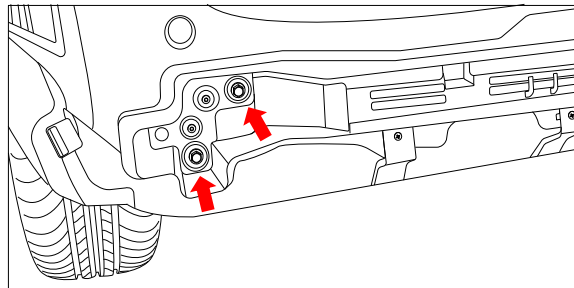
TOWBAR

INSTALLATION INSTRUCTIONS

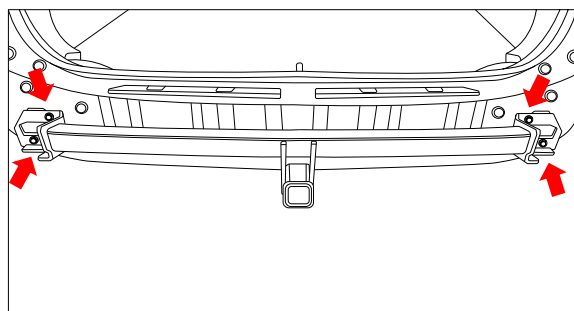
PART NUMBER 03533RW

KIA CARNIVAL CAN CL4

8. Remove and discard the impact beam secured with 2 x bolts each side.

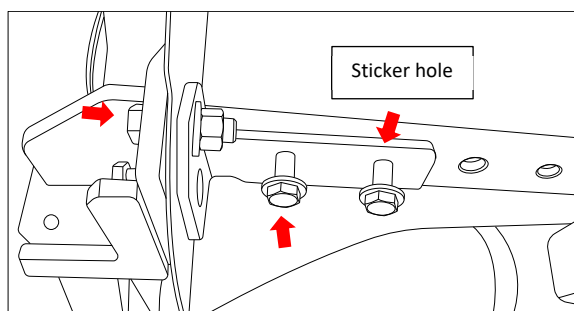


9. Position the towbar onto vehicle with the sidearms going into the chassis rail. Loosely secure each side to the back panel captive nuts with 2 x M10 bolts complete with 1 x washer per bolt.



10. Remove the sticker covering the forward (of vehicle) hole position.
11. Position the support plate under the chassis rail and loosely secure with 2 x M12 bolts complete with 1 x washer per bolt and to the back panel with 1 x M12 bolt complete with 2 x washers and 1 x nut per bolt.

Repeat for other side.

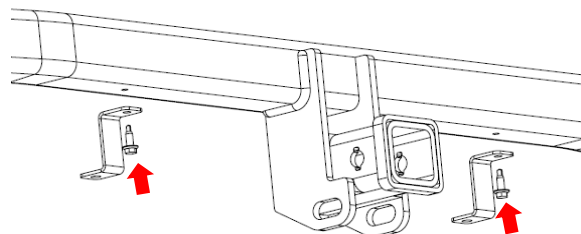


Tighten all fasteners to the following torque:

M10 x 1.25 Gr 10.9 : 68Nm

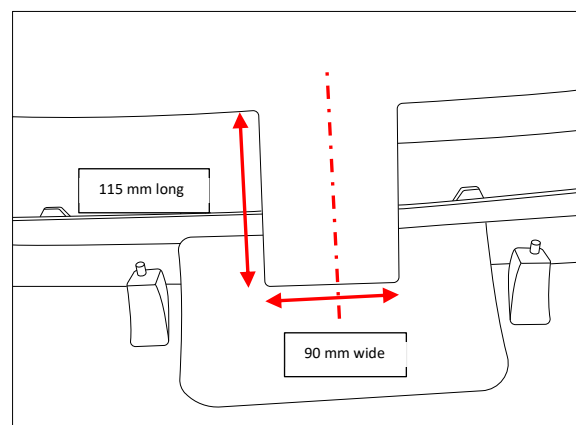
M12 x 1.25 Gr 10.9 : 125Nm

12. Fit the bumper tabs to the crosstube with 1 x tek screw. Ensure to not overtighten.

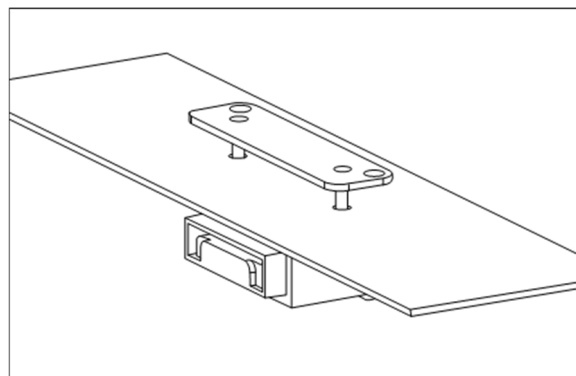


13. For Bumper cut.
Determine the centre of the bumper, measure, mark off and cut out 90mm wide and 115mm long, measured from the bottom edge of the bumper.

Ensure to not cut through or damage any cables located on the inside of the bumper.



14. For plug bracket.
15. At an appropriate position on the bumper, mark out and drill 2x $\phi 5$ mm holes 69mm apart on bumper skin to support plug bracket.





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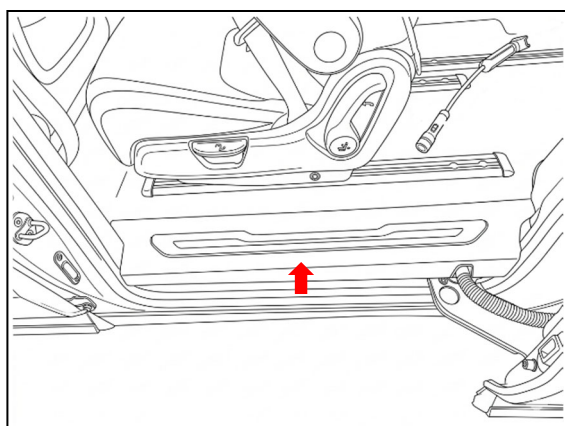
KIA CARNIVAL CAN CL4



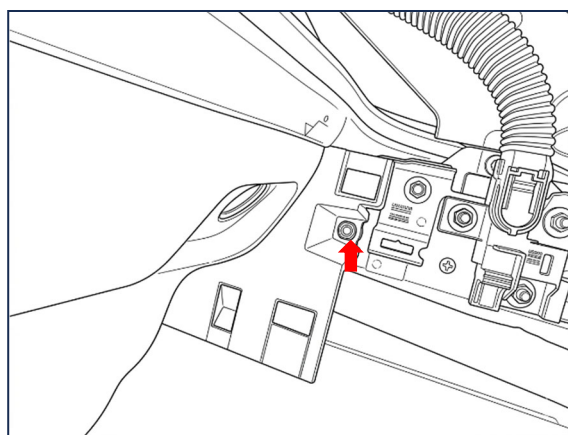
IMPORTANT

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.

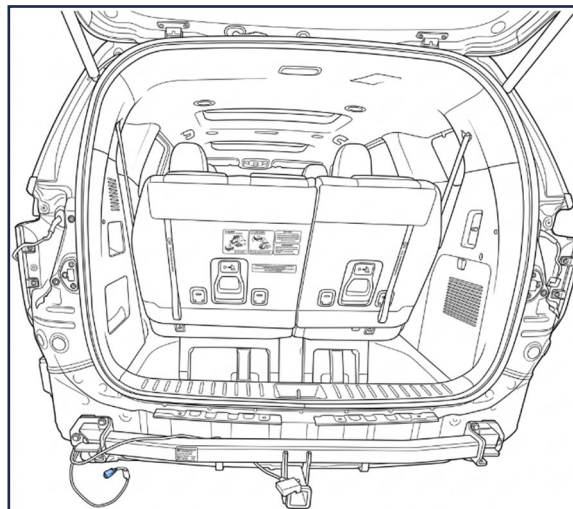
15. Slide open LHS side passenger door.
16. Using a trim tool remove LHS sill trim to expose LHS cargo trim fastener.



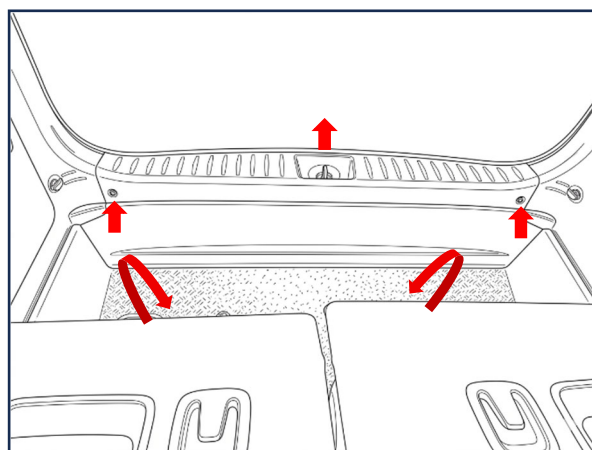
17. Remove the LHS side cargo trim fastener.



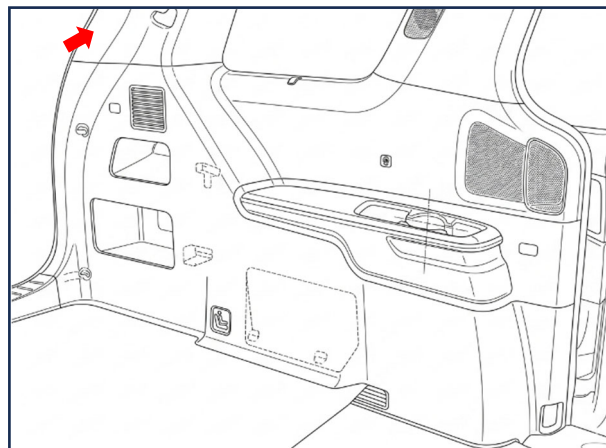
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18. Lift up the third row seats to allow access to rear cargo scuff trim fasteners.



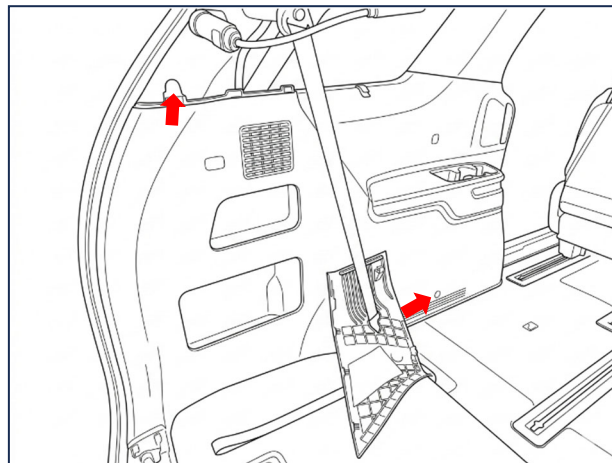
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19. Using a Ø10mm socket, remove 2x fasteners securing the rear cargo scuff trim.
20. Remove scuff trim.
21. Fold the third seats back into floor.



-
22. Remove LHS rear cargo trim upper D-pillar trim.

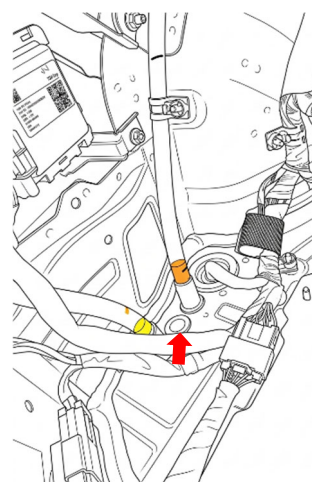


23. Remove 2x fasteners securing LHS rear lower cargo trim.
24. Dislodge trim and disconnect connectors.

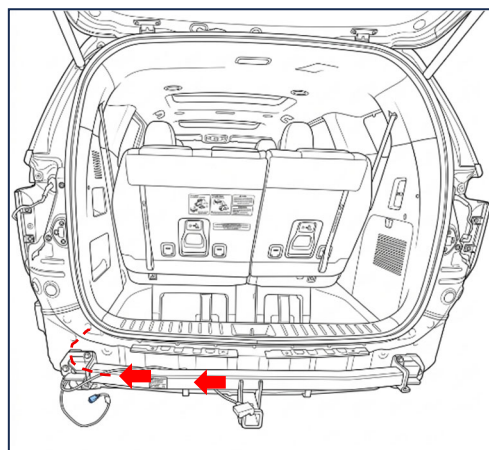


25. On the LHS rear locate vehicle blanking grommet and discard.
26. Using step drill, drill hole out to Ø30mm.

**Note: Remove swarf and sharp edges,
Spray rust inhibitor.**



27. From outside the vehicle route the tail harness (1200) blue connector towards the previously drilled hole.
28. Feed the connector through the hole and slide the grommet in position allowing enough length so the trailer socket can be mounted to bumper fascia plug bracket.
29. Secure the grommet using a cable tie and ensure the grommet is seated properly and maintain proper seal.



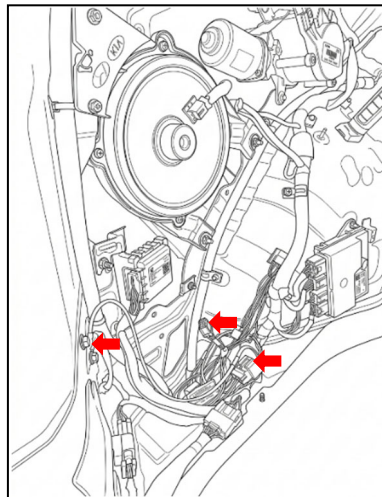


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PART NUMBER 03533RW

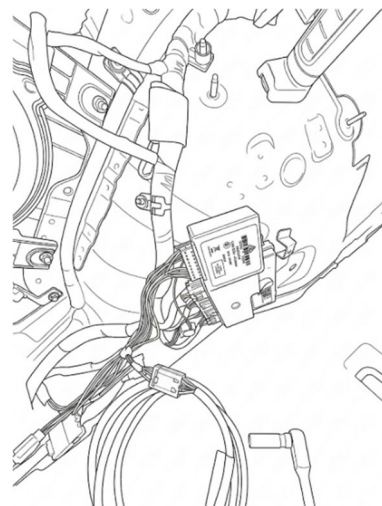
KIA CARNIVAL CAN CL4

30. Secure trailer patch ground ring terminal to factory ground point.
31. Locate the vehicle 8-way Trailer Prewire connector and connect the trailer patch mating connector.
32. Connect the trailer patch 8-way blue connector to mating 8-way blue tail harness connector.



33. Connect trailer patch 18-way connector to ECU (WLE70034).
Ensure the ECU LED is green.
34. Remove the adhesive tape protector off the ECU and place ECU to vehicle sheet metal as shown.

Apply pressure on the ECU 20 - 30 seconds to allow proper adhesion.



35. Refit all removed parts 1-7 and 15- 20 in reverse.
Note that only the inner 2 bumper tabs are used.
36. Test the functionality of trailer module ensuring all lights work using a trailer test board.
37. Place fitting instructions in glovebox when finished.





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.**

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.

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.



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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).

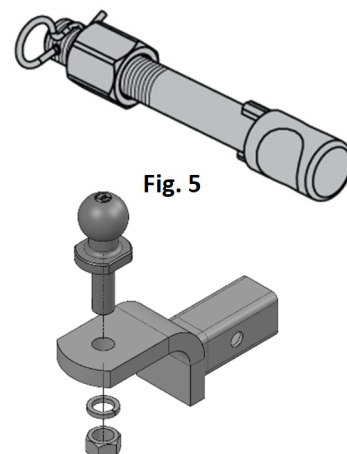
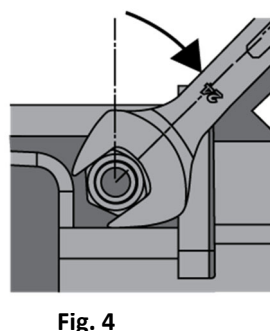
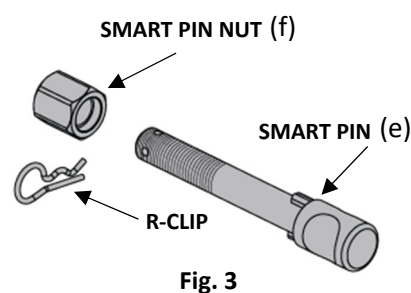
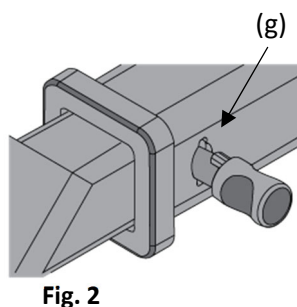
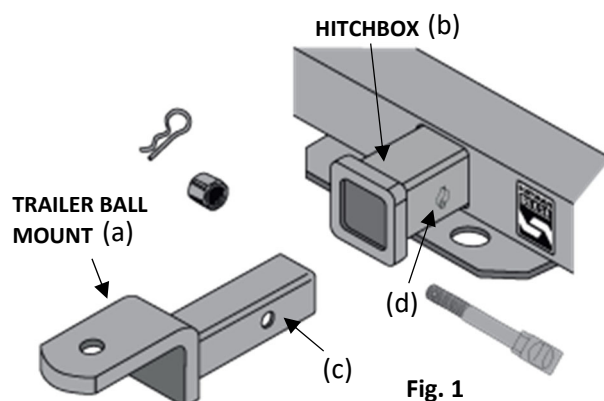


Fig. 6