



RAM 1500 DT X-BAR



## **PRODUCT DETAILS:**

Part Number: 03457XW Maximum Towing Braked : 4500 kg -70mm ball ECU Number: 3500 kg - 50mm ball

Tail Harness Length Required: 400 mm Maximum Towing Unbraked: 750 kg

TBM/Lug Part Number: 21361/21366 Maximum Static Ball Load : 450 kg - 70mm ball

Wiring Part Number: 102814-WL : 350 kg – 50mm ball

## **FITTING DETAILS:**

Towbar Installation Time:50 Mins.Hayman Reese SmartCODE Solution Required:NOWiring Installation Time:30 Mins.RPA Disable/Other:YES

Total Installation Time: 80 Mins.

Bumper Cut Required: No • RPA disable via switch on dash (see note in step 35).
• Trailer harness adapts to existing vehicle trailer

Note:

harness. (400mm tail required).

## **RECOVERY RATING:**

## **CENTRE RECOVERY HOOK**

CENTRE RECOVERY POINT LOADING MUST NOT EXCEED 8000kg. DESIGNED FOR USE WITH A SNATCH STRAP NOT EXCEEDING 8000kg MBS (MINIMUM BRAKING STRENGTH).

8000kg





## SIDE RECOVERY HOOK (SINGLE)

SIDE RECOVERY POINT LOADING MUST NOT EXCEED 4000kg MBS (MINIMUM BRAKING STRENGTH).

4000kg









#### TOWBAR INSTALLATION INSTRUCTIONS



PART NUMBER

**CORRECT** 

INCORRECT

03457XW

Figure 1

Figure 2

RAM 1500 DT X-BAR

## ENSURE THAT INSTRUCTIONS ARE UNDERSTOOD PRIOR TO FITMENT.

# **1** 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).

## 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.
- 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.

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





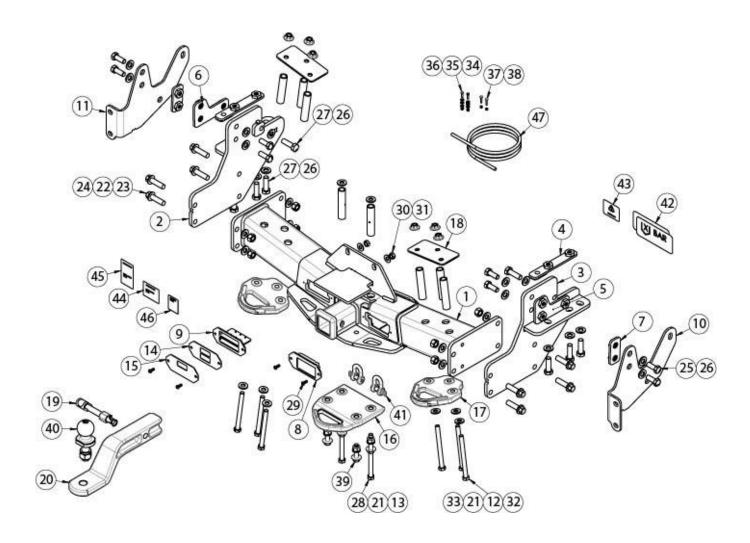




RAM 1500 DT X-BAR



# **TOWBAR ASSEMBLY DIAGRAM**









PART NUMBER 03457XW RAM 1500 DT X-BAR

ITEM	DESCRIPTION	QTY
1	RAM DT 1500 WELDED ASSY, TUB	1
2	SIDE ARM ASSY, LH	1
3	SIDE ARM ASSY, RH	1
4	NUT PLATE ASSY 180 X 30	2
5	SIDE ARM NUT PLATE ASSY, RHS	1
6	SIDE ARM NUT PLATE ASSY, LHS	1
7	NUT PLATE ASSY 85 X 40	2
8	7/12 PIN PLUG BRACKET ASSEMBLY	1
9	ANDERSON BRACKET ASSEMBLY	1
10	BUMPER BRK RHS	1
11	BUMPER BRK LHS	1
12	OUTSIDE RECOVERY CRUSH TUBE	6
13	SPACER TUBE 18OD X 2.5 X 101mm	2
14	DOUBLE PLUG ANDERSON COVER	1
15	SINGLE PLUG ANDERSON COVER	1
16	FORGED CENTRE RECOVERY HOOK	1
17	FORGED SIDE RECOVERY HOOK	2
18	WASHER PLATE	2
19	SMART PIN GOLD	1
20	FORGED TBM 65MM DROP 3.5T	1
21	WASHER PLAIN M12x27x3.0	8
22	WASHER PLAIN M12x28x3	8
23	BOLT HEX FLANGE HD M14x50x2.0P	8
24	NUT HEX HD M14x2.0P	8

ITEM	DESCRIPTION	QTY
25	SET SCREW HEX HD M14x35x2.0P	8
26	WASHER PLAIN M14x28x3.0	16
27	SET SCREW HEX HD M14x45x2P	8
28	BOLT HEX HD M12x150x1.75P	2
29	SCREW BUTTON HD M6x16x1.0P	4
30	NUT HEX HD M10x1.5P	2
31	WASHER PLAIN M10x23x2	2
32	HEX FLANGED HD M12x1.25P	6
33	BOLT HEX HD M12x140x1.25P	6
34	SCREW PAN HD M4x16x0.7P	2
35	WASHER PLAIN M5x10x1	6
36	NUT NYLOC HEX HD M4x0.7P	2
37	SCREW PAN HD M3x20x0.7P	2
38	NUT NYLOC HEX HD M3x0.7P	2
39	CENTRE RECOVERY HOOK BOLT KIT	1
40	TOWBALL 50mm	1
41	"D" SHACKLE 10mm	2
42	X-BAR DECAL STICKER MKII	2
43	XBAR TORQUE RATING WARNING LABEL	1
44	COMPLIANCE LABEL	1
45	LOAD RATING LABEL	1
46	HAYMAN REESE LOGO STICKER	1
47	WIRING LOOM	1

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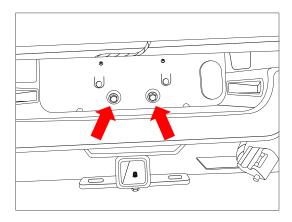
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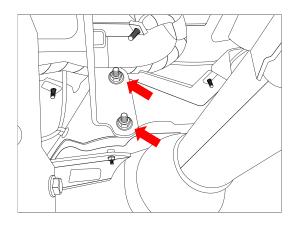
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1. Remove 2 x screws from the centre of the bumper.

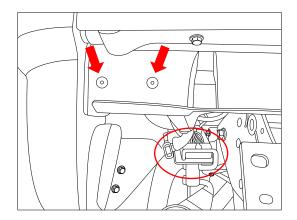


2. Remove 2 x flange nuts secured to the rear of bumper bracket.

Repeat for the other side.



- 3. Remove the bumper from the vehicle, ensure to disconnect any electrical connections located on the LH side.
- 4. From rear of vehicle, remove plastic trim secured with 4 x scrivets. (2 each side). Disconnect any electrical wiring on the trim as required.



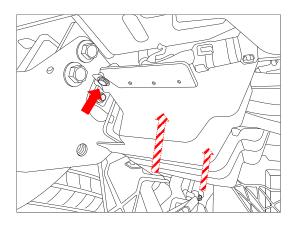




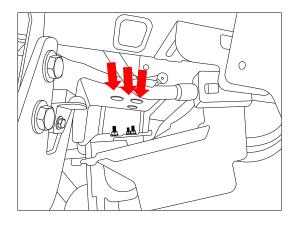


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5. On the RH side, remove the 2x bolts and 1x scrivet from module cover.



6. On the RH side, to allow for sidearm mounting bolt clearance, release the module secured with 3x flange nuts from the top.



7. If the vehicle has an OE towbar installed, remove the necessary bolts and brackets as required and set aside for the customer.







PART NUMBER

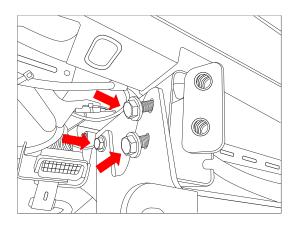
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 Position the bumper bracket plate to the outside of the chassis and loosely secure the most forward hole position with 1x M14x 45mm bolt complete with 1x washer.

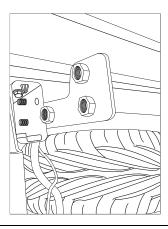
 Insert the Nut plate assembly 85x40 into the chassis rail and loosely secure the bracket plate with 2x M14x35mm bolts complete with 1x washer per bolt.

Repeat for other side. (LH side illustrated)



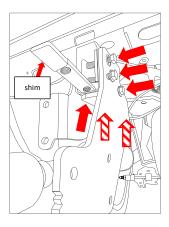
10. Insert the Side arm nut plate assembly into the chassis.

Repeat for other side.



- 11. Position the side arm assembly to the chassis rail and loosely secure to the side (using the Side arm nut plate assembly) with 3 x M14x35mm bolts complete with 1 x washer per bolt.
- 12. Insert the Nut plate assy 180 x30 into the chassis rail (shim on the bottom and rearwards) and loosely secure the side arm assembly from the bottom with 3x M14x45 bolts complete with 1 x washer per bolt.

Repeat for other side.







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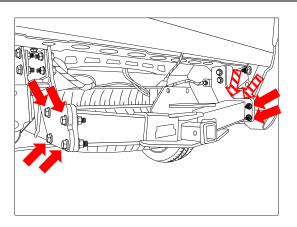
13. Lift crosstube assembly up to the side arms and loosely secure each side with 4x M14 flange head bolts complete with 1x washer and 1x nut per holt

Reposition spare tyre if required, the toolkit is located under the driver seat.

14. Tighten all fasteners to the following torque.

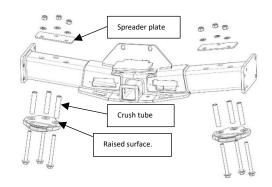
M14x2 Gr10.9 : 175Nm

M14x2 Gr10.9 (black): 155Nm



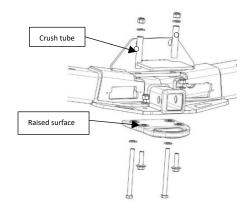
15. On the crosstube assembly, fit each side recovery hook with 3x M12 bolts complete with 1x crush tube (without hole), 1x washer and 1x nyloc per bolt. Ensure the spreader plate is fitted on the top of the crosstube.

Tighten the fasteners to 100Nm



16. For the centre recovery hook, insert the 2x crushtubes (with holes) into the crosstube and complete the installation with 4x M12 bolts complete with 2x washers and 1x nyloc for the 150mm bolts and 1x washer and 1x nyloc for the 45mm bolts.

Tighten all the fasteners to 100Nm







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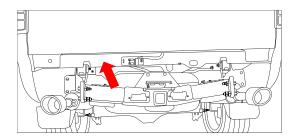
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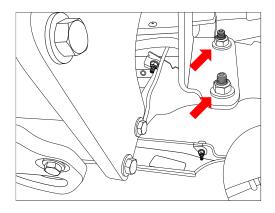
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17. Refit the removed plastic trim and any loosened wiring.

18. Refit the module and module cover if removed.

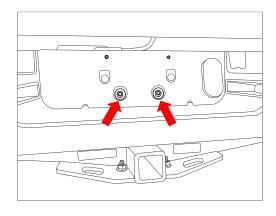


19. Refit the bumper to the earlier fitted bumper brackets and secure each side with the original 2x flange nuts.



20. Secure the bumper to the centre section of the crosstube assembly with the original 2x M10 bolt complete with the supplied 1x washer and 1x nut per bolt.

Tighten the fasteners to 44Nm









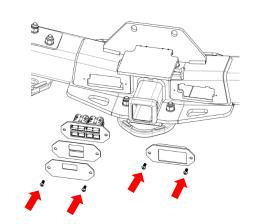
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21. Route the wiring through the back of the towbar and use the provided brackets to mount up to 4 x Anderson plugs and 1 x (7 or 12) pin plug.

If fitting a 12 pin plug, use the provide M5 washers as spacers to ensure the plug is at the same angle as the mounting plate. This allows the cover to be opened when installed.

Secure each plate to the towbar with 2 x M6 screws.

22. **NOTE:** If only 1 or 2 Anderson plugs are used, mount to the centre position on the bracket and fit the appropriate cover plate.



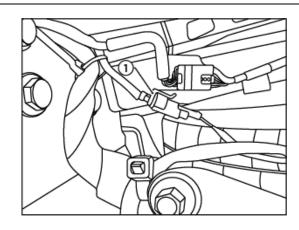


## **IMPORTANT**

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.

- 23. Locate the 1-Way Connector (1) underneath the vehicle on the LHS.
- 24. Disconnect the 1-Way Connector (1) and connect it to the 1-Way.

Male Connector on the Trailer Patch (102814-WL).



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PO Box 4050, Dandenong South VIC 3164
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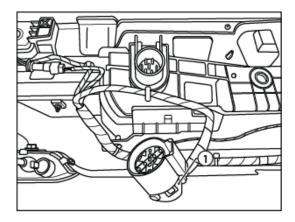
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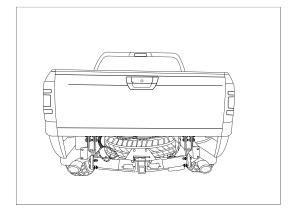
25. Disconnect the 7-Way Round Female Connector (1) that's located on the rear bumper.

26. Connect the 7-Way Round Male Connector on the Trailer Patch (102814-WL) to the 7-Way Round Female Connector (1).

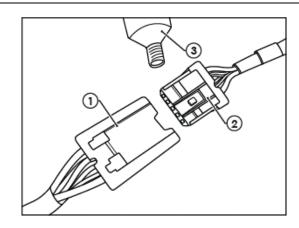


- 27. Secure tail harness to towbar.
- 28. Route the blue connector on the 400mm Tail harness to the mating connector on the Trailer Patch (102814-WL).

Note: Keep harness routing clear of all sharp edges, moving parts and places of extreme heat.



- 29. Connect the tail harness (tail length 400mm) 8-Way Connector (1) to the trailer patch mating 8-Way Connector (2).
- 30. Use Silicone Grease (3) to seal the blue connectors.
- 31. Secure all harnesses using supplied cable ties.



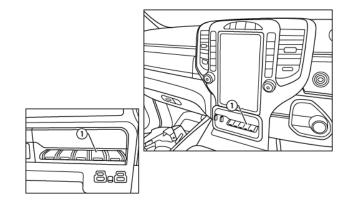


## **TOWBAR INSTALLATION INSTRUCTIONS**

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- 32. Test the trailer patch function using a light board or multi-meter.
- 33. Re-fit all removed parts and secure all fasteners, ensuring there are no squeaks or rattles.
- 34. The RPA function can be disabled via a Switch (1) underneath the infotainment screen.
- 35. Place the fitting instructions in the glove box 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.

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# **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.

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## **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.

Hayman Reese (Cequent)
PO Box 4050, Dandenong South VIC 3164
Phone 1800 812 017 Email 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.



Regularly inspect for wear and check the tightness of the Smart Pin Nut. Follow instructions below to retighten 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

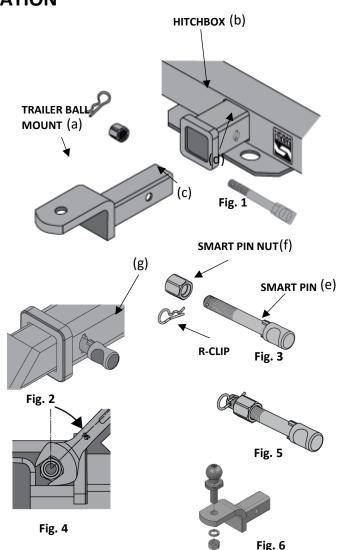
Tighten Smart Pin Nut by turning nut a further 1/8th of a turn in the clockwise direction using a 24mm spanner (Fig. 4).

## 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 <u>350 Nm</u> using a calibrated torque wrench (Fig. 6).





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