

Towbar Fitting Instructions
To Suit **KIA OPTIMA SEDAN 2011**
Part Number **KM16L**
Rating 1200 kg

INSTALLATION INSTRUCTIONS

PLEASE ENSURE THAT INSTRUCTIONS ARE UNDERSTOOD PRIOR TO FITMENT



Installation Time: Approx **45** Mins

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Towbar capacity

Part Number **KM16L**

Max Towing Braked **1200**kg
Max Static Ball Load **120**kg



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Warning:

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

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.

1. **General:** Ensure all hardware items have been included refer to assembly diagram.
2. It is recommended that the instructions are read through and completely understood before making any attempt to fit this product.
3. Be wary of any changes to vehicle designs or other accessories that may conflict with the installation of this product.
4. Before drilling ensure that the area is clear of fuel, electrical & other components.
5. All holes drilled into the body panels shall have all burrs & swarf removed then coated with a suitable rust preventative paint.
6. The high tensile fasteners supplied with this product were used to achieve the specified rating. If replacement is required ensure that fasteners of the same rating & quality are used. Contact an authorised **Trailboss** dealer if further information is required.
7. Ensure that all hardware is fastened to torque list below check fasteners on regular basis.
8. Towbar load rating sticker provided with this product shall be conspicuously located on inside rear end of the driver's door. **(See diagram below).**
9. Trailboss recommends that you check your tow ball to ensure that it complies with the Australian standards **AS 4177.2**.
10. **PLEASE NOTE:** It is advised to remove your lug or tbm when not actually towing so as to produce a clear view of the vehicles registration plate if obscured, and to also provide maximum available departure angle.

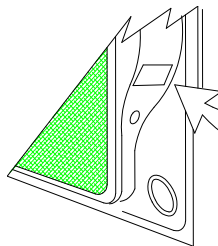
Tow bar Maintenance and Care.

Trailboss recommends that bolt torque's, as listed below, are routinely and regularly inspected and checked for correct tension. Replace any worn or defective parts.

We recommended to remove Tow Ball Mounts (TBM's, tongues or lugs) when not being used for any considerable length of time.

So as to avoid injury, when not towing it is suggested that the tongue, Pull Pin and R-clip are removed then stored in a safe, clean and dry place, away from excessive moisture.

Hitch Pull Pins and spring "R" clips are regularly checked for proper installation. Replace any worn or defective parts.



Place load rating sticker
inside driver's door here

RECOMMENDED ASSEMBLY

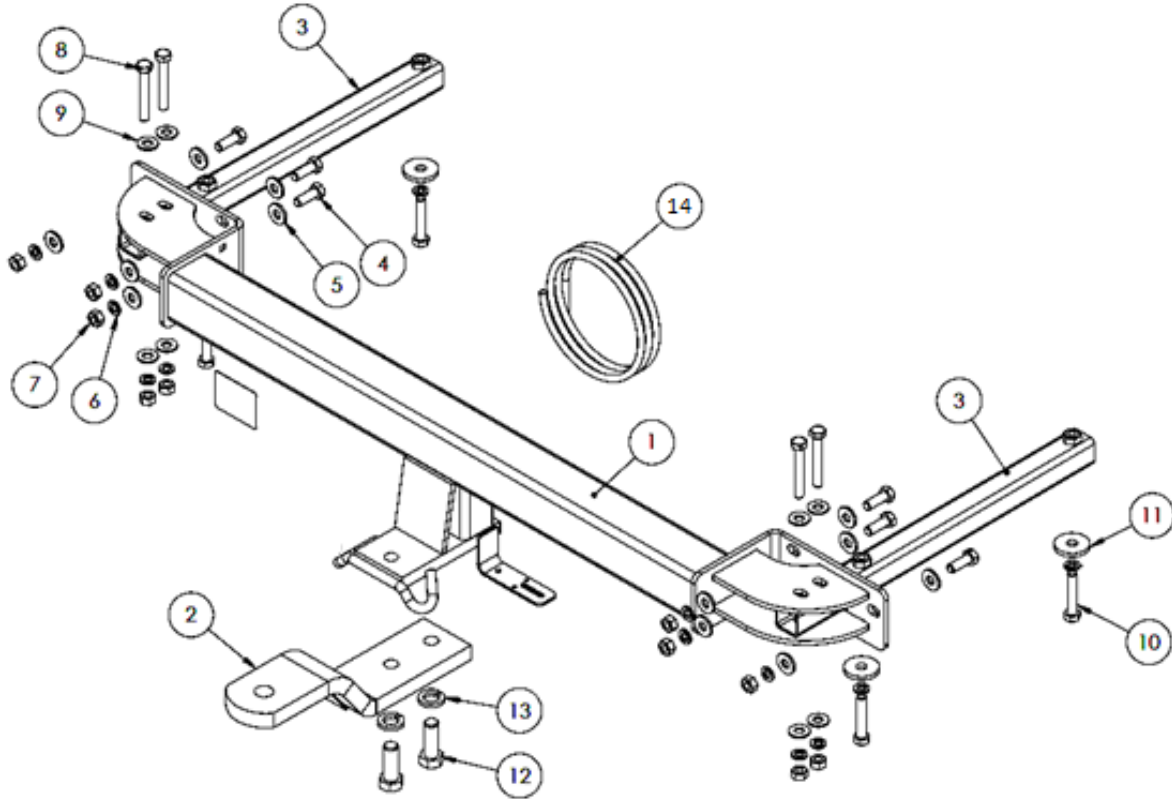
TORQUE LISTING

<u>Diameter</u>	<u>Grade 8.8 Bolt</u>	
M6		9.5 Nm
M8		21.7 Nm
M10		43.4 Nm
M12		77.3 Nm
M14		146 Nm
M16		189.8 Nm

FOR TOWING PURPOSES ONLY


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

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ITEM No	DESCRIPTION	QTY
1	KIA OPTIMA SEDAN 2011	1
2	LUG	1
3	CHASSIS INSERT ASSY	2
4	M10 x 30 - 1.5P BOLT	6
5	WASHER FT M10 X 25.4 X 3	12
6	M10 X 3.5 X 2.2 SPING WASHER	14
7	NUT HX M10 - 1.5P Z/P	10
8	BOLT M10 x 70 - 1.5P	4
9	WASHER FT M10 X 23 X 2 Z/P	8
10	BOLT M10 x 60 - 1.5P	4
11	SPACER 40mm (A02466R-17)	4
12	M16 x 45 - 2P BOLT	2
13	M16 SPRING WASHER	2
14	WIRING LOOM	1

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 Position the vehicle on to a safe working height on the hoist before commencing fitment.

1. Remove the bumper bar and the rear impact beam.

Refer to the vehicle manufacturer's manual for details.

2. Locate the towbar welded assembly on the back panel and tighten the bolts on the back panel, as shown in Figure 2

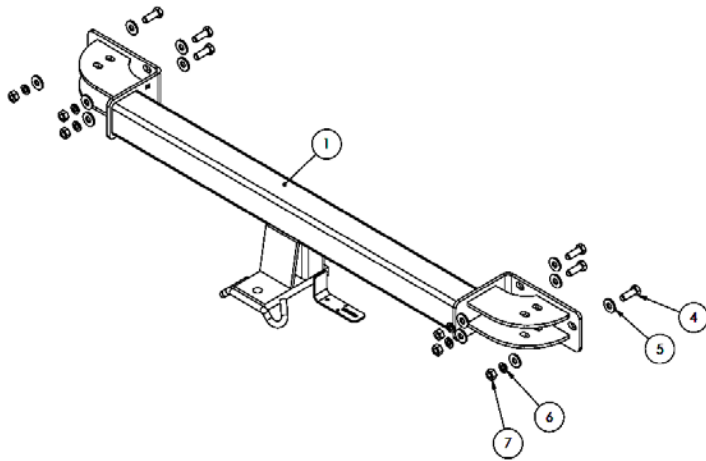


Figure 2 – Locate the towbar on the vehicle.

3. Insert the loose chassis side arms and bolt them to the towbar, using the relevant bolts, as shown in Figure 3.

Note: Passenger side shown, repeat the step for driver side.

4. Tighten and torque all bolts up to the torque requirement as mentioned on page 2

5. Refit bumper bar, (Referring to vehicle manufacturers manual.)

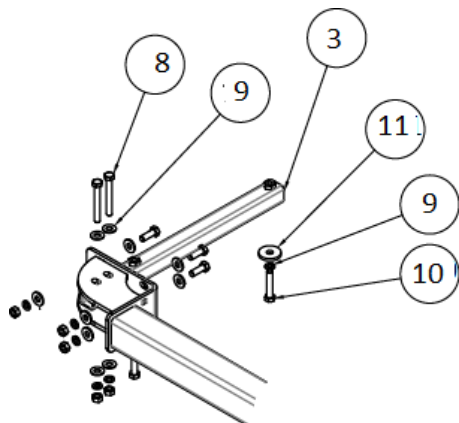


Figure 3 – Insert the chassis arms.



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Wiring Loom Installation Instructions

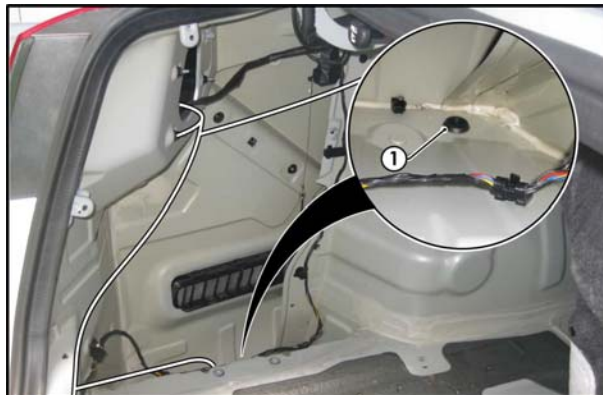
Kia TF Optima
Part No: 100548-WL

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

Wiring Loom Installation Time: Approx 30 Mins

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1. In the luggage compartment, remove the floor cover carpet.
2. Remove the rear trim by first removing the two clips.
3. In the LHS side trim, remove the three clips.
4. Remove the two floor screws.
5. Remove the floor bolt and remove the LHS side trim.
6. Repeat steps for the RHS.
7. Locate and disconnect the LHS tail light connector.
8. Patch in the Trailer Harness (P/No: 100548-WL) mating connectors.
9. Connect the Trailer Harness ground ring terminal to the LHS tail light stud.



10. Remove the LHS luggage compartment grommet (1).
 11. Drill out the grommet hole to $\text{Ø}31\text{mm}$.
 12. File any rough or sharp edges and spray on rust inhibitor.
 13. Locate the vehicle 'BLUE' reverse signal wire.
 14. Following the table below, connect the ezy tap to the vehicle 'BLUE' reverse signal wire.
 15. Connect the Trailer Harness reverse terminal to the ezy tap.
- | Function | Trailer Patch | Vehicle Connector |
|----------|---------------|-------------------|
| REVERSE | BLACK | BLUE |
16. Route the Trailer Harness across the rear of the luggage compartment and towards the RHS tail light connectors.



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17. Locate and disconnect the RHS tail light connectors.
18. Patch in the Trailer Harness mating connectors.
19. From outside the vehicle, mount the trailer socket to the towbar mounting bracket using M4 fasteners (not supplied).
20. Route the Tail Harness (tail length 1800mm) across the towbar towards the LHS of the vehicle and up through the previously drilled out hole.
21. Ensure the Tail Harness grommet is seated correctly and secure in place using a cable tie (not supplied).
22. Connect the Tail Harness 8-way connector to the Trailer Harness mating 8-way connector.
23. Test the Trailer Harness function using a Light Board or multi-meter.
24. Secure all Harnesses using cables ties (not supplied).
25. Re-fit all removed parts and secure all fasteners, ensuring there are no squeaks or rattles.
26. Place the instructions in the glove box after fitment.