

PART NUMBER 03530XW

**BYD SHARK 6 X-BAR** 



#### **PRODUCT DETAILS:**

Part Number: 03530XW Maximum Towing Braked: 2500 kg
ECU Number: NA Maximum Towing Unbraked: 750 kg
Tail Harness Length Required: 1200mm Maximum Static Ball Load: 250 kg

TBM/Lug Part Number: 21352

Wiring Part Number: 107066-WL

#### **FITTING DETAILS:**

Towbar Installation Time:90 Mins.Hayman Reese SmartCODE Solution Required:NOWiring Installation Time:15 Mins.RPA Disable/Other:YES

Total Installation Time: 105 Mins.

**Bumper Cut Required:** Yes

#### Note:

- Please refer vehicles owner's manual for proper operation and understanding of towing features.
- 04966 tail can be used if IP rated socket is requested.

## **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





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**PART NUMBER** 

CORRECT

INCORRECT

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Figure 1

Figure 2

**BYD SHARK 6 X-BAR** 

## ENSURE THAT INSTRUCTIONS ARE UNDERSTOOD PRIOR TO FITMENT.



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**

- 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.

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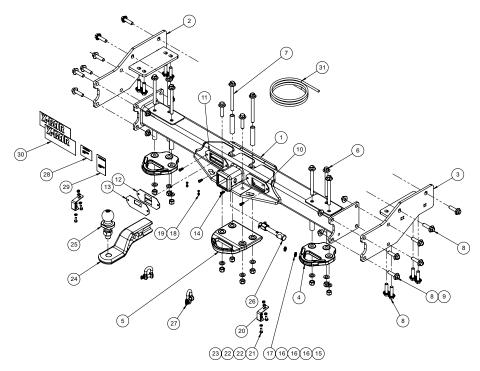


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# **TOWBAR ASSEMBLY DIAGRAM**



ITEM	DESCRIPTION	QTY
1	BYD SHARK 6 WELDED ASSEMBLY	1
2	SIDE ARM ASSEMBLY LHS	1
3	SIDE ARM ASSEMBLY RHS	1
4	FORGED SIDE RECOVERY HOOK	2
5	FORGED CENTRE RECOVERY HOOK	1
6	SIDE RECOVERY HOOK BOLT KIT	2
7	XBAR FORGED CENTRE HOOK KIT	1
8	SCREW FL HEX HD M12x45x1.25P G10.9	20
9	NUT FL HEX HD M12x1.25P G10	8
10	7/12 PIN PLUG BRACKET ASSEMBLY	1
11	ANDERSON BRACKET ASSEMBLY	1
12	DOUBLE PLUG ANDERSON COVER	1
13	SINGLE PLUG ANDERSON COVER	1
14	SCREW BUTTON HD M6x16x1.0P G10.9	4
15	SCREW PAN HD M4x16x0.7P G4.6	2
16	WASHER PLAIN M5x10x1.0mm	6

ITEM	DESCRIPTION	QTY
17	NUT NYLOC HEX HD M4x07P G8	2
18	SCREW PAN HD M3x20x0.7P G4.6	2
19	NUT NYLOC HEX HD M3x0.7P G8	2
20	BUMPER TAB	2
21	SCREW HEX HD M6x16x1.0P G8.8	4
22	WASHER PLAIN M6x12.5x1.2mm	8
23	NUT HEX HD M6x1.0P G8	4
24	FORGED TOWBALL MOUNT	1
25	TOWBALL 50mm 3500KG	1
26	SMART PIN GOLD	1
27	"D" SHACKLE 10mm	2
28	COMPLIANCE LABEL	1
29	LOAD RATING LABEL	1
30	XBAR DECAL STICKER	2
31	WIRE LOOM	1

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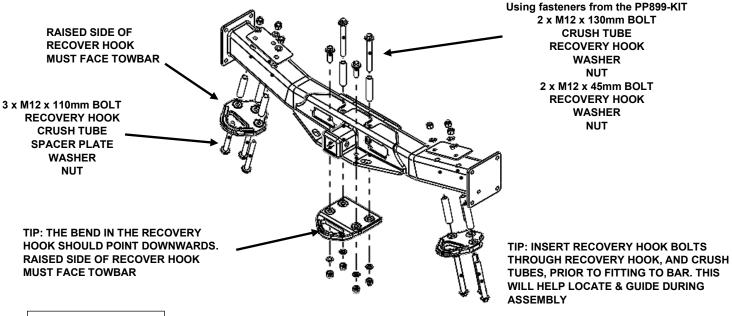
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**NOTE:** Pre-assembly of X-Bar centre section can assist for vehicles with difficult access.

## A. BOLT RECOVERY HOOKS TO TOWBAR



TORQUE FASTENERS TO 100 Nm.

Image not representative of BYD Shark 6 X-Bar

## **B. INSTALL TRAILER SOCKET TAIL HARNESS**

USING 2 x M4 x 16mm SCREWS SECURE THE WIRING PLUG TO THE 7
PIN PLUG BRACKET, USING 2 X M6 X 16 X1.0P SECURE THE 7 PIN
PLUG BRACKET AND ANDERSON PLUG BRACKET (IF REQUIRED) TO
THE MAIN TOWBAR ASSEMBLY THROUGH THE TAPED HOLES
HOLES AS SHOWN.

ANDERSON PLUG BRACKET
SUITS FOUR PLUGS- IF RQUIRED

ANDERSON PLUG BRACKET SUITS TWO PLUGS- IF RQUIRED

ANDERSON PLUG BRACKET SUITS ONE PLUG - IF RQUIRED

TIP: IF FITTING A 12PIN PLUG, USE THE PROVIDED M5 WASHERS AS SPACERS TO ENSURE THE PLUG IS AT THE SAME ANGLE AS THE MOUNTING PLATE. THIS ALLOWS THE COVER TO BE OPENDED WHEN INSTALLED. SECURE EACH PLATE TO THE TOWBAR WITH 2 x M6 SCREWS.

ROUTE TAIL HARNESS
THROUGH TUBE EXIT POINT

7 OR 12 PIN WIRING
PLUG BRACKET

NOTE: IF ONLY 1 OR 2 ANDERSON PLUGS ARE USED, ENSURE TO USE THE ENTRE HOLE MOUNTING POSITIONS ON THE BRACKET AND THE APPROPRIATE COVER PLATE.

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X BAR

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- 1. Lower and remove the spare tyre.
- 2. Disconnect towbar wiring harness, using a trim tool remove the firtree clip from the towbar to the towbar
- 3. Remove 4 x Bolts from underside of the Standard Towbar

Repeat for the other side.

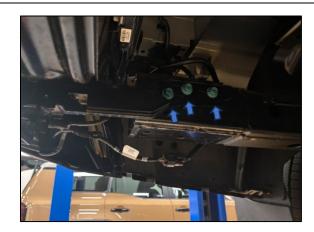


4. With two people remove & discard the standard towbar by removing final two bolts each side holding the towbar to the vehicle chassis.



5. Remove and retain 3x bolts holding the bumper to the vehicle chassis.

Repeat for the other side.









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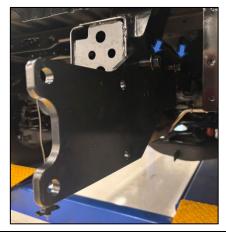
BYD SHARK 6 X-BAR

6. Remove the bumper from the vehicle.



Fit the side arm to the chassis. Loosely attach with 2x M12 flange bolts.

Repeat for the other side.



8. Loosely attach side arm to the bottom of the chassis rail with 4x M12 flange head bolts.

Repeat for the other side.





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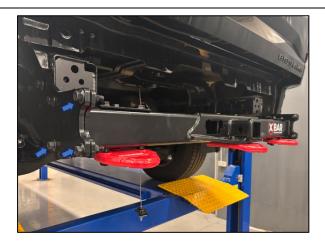
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- Pre-assemble the Recovery Hooks to the Centre Section following step A BOLT RECOVERY HOOKS TO TOWBAR shown on page 4
- 10. Using two people, fit the cross-bar assembly between the side arms. Loosely tighten with 4x M12 flange head bolts, and 4x M12 flange nuts.

Repeat for the other side.



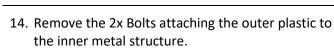
- 11. Tighten 2x M12 flange head bolts attaching the side arm to the chassis first.
- 12. Tighten 4x M12 flange head bolts attaching the side arm to Cross Bar Assembly.

  Repeat for the other side.
- 13. Then tighten the remaining 4x M12 flange head bolts attaching the side arm to the bottom of the chassis

Repeat for the other side.

Torque all fasteners as follows:

**BLACK FLANGE BOLTS M12 x 1.25 - 10.9 = 140Nm** 



15. Using a trim tool remove the firtree connecting the wiring harness bracket.

Repeat for the other side.













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**BYD SHARK 6 X-BAR** 

16. Using a cutting tool cut off the small bracket that is spot welded to the main step bracket. Grind off any sharp edges then paint cut surfaces with a rust preventative paint

Take care not to damage the wiring.



**Bracket Removed** 



- 17. With masking tape, mark out the centre area to be trimmed so that the centre cut out is mirrored symmetrical both sides as shown.
- 18. Drill diameter 10mm hole for corner radius then using a plastic cutting/trim tool, trim the edges back to the hole. Ensure any plastic swarf/debris is removed leaving a nice clean edge as shown.



Cutout after final Assembly









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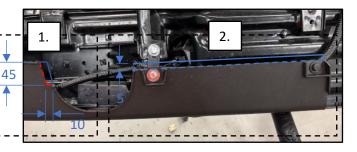
BYD SHARK 6 X-BAR

19. With masking tape, mark out the areas to be trimmed as shown. (NOTE: Image shows trimmed part)

- Using a plastic cutting/trim tool, trim 10mm x
   45mm off the edge of the tow lug cutout in the bumper.
- 2. Trim 5mm from the bottom edge of the bumper between centre cut out and the tow lug cutout as shown. Metal bracket of the inner bumper attachment will also need to be trimmed 5mm then paint cut surfaces with a rust preventative paint.

Ensure any plastic swarf/debris is removed leaving a nice clean edge.

Repeat for the other side.



20. Assemble the bumper bracket as shown. Drill a 6mm diam hole in the slotted location. Assemble bracket to main bracket and bumper with M6 x 16mm Hex Head Screw, 2x Washer and Nut per attachment. Repeat for the other side.





21. Loosely fit the bumper to the vehicle using the Bolts retained from step 5 and reconnect the bumper wiring detailed in step 2.

Make final adjustments to bumper position Torque bolts to manufactures specification.







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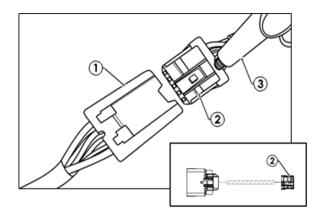
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22. If not done so mount the trailer socket to plug bracket as per instructions on page 4.

23. Route the tail blue connector towards the LHS of the vehicle.

- 24. Connect the tail harness (1200mm) 8-way connector (1) to the trailer patch 8-way mating connector (2).
- 25. Waterproof the trailer patch 8-way connector (1) and the tail harness 8-way male connector (2) using Die-Electric Grease (3).



- 26. Connect the trailer patch to vehicle mating breakout connector.
- 27. Secure the harness with supplied cable ties.
- 28. Test the trailer wiring harness functionality using a lightboard.
- 29. Refit spare wheel.
- 30. Place fitting instructions in glovebox 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.

# 1

## **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.

# 0

# **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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# **CUSTOMER INFORMATION**

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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).

