## PART No: 02912RW TOYOTA PRADO 120 SERIES

## INSTALLATION INSTRUCTIONS

PLEASE ENSURE THAT INSTRUCTIONS ARE UNDERSTOOD PRIOR TO FITMENT PLACE THESE INSTRUCTIONS IN THE VEHICLE'S GLOVEBOX AFTER INSTALLATION IS COMPLETED



**Installation Time: Approx 60 Mins** 

## **Towbar Installation Instructions**

**TOYOTA PRADO 120 SERIES** 

Part Number 02912RW

Towbar capacity:
Max Towing Braked 2500kg
Max Static Ball Load 250kg

Hayman Reese (Cequent)
PO Box 4050, Dandenong South VIC 3164
Phone 1800 812 017 Email info@haymanreese.com.au



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### Warning:

- 1. Do not, drill, cut, weld or otherwise modify the towbar.
- If you are using electric welding on a motor vehicle, <u>always</u> check that the vehicle is not equipped with electronic
  engine or instrument management equipment. Failure to do so could <u>destroy</u> any on board computers. If in doubt,
  check with the vehicle's manufacturer.
- 3. If TBM is used in inverted position tow ball may make contact with rear tailgate when lowered, which could cause damage.

#### **General:**

- 1. 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 **Hayman Reese** 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. Hayman Reese 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.

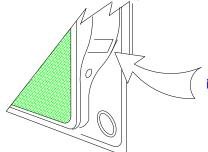
#### Tow bar Maintenance and Care.

Hayman Reese 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		
Diameter Grade 8.8 Bolt		
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.

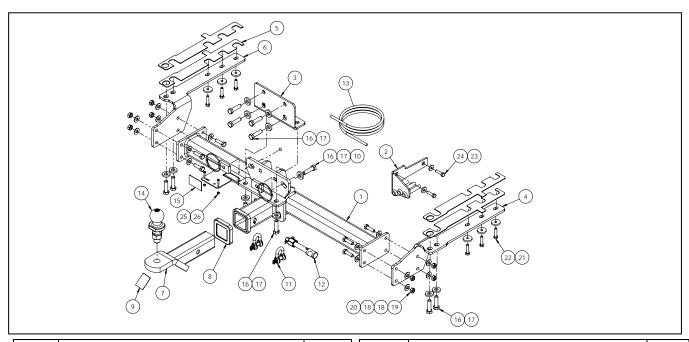
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ITEM	DESCRIPTION	QTY
1	TOYOTA PRADO 17 WELDED ASSY	1
2	EXHAUST BRACKET	1
3	CLAMPING PLATE	1
4	SIDEARM RHS	1
5	SPACER PLATE	4
6	SIDEARM LHS	1
7	ТВМ	1
8	HITCH BOX COLLAR COVER	1
9	HAYMAN REESE LOGO STICKER	1
10	M12x1.25 TAP PLATE WITH 300 WIRE	2
11	10MM "D" SHACKLE	2
12	SMART PIN ASSY CLASS 4 - GOLD	1
13	WIRING LOOM	1
14	TOWBALL 50MM CHROME 3500KG	1

ITEM	DESCRIPTION	QTY
15	ACRYLIC COMPLIANCE PLATE	1
16	SET SCREW HEX HD M12x45x1.25P	12
17	WASHER FLAT M12x28.5x5	12
18	WASHER FLAT M10x23x2 Z/P	16
19	NUT HX M10-1.25 Z/P	8
20	SET SCREW HEX HD M10x35x1.25P	8
21	WASHER FT (M8) 8.1x32x5 MM Z/P	6
22	BOLT HEX M8x35x1.25P	6
23	WASHER PLAIN M8x22x3	2
24	SETSCREW HEX HD M8x30x1.25P	2
25	SCREW PAN HD M4x16x0.7P	2
26	NUT NYLON LOCK HEX HD M4x0.7P	2

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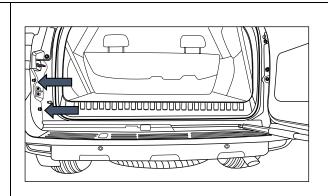


## PART No: 02912RW TOYOTA PRADO 120 SERIES

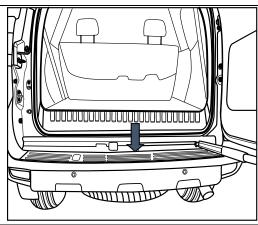
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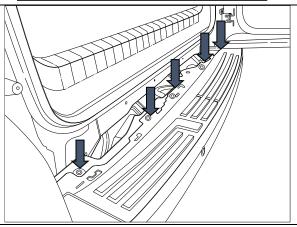
 Release the tailgate to expose the rear cabin. Remove 2 x scrivets located around boot opening.



2. Using a trim removal tool, carefully extract the rear garnish on top of the bumper.



3. With the bumper fully exposed, remove 5 x set screws located behind plastic trim.



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REESE

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## INSTALLATION INSTRUCTIONS

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4. On the inside of the wheel arch, remove 1 x set screw and 2 x scrivets. Repeat for opposite side. 5. Remove 1 x screw and 1 x scrivets from underneath vehicle on the side. Repeat for the opposite side. 6. Remove 2 x screws from rear bumper fascia lip on underside of vehicle.

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HAYMAN

## PART No: 02912RW TOYOTA PRADO 120 SERIES

## **INSTALLATION INSTRUCTIONS**

PLEASE ENSURE THAT INSTRUCTIONS ARE UNDERSTOOD PRIOR TO FITMENT
PLACE THESE INSTRUCTIONS IN THE VEHICLE'S GLOVEBOX AFTER INSTALLATION IS COMPLETED

Unclip wiring harness connectors on passenger side and reverse sensors if fitted.  Repeat for opposite side.	
8. Using two people, carefully unclip the bumper assembly and set aside.	
9. On the passenger side remove 2 x Set screws and discard the factory shipping hook.  Output  Description:	

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REESE

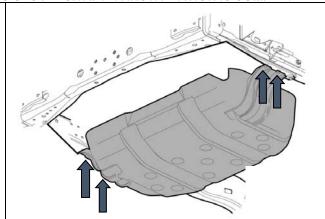
## PART No: 02912RW TOYOTA PRADO 120 SERIES

## **INSTALLATION INSTRUCTIONS**

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10.Remove 4 x bolts securing fuel protector from underside of vehicle as shown and discard bolts.

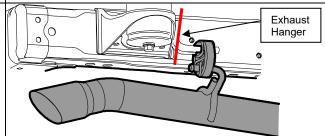
Fuel protector will remain supported by a 5<sup>th</sup> bolt towards the front of vehicle. Leave this bolt and provide additional support if required.



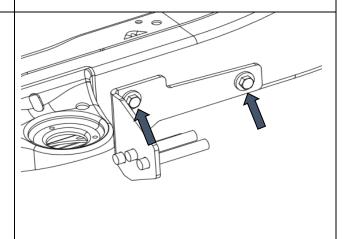
11.Lower exhaust by unhooking from rear most hanger. Lower and support exhaust.

Using an appropriate metal cutting tool, carefully cut the rear most hangers as shown.

12. Apply rust inhibitor to all cut areas.



13.Loosely secure the exhaust hanger bracket to the RH chassis rail with 2 x M8 x 35mm bolts complete with 1 x M8 washer per bolt.



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REESE

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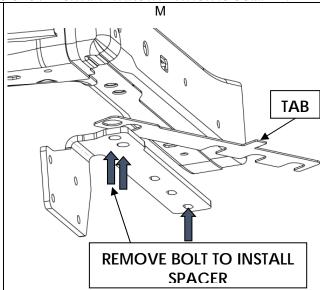
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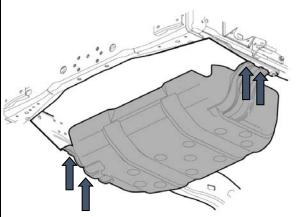
14.Loosely secure RH Sidearm to chassis rail. Secure with 2 x M12 x 45mm bolts complete with 1 x M12 washer per bolt at rear most holes. Secure most forward hole in chassis rail with 1 x M8 x 35mm bolt complete with M8 washer.

Use supplied spacer plates as required to ensure holes align in Step 18. To install spacer plate remove rear most bolt on side arm, insert spacer and reinstall bolt. Swing spacer using tab in between side arm and bottom of chassis rail.

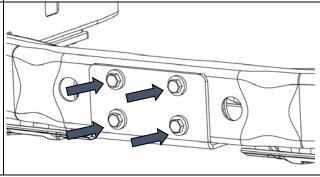
Repeat for LHS.



15. Re-fit fuel tank protector to underside of vehicle and secure to chassis rail with 4 x M8 x 35mm bolts (2 per side) complete with 1 x M8 washer per bolt.



16.Loosely secure the front plate to vehicle with 4 x M12 x 45mm bolts.



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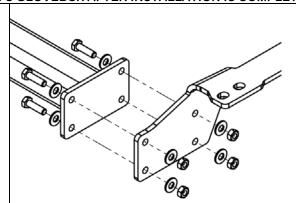


## PART No: 02912RW TOYOTA PRADO 120 SERIES

## INSTALLATION INSTRUCTIONS

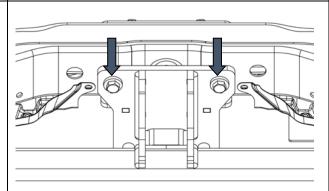
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17.Lift towbar to align with side arms and loosely secure with 8 x M10 x 35mm bolts (4 per side) complete with 2 x M10 washers and 1 x M10 nut per bolt.



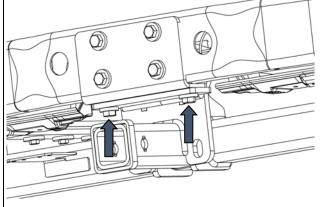
18.Loosely secure towbar to rear side of vehicle chassis with 2 x M12 x 45mm bolts by inserting tapped plate on wire inside chassis rail. Use 1 x M12 washer per bolt.

If bar is too high, causing hole misalignment, add spacers as per Step 14.



- 19. Secure the front plate to the towbar with 2 x M12 x 45mm bolts complete with 1 x M12 washer per bolt.
- 20. Torque all bolts to the torques listed below:

M12: 125 N.m M10: 48 N.m M8: 22 N.m



21.Reassemble the bumper bar assembly in the reverse order of removal, ensuring exhaust is mounted to newly fitted hanger.

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PART No: 100041-WL TOYOTA PRADO

## **INSTALLATION INSTRUCTIONS**

PLEASE ENSURE THAT INSTRUCTIONS UNDERSTOOD PRIOR TO FITMENT

## **Wiring Loom Installation Instructions**

TOYOTA PRADO Part No: 100041-WL

Tail Harness Length Required: 1200mm RPA Override Switch Part No: 04848 (If Fitted)

Wiring Loom Installation Time: Approx 30 Mins

Issue Date 24-08-09 Page 1 Part No: 100041-WL



PART No: 100041-WL TOYOTA PRADO

## **INSTALLATION INSTRUCTIONS**

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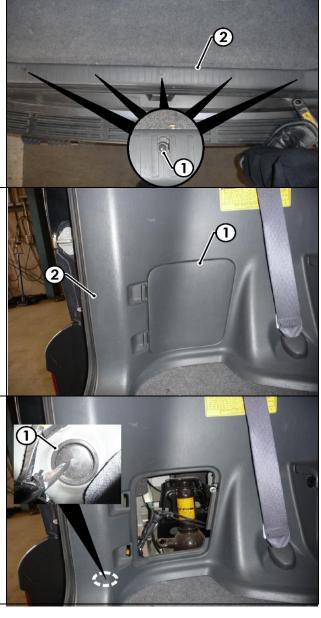
1. In the luggage compartment, remove the five luggage compartment rear trim caps.

Remove the five fasteners (1) from the rear trim, then remove the rear trim (2).

2. Remove the LHS jack compartment access door (1).

Carefully dislodge and peel open the LHS luggage compartment trim towards the centre of the vehicle (2) to reveal trailer break-out connector and grommet.

3. Behind the LHS luggage compartment trim rear quarter area, locate and remove the grommet (1).



Issue Date 24-08-09 Page 2 Part No: 100041-WL



## PART No: 100041-WL TOYOTA PRADO

## **INSTALLATION INSTRUCTIONS**

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4. From underneath the rear of the vehicle, mount the Trailer Tail Harness (socket tail length 1200mm) (1) onto the towbar mounting bracket using M4 fasteners.



5. From underneath the LHS rear quarter area of the vehicle, route the Trailer Tail Harness (tail length 1200mm) (1) into the vehicle through the grommet hole.



6. Retrieve the Trailer Tail Harness (1) through the LHS rear quarter grommet. Ensure that the Trailer Harness grommet makes a good seal.



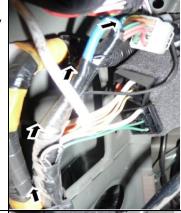


PART No: 100041-WL TOYOTA PRADO

## **INSTALLATION INSTRUCTIONS**

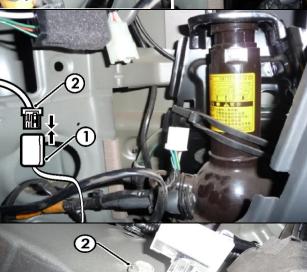
PLEASE ENSURE THAT INSTRUCTIONS UNDERSTOOD PRIOR TO FITMENT

7. Connect the Trailer Patch Harness (part no. 100041-WL) (1) into the vehicle harness 6-way break-out connector (2).





8. Connect the Trailer Patch Harness (1) to the Trailer Tail Harness (2).



9. Route the Trailer Patch Harness ring terminal (1) to the grounding point (2) on the upper LHS rear quarter sheet metal.



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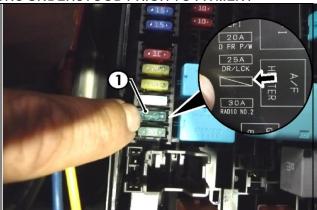


## PART No: 100041-WL TOYOTA PRADO

## **INSTALLATION INSTRUCTIONS**

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10. Locate the fuse box from underneath the bonnet and slot a 30 amp fuse into the indicated position (1) as shown.



- Insert the two relays into the Trailer Patch Harness connectors located in the LHS quarter panel.
- 12. Secure all harnesses to the vehicle using cable ties.
- 13. Test trailer harness function using trailer light board or multi-meter.
- 14. Refit all removed parts and secure all fasteners ensuring there are no squeaks or rattles.
- 15. Please place the fitting instructions in the glove box after installation.

Issue Date 24-08-09 Page 5 Part No: 100041-WL





# FITTING INSTRUCTIONS Smart Pin (55070BL)

- These fitting instructions are supplied to ensure understanding of how the SMART PIN should be fitted and used correctly.
- Once installed, we recommend <u>ALL</u> instructions are kept and placed in the vehicle glove box.

NOTE: Routine maintenance and inspection of the towbar & SMART PIN is required. Regularly inspect for wear and check the tightness of the SMART PIN NUT. Follow instructions below to retighten the nut when necessary.

\*Do not tow with your vehicle if the R CLIP or the SMART PIN NUT is loose or missing. Replacement parts are available from your Hayman Reese Distributor.

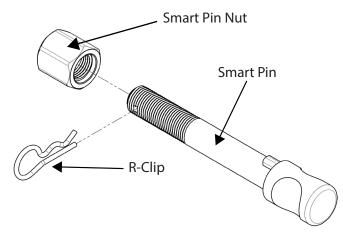
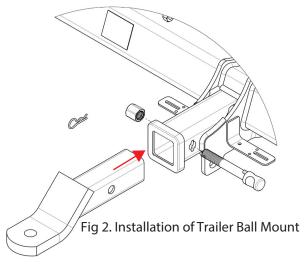
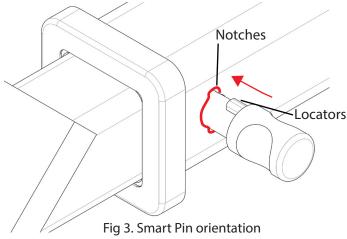


Fig 1. Smart Pin assembly

STEP 1

Insert Trailer Ball Mount (TBM) into towbar HITCHBOX, aligning hole in TBM SHANK with hole in HITCHBOX (Fig. 2).





STEP 2

Insert SMART PIN through hole in HITCHBOX and hole in TBM SHANK; ensure the LOCATORS are inserted into the NOTCHES in the HITCHBOX (Fig. 3).

STEP 3

Screw SMART PIN NUT onto SMART PIN; tighten SMART PIN NUT until finger tight, ensuring TBM is restrained from 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).



Install SMART PIN R CLIP through the hole on the SMART PIN (Fig. 1).

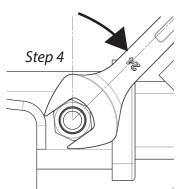


Fig 4. Tightening of Smart Pin Nut

