

## INSTALLATION INSTRUCTIONS



### **01766RW - TO SUIT KIA CARNIVAL 8/99-ON**

### **PLEASE READ INSTRUCTIONS THROUGH BEFORE YOU BEGIN**

**WARNING :** 1. Do not drill, cut weld or otherwise modify the towbar.

2. If you are using electric welding on a motor vehicle, always check that the vehicle is not equipped with electronic engine or instrument management equipment. Failure to do so could destroy any onboard computers. If in doubt, check with the vehicle's manufacturer.

Max. Towing Weight: 2000kg

1. Ensure all hardware items have been included.
2. Unhook exhaust from three rear most mounts.
3. Remove four bumper bar iron bolts from under vehicle and discard.
4. Carefully slide towbar arms in through shipping hook brackets and on to chassis rails. Align four rear most holes of towbar with holes in chassis. Insert four M10x35x1.25 bolts or four M12x35 1.5 bolts (whichever is applicable) supplied to support towbar.
5. Centre towbar to vehicle and semi tighten bolts, using remaining two forward most holes as guide, drill 10mm hole in chassis rail.
6. Remove towbar from vehicle and remove rear bumper bar as well. To remove bumper bar, unscrew two bolts from under rear wheel arch one on each side. Also three on each side next to mud flap including one on mud flap.
7. Refit towbar without bumper bar.
8. Insert wired bolt from rear of vehicle through chassis opening and align wired bolt with 10mm hole drilled in chassis and drop through.
9. Locate and align wired bolt to towbars most forward hole on side arms and support towbar by tightening nuts semi tight.
10. Refit bumper bar. **NOTE: Make sure bumper bar has gone hard up against body of vehicle so as captive nuts on bumper bar irons line up with side arm holes. Insert all bolts semi tight.**
11. Fit exhaust bracket if necessary.
12. Tighten all bolts to torque listing below.
13. Towbar rating sticker to be conspicuously located on the inside of the driver's door. (See diagram below)

**NOTE:**

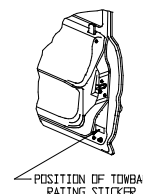
Hayman Reese recommends that you check your towball to ensure it complies to Australian Design Rules.

### **RECOMMENDED ASSEMBLY TORQUE LISTING**

<b><u>Diameter</u></b>	<b><u>Grade 8.8 Bolt</u></b>
	<b>Nm</b>
M6	9.5
M8	21.7
M10	43.4
M12	77.3
M14	121.0
M16	189.8

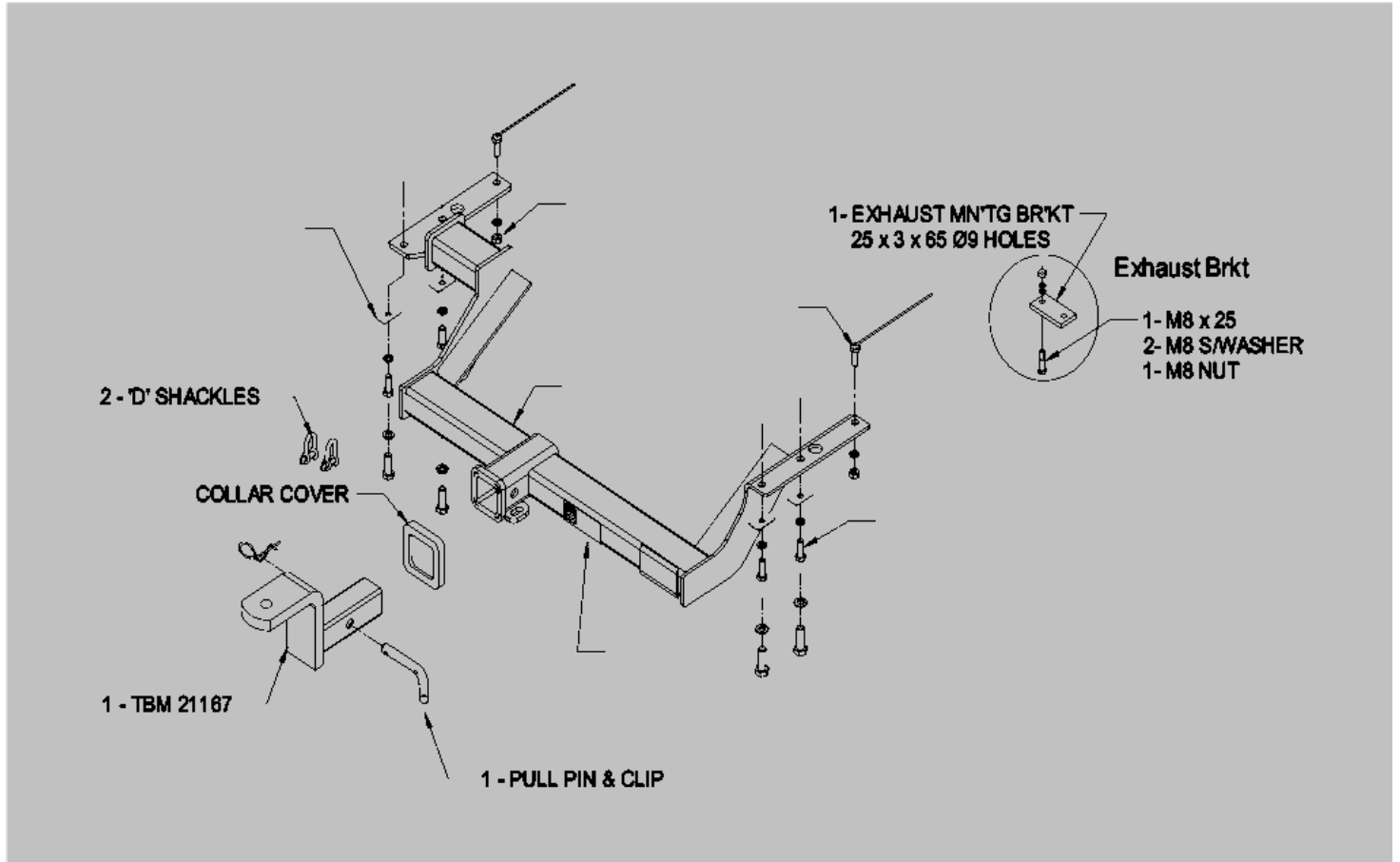
#### **FOR TOWING PURPOSES ONLY**

For towing capacity details please refer to vehicle owner's manual or to the manufacturer. Overloading can void your warranties.



**PLEASE NOTE:** You must remove the lug unless you are actually towing if it obscures your number plate. Failure to do so may result in a fine.

**R1766 - TO SUIT KIA CARNIVAL 8/99-ON**



## Wiring Loom Installation Instructions

**KIA CARNIVAL**  
**Part No: 100298-WL**

**ECU Required: 04826**  
**Tail Harness Length Required: 1800mm**  
**RPA Override Switch Part No: 04848 (If Fitted)**

**Wiring Loom Installation Time: Approx 45 Mins**

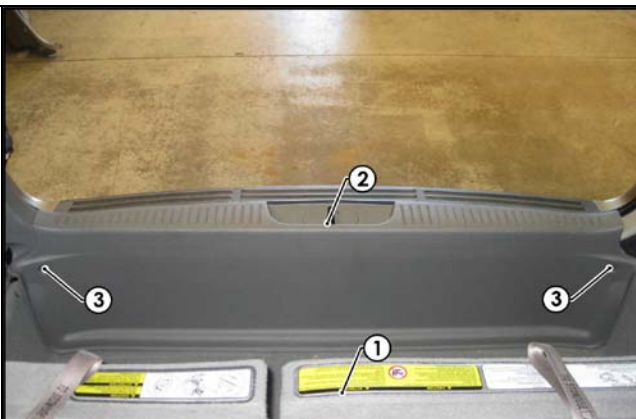
1. From outside the vehicle, remove the LHS tail light (1) by first removing the three screws (2) and disconnecting the tail light connector.
2. Repeat step for the RHS.



3. Route the LHS tail light connector (1) into the luggage compartment by pushing the tail light grommet (2) through the tail light hole.
4. Repeat step for the RHS.



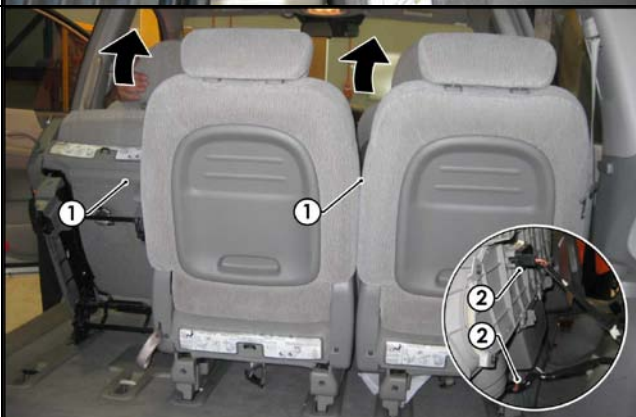
5. From inside the luggage compartment, raise the third row seats (1) to gain access to the rear trim (2).
6. Remove the rear trim (2) by first removing the two screws (3).



7. Remove the LHS side trim lower screw (1).
8. Repeat step for the RHS.



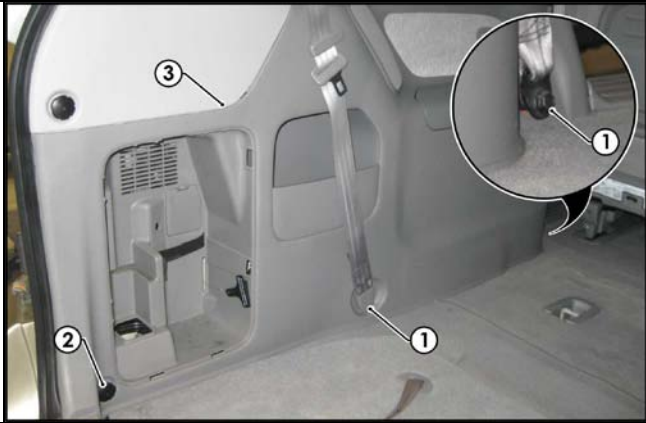
9. Fold the rear seats (1) forward and disconnect the two connectors (2).



10. Remove the LHS panel cover (1) to gain access to the vehicle jack.
11. Remove the vehicle jack.



12. Remove the two LHS seat belt lower bolts (1).
13. Remove the two 10mm bolts from inside the jack cavity.
14. Remove the LHS lower cargo hook (2) and remove the LHS side trim (3).



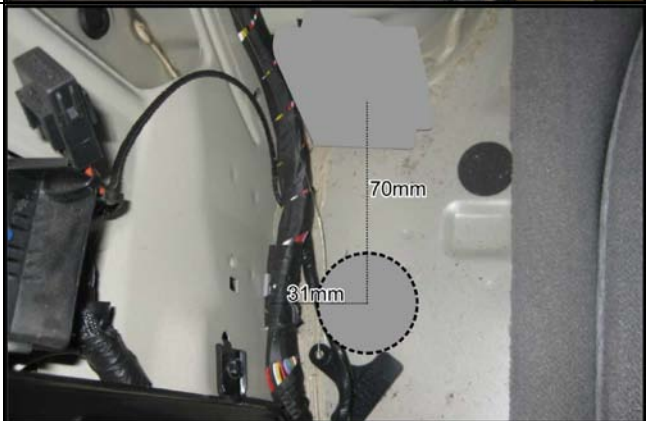
15. Dislodge the RHS side trim (1) by first removing the cargo hook (2).



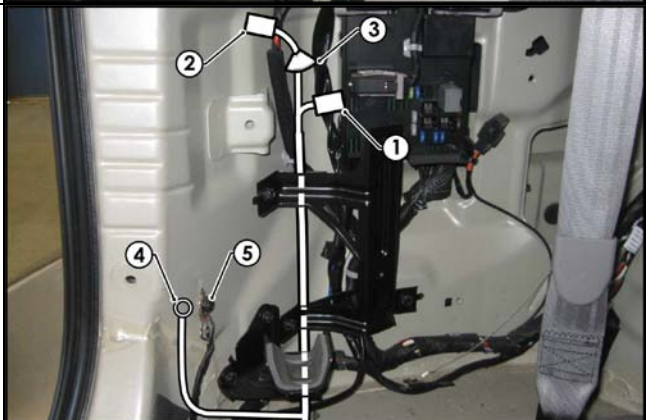
16. Drill a Ø31mm hole (1) into the LHS side of the luggage compartment.

**Note: Please refer to image for the correct drilling location.**

17. File any rough or sharp edges and spray on rust inhibitor.

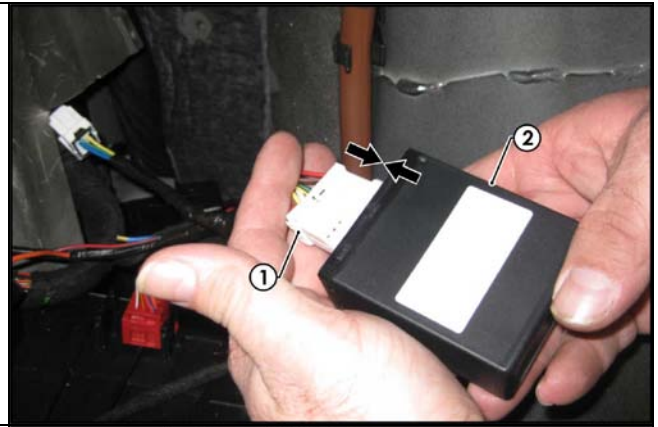


18. Locate the LHS tail light connector.
19. Connect the Trailer Harness male connector (1) to the LHS tail light connector.
20. Route the Trailer Harness female connector (2) out through the LHS tail light hole, ensuring the grommet (3) is seated correctly.
21. Connect the Trailer Harness ground ring terminal (4) to the existing vehicle ground point (5).

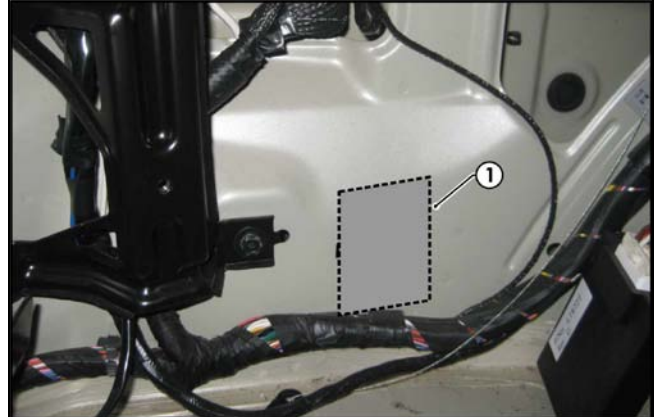




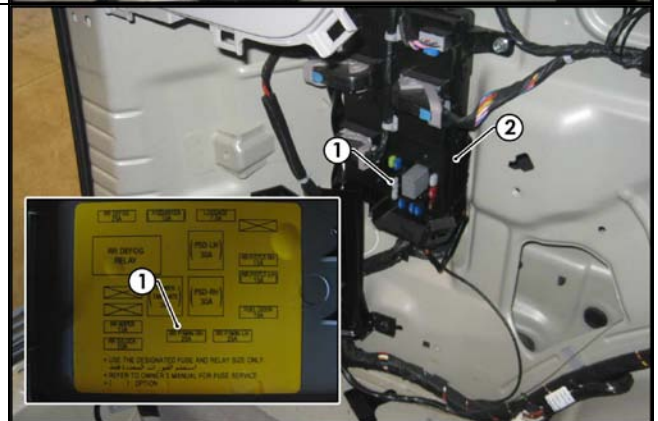
22. Connect the trailer harness 12-way connector (1) to the ECU (2).



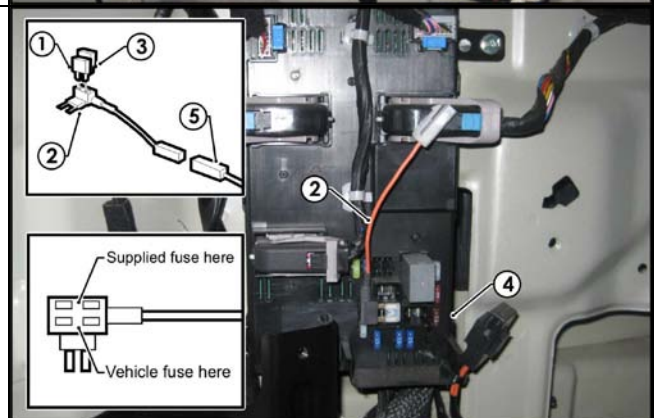
23. Apply double sided tape to the ECU (1) and adhere it to the vehicle sheet metal on the LHS of the luggage compartment.



24. Locate and remove the power window fuse (1) from the LHS fuse panel (2).



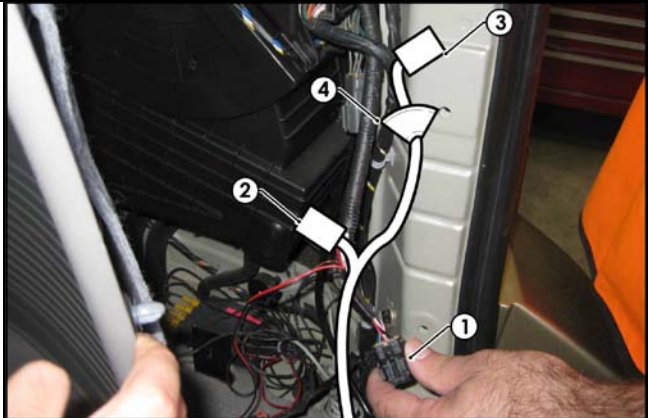
25. Insert the removed vehicle fuse (1) into the lower slot of the Add-a-Fuse harness (2).  
 26. Insert the supplied 20-amp fuse (3) into the upper slot of the Add-a-Fuse harness (2).  
 27. Plug the Add-a-Fuse harness (2) into the now vacant fuse slot on the fuse panel (4).  
 28. Connect the 'ORANGE' power wire 1-way connector (5) into the Add-a-Fuse harness (3) mating connector.



29. Route the Trailer Harness across the rear of the luggage compartment and towards the RHS of the vehicle.



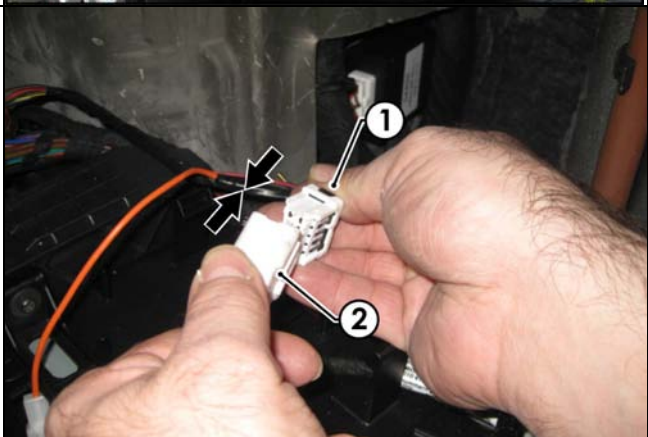
30. Locate the RHS tail light connector (1).  
31. Connect the Trailer Harness male connector (2) to the RHS tail light connector.  
32. Route the Trailer Harness female connector (3) out through the RHS tail light hole, ensuring the grommet (4) is seated correctly.



33. From outside the vehicle, mount the trailer socket (1) to the towbar mounting bracket using M4 fasteners (not supplied).  
34. Route the Tail Harness (2) across the towbar towards the LHS of the vehicle and up through the previously drilled out hole.  
35. Ensure the Tail Harness grommet is seated correctly and secure in place using a cable tie (not supplied).



36. Connect the Tail Harness 8-way connector (1) to the Trailer Harness mating 8-way connector (2).



<p>37. Test the Trailer Harness function using a Light Board or multimeter.</p> <p>38. Secure all Harnesses using cables ties (not supplied).</p> <p>39. Re-fit all removed parts and secure all fasteners, ensuring there are no squeaks or rattles.</p> <p>40. Place the instructions in the glove box after fitment.</p>	
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