



TOWBAR INSTALLATION INSTRUCTIONS

PART NUMBER 03294XW

FORD RANGER PX X-BAR



PRODUCT DETAILS:

Part Number:	03294XW	Maximum Towing Braked:	3500	kg
ECU Number:	WLE70003	Maximum Towing Unbraked:	750	kg
Tail Harness Length Required:	1200mm	Maximum Static Ball Load:	350	kg
TBM/Lug Part Number:	21366			
Wiring Part Number:	WLL90003			

FITTING DETAILS:

Towbar Installation Time:	70 mins.	Hayman Reese SmartCODE Solution Required:	YES
Wiring Installation Time:	30 mins.	RPA Disable/Other:	YES
Total Installation Time:	100 mins	Note:	
Bumper Cut Required:	No		
		<ul style="list-style-type: none">• Electric brake wire blue wire taped back to input harness.• RPA accessory disable when vehicle is coded.• Some drilling maybe required (see Step 24).	



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ENSURE THAT INSTRUCTIONS ARE UNDERSTOOD PRIOR TO FITMENT.

i 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).

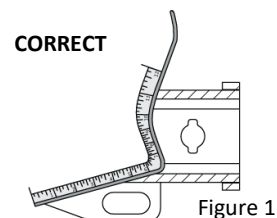


Figure 1

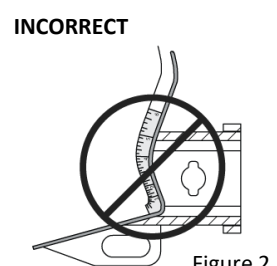


Figure 2

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

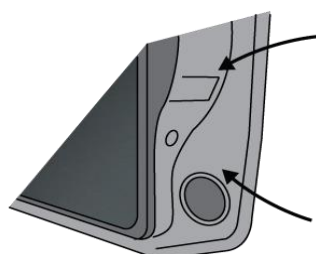
- Ensure that all hardware is fastened to correct torque as specified in this fitting instruction.
- All fasteners supplied with this product are used to achieve a specified clamp loading. If replacement is required ensure that fasteners of the same grade and class are used.



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.

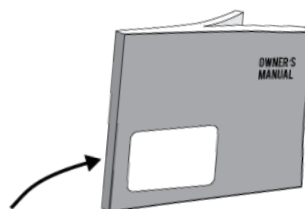
Product Labels

- a. Towbar load rating sticker provided with this product shall be conspicuously located on inside rear end of the driver's door.
- b. 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.

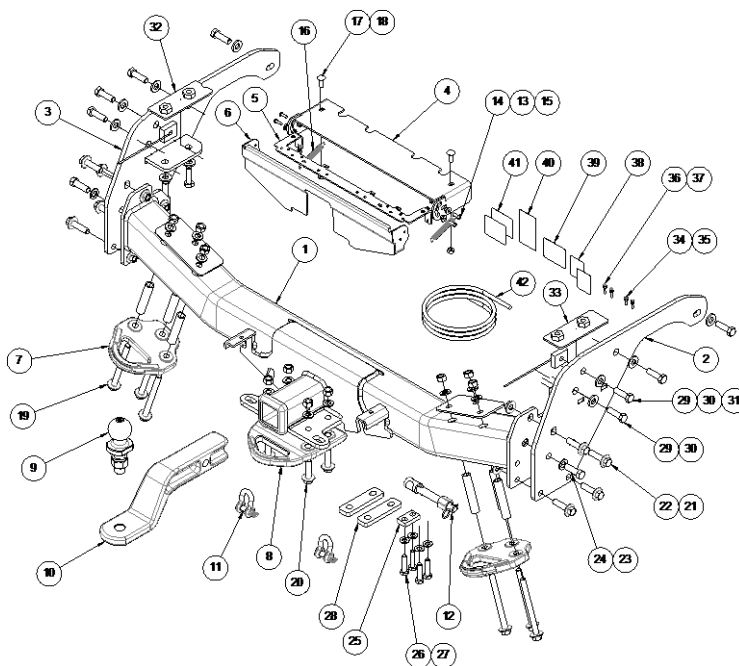


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i TOWBAR ASSEMBLY DIAGRAM



ITEM	DESCRIPTION	QTY
1	RANGER/BT-50 XBAR WELDED ASSEMBLY	1
2	RH EXTENDED SIDE ARM ASSEMBLY	1
3	LH EXTENDED SIDE ARM ASSEMBLY	1
4	WIRING HOUSING	1
5	PLUG PLATE	1
6	XBAR REAR COVER	1
7	FORGED SIDE RECOVERY HOOK	2
8	FORGED CENTRE RECOVERY HOOK	1
9	TOWBALL 50mm	1
10	3.5T FORGED TBM 65MM DROP	1
11	"D" SHACKLE 10mm	2
12	SMART PIN GOLD	1
13	BUSH 15ODx8Lx5ID	4
14	SET SCREW HEX HD M5x16x0.8P BLK ZN-NI	4
15	NUT NYLOC HEX M5x0.8P	4
16	XBAR COVER SPRING 60Lx100Dx1P	2
17	BOLT COACH M8x20x1.25P BLACK	2
18	NUT NYLOC HEX M8x1.25P	2
19	SIDE RECOVERY HOOK BOLT KIT	2
20	CENTRE RECOVERY HOOK BOLT KIT	1
21	NUT FLANGED HEX M12x1.25P	8

ITEM	DESCRIPTION	QTY
22	SET SCREW FL HEX HD M12x45x1.25P	8
23	WASHER PLAIN M12x28x3	2
24	SET SCREW HEX HD M12x40 1.75P	2
25	STEP BRACKET SPACER	2
26	BOLT HEX HD M10x40x1.5P	4
27	WASHER PLAIN M10x21x1.6	4
28	STEP MOUNT SPACER	2
29	SET SCREW HEX HD M12x40x1.75P	12
30	WASHER PLAIN 1/2"	12
31	TAPPED PLATE & WIRE	2
32	NUT PLATE LH T6	1
33	NUT PLATE RH T6	1
34	SCREW PAN HD M4x16x0.7P	2
35	NUT NYLOC HEX M4x0.7P	2
36	SCREW PAN HD M3x20x 0.7P	2
37	NUT NYLOC HEX M3x0.7P	2
38	XBAR LOGO STICKER	2
39	COMPLIANCE LABEL	1
40	DOOR RATING LABEL	1
41	CAN WARNING LABEL	2
42	WIRING LOOM	1

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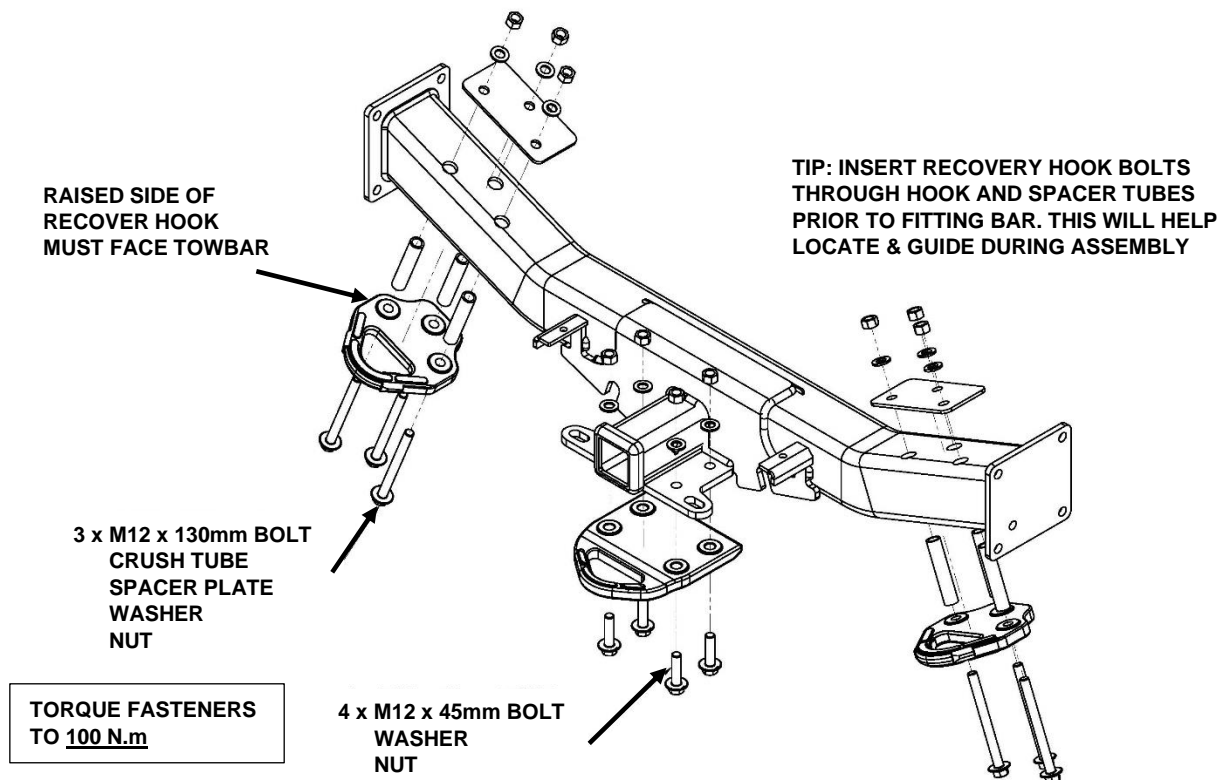
TOWBAR INSTALLATION INSTRUCTIONS

PART NUMBER 03294XW

FORD RANGER PX X-BAR

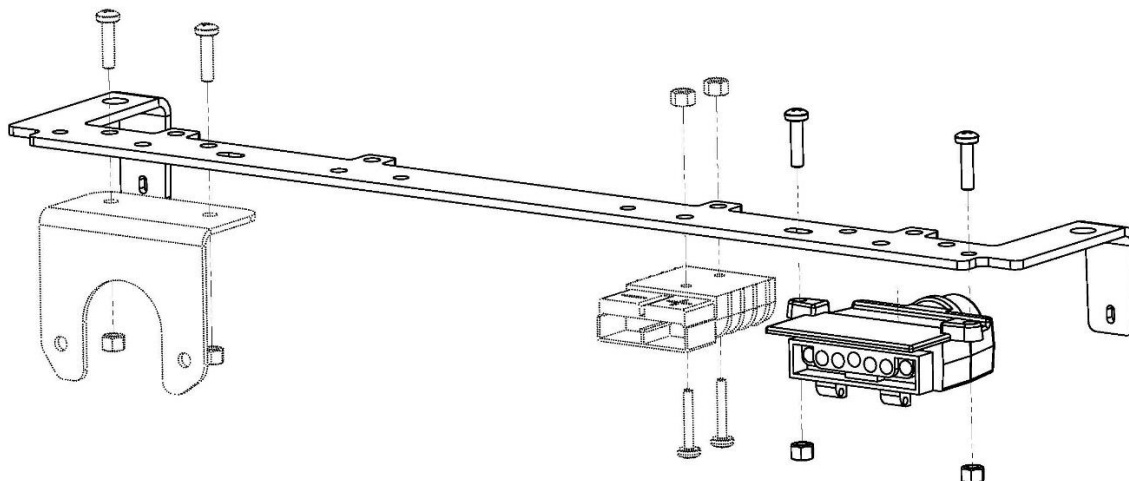
NOTE: Pre-assembly of X-Bar centre section can assist for vehicles with difficult access.

A. BOLT RECOVERY HOOKS TO TOWBAR



B. MOUNT PLUGS TO BRACKET

AFTER CHOOSING YOUR DESIRED PLUG CONFIGURATION, INSTALL PLUGS AND WIRING TO BRACKET USING FASTENERS PROVIDED





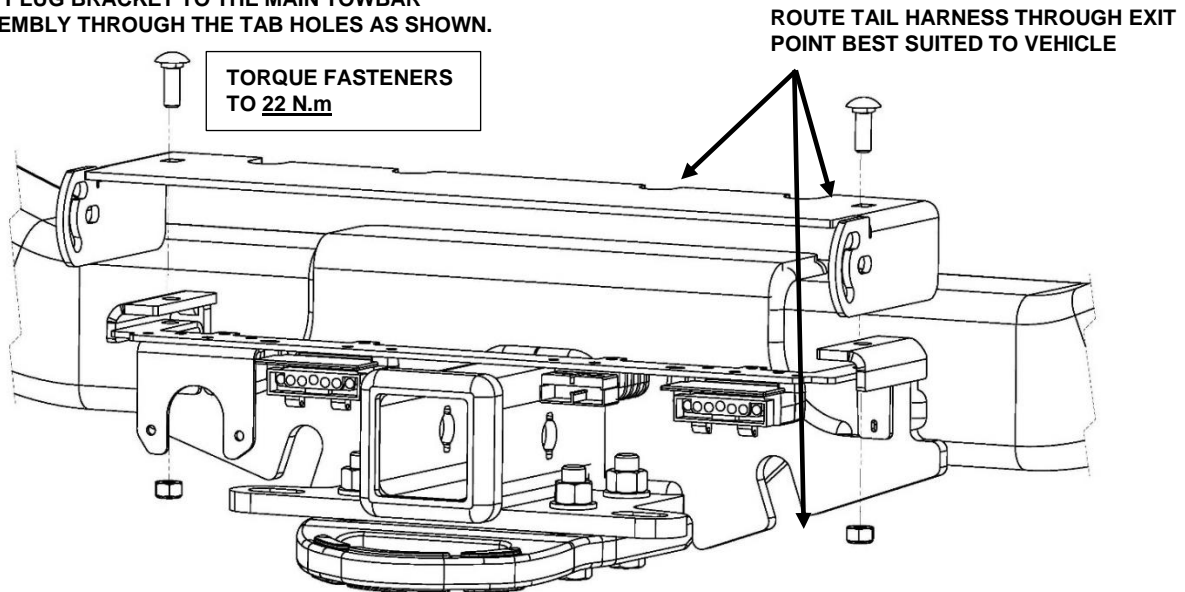
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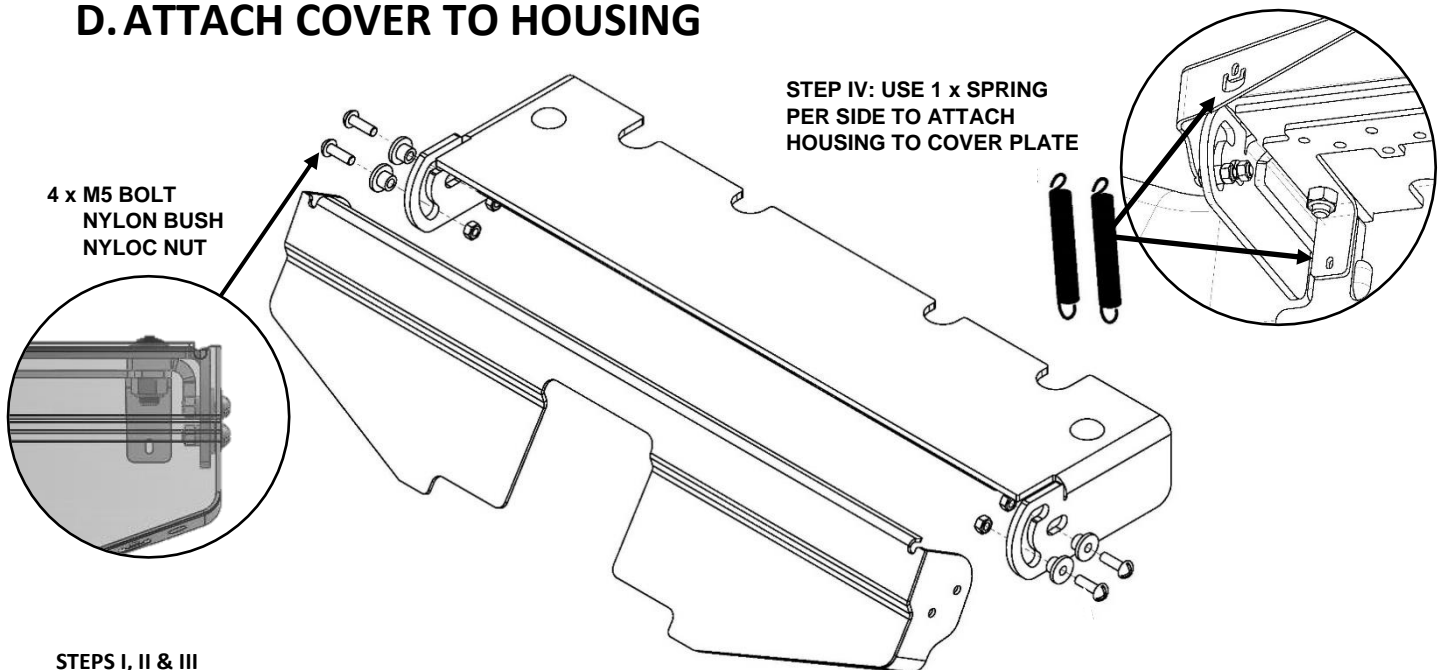
FORD RANGER PX X-BAR

C. INSTALL WIRING HOUSING

USING 2 x M8 COACH BOLTS COMPLETE WITH 1 x NYLOC NUT PER BOLT, SECURE THE WIRING HOUSING AND PLUG BRACKET TO THE MAIN TOWBAR ASSEMBLY THROUGH THE TAB HOLES AS SHOWN.



D. ATTACH COVER TO HOUSING



STEPS I, II & III

- I. INSERT BUSHES INTO SLOTS
- II. THEN PLACE COVER OVER HOUSING, LINING UP BUSHES WITH SCREW HOLES
- III. FINALLY FASTEN COVER TO HOUSING BY PUSHING SCREWS THROUGH BUSHES AND SECURING WITH NUTS

NOTE: DO NOT OVERTIGHTEN FASTENERS TO ENSURE COVER ASSEMBLY CAN ROTATE FREELY & TO PREVENT DAMAGE TO BUSHES



TOWBAR INSTALLATION INSTRUCTIONS

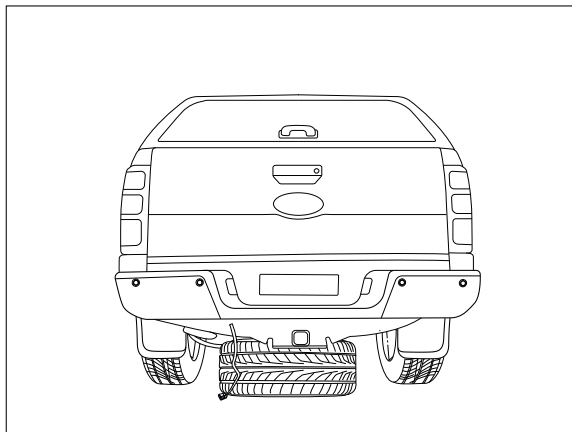
PART NUMBER 03294XW

FORD RANGER PX X-BAR

1. Disconnect the reverse sensor and light connections.

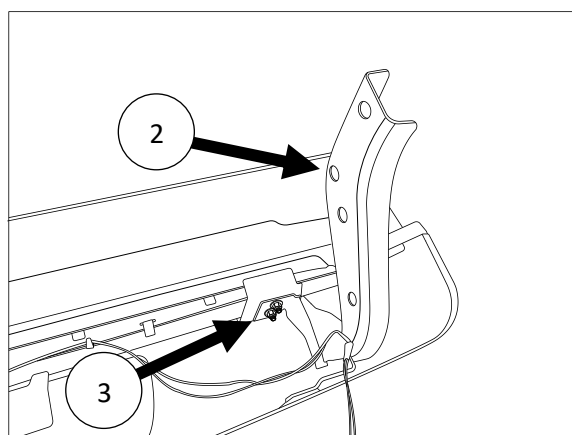
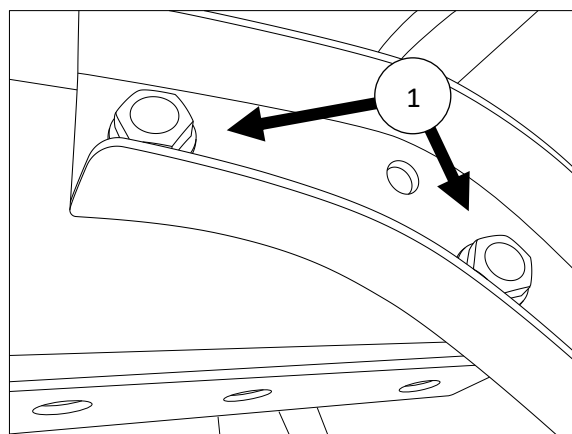
Lower the spare wheel.

CAUTION: Be aware of wheel dislodgement when lowering.



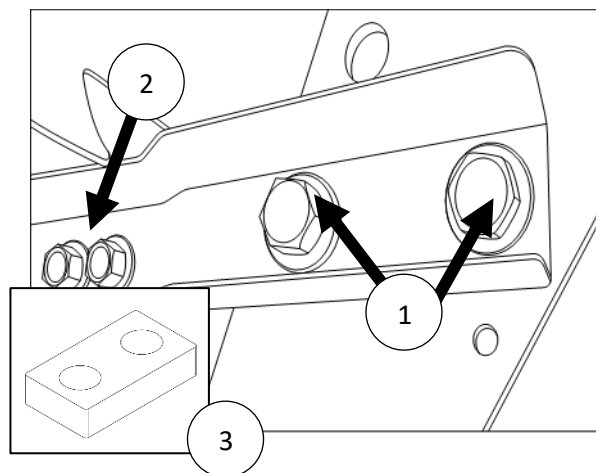
2.a FOR VEHICLES WITHOUT FACTORY TOWBAR

- i. Remove the 2 x M12 (1) bolts from either side of the bumper step assembly and remove the steel bumper from vehicle.
- ii. Using towbar sidearm as a guide align the three existing holes with the holes on the step bracket.
- iii. Using the centre marked, drill a 16mm hole on the step mount bracket (2).
- iv. Apply anti-rust paint to hole.
- v. Repeat the step 'ii' to 'v' for RHS.
- vi. Release the 2 x lock nuts on the underside of the bumper on both sides and slide the step mount bracket outwards to have a gap of 1200mm.



2.b FOR VEHICLES WITH FACTORY TOWBAR

- i. Remove the 2 x M12 factory step bolts (1) from either side of the bumper step assembly as shown and remove assembly from vehicle.
- ii. Remove towbar.
- iii. Remove two bolts (2) from each side of step connecting the step mount brackets to rear bumper step assembly and discard the bolts.
- iv. Place 10mm spacers (3) in between step mount brackets and bumper step, then reattach with 2 x M10 bolts per side, complete with 2 x washers and 1 x nut per bolt.

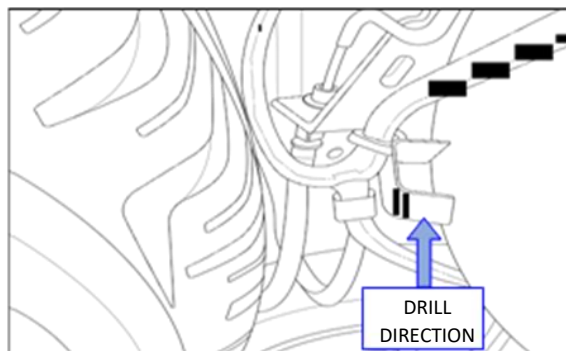


3. Move Wire Loom located on Diff Housing

Remove wiring loom mounted on the diff housing.

Drill an 8mm hole through the connector bracket from bottom to top surface which is welded on the diff housing as shown. Apply anti-rust or paint to newly drilled hole to prevent corrosion.

Mount the wiring loom on the newly drilled top hole of the connector bracket.

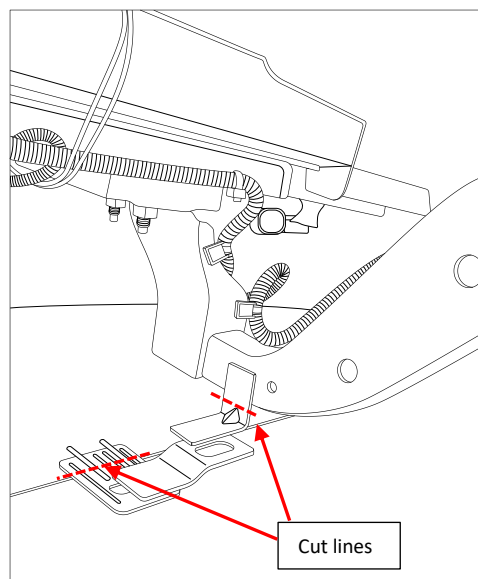


4. For vehicle without factory towbar. Remove bumper bracket and bumper tabs

On the bumper assembly, cut off the steel bumper tab bracket where it connects to the mounting arm as indicated. Apply anti-rust or paint to prevent corrosion.

Remove the bumper tab by cutting in line with the bumper edge. Ensure minimal visible damage to the bumper.

Repeat for the other side.





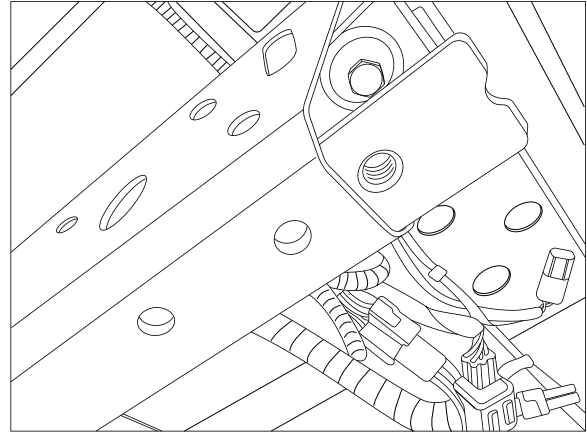
TOWBAR INSTALLATION INSTRUCTIONS

PART NUMBER 03294XW

FORD RANGER PX X-BAR

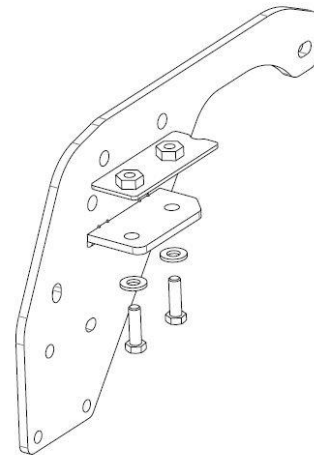
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5. Insert nut plate into chassis rail and align with holes in chassis.

Repeat for opposite side.



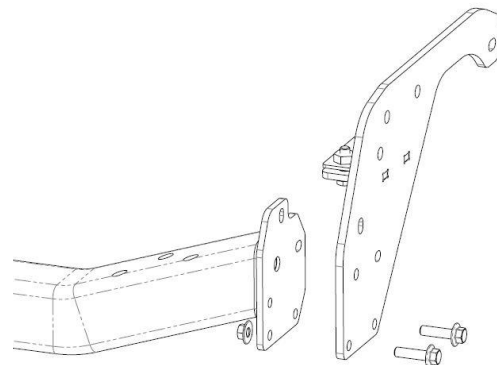
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6. Loosely secure sidearm to underside of chassis rail via nut plates, with 2 x M12 bolts complete with 1 x washer per bolt, as shown

Repeat for opposite side.



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7. Lift centre welded assembly up to side arms and loosely secure with 2 x M12 flanged bolts per side, complete with 1 x flanged nut per bolt, via bottom 2 holes as shown.

8. If not already done, complete pre-assembly steps A, B, C, & D now.



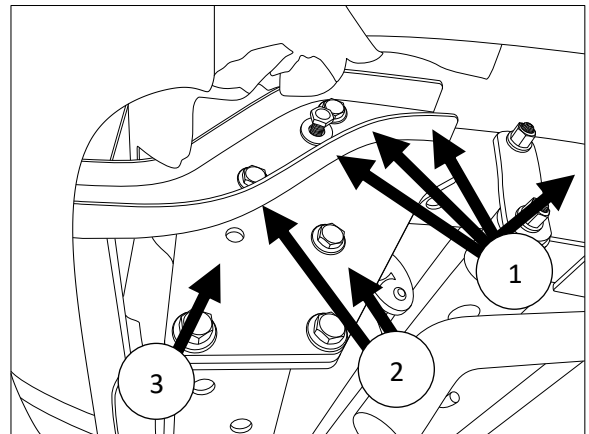
9.a FOR VEHICLES WITHOUT FACTORY TOWBAR

- i. Loosely secure the step mount bracket of the rear bumper step assembly to the chassis rail along with the towbar sidearm using 4 x M12 bolts complete with 1 x washer per bolt (1).

NOTE: Use 1 x M12 tapped plate per side for the hole that doesn't have a captive nut.

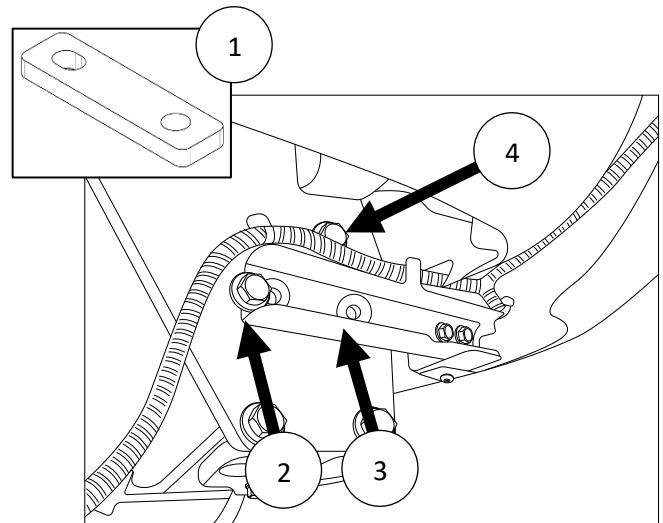
- ii. Use remaining 2 x M12 flanged bolts per side complete with 1 x flanged nut to secure sidearm and step to centre section (2).

NOTE: captive nut hole only used for factory towbar step variant (3).



9.b FOR VEHICLES WITH FACTORY TOWBAR

- i. See step 8.a.i.
NOTE: Use 1 x M12 tapped plate per side for the hole that doesn't have a captive nut.
- ii. Placing the 10mm spacer plate in between (1), loosely secure the step mount bracket of the rear bumper step assembly to the towbar sidearm using 1 x M12 flanged bolt (2) complete with 1 x flanged nut and 1 x M12 bolt (3) complete with 1 x washer (to be secured into captive nut).
- iii. Secure sidearm to central assembly with remaining 1 x M12 flanged bolt per side, complete with 1 x flanged nut per bolt (4).



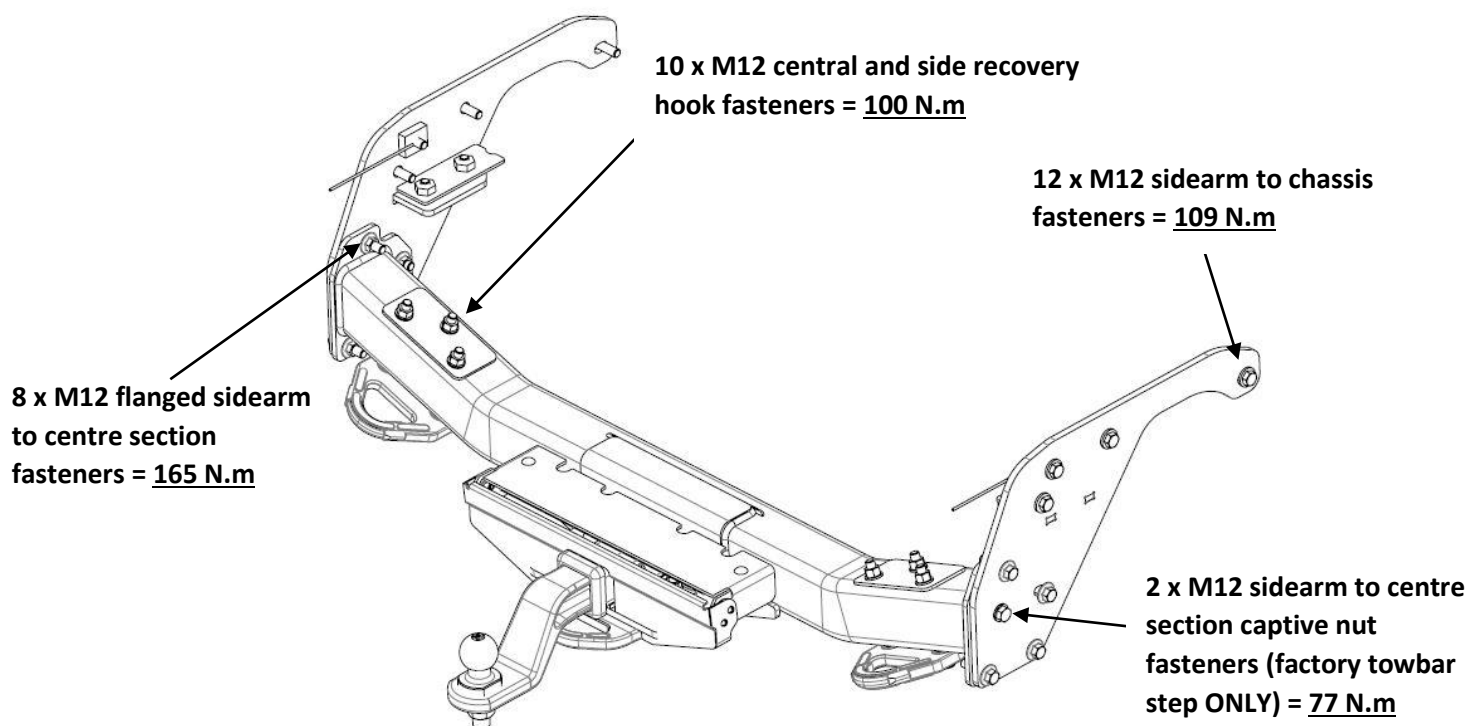


TOWBAR INSTALLATION INSTRUCTIONS

PART NUMBER 03294XW

FORD RANGER PX X-BAR

10. Torque all bolts as follows:



IMPORTANT: Ensure all bolts are tightened to correct torques using a calibrated torque wrench. Tighten side arms to chassis rail first in an even pattern/sequence. Repeat for centre section to side arms and finally torque all other fasteners.

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.

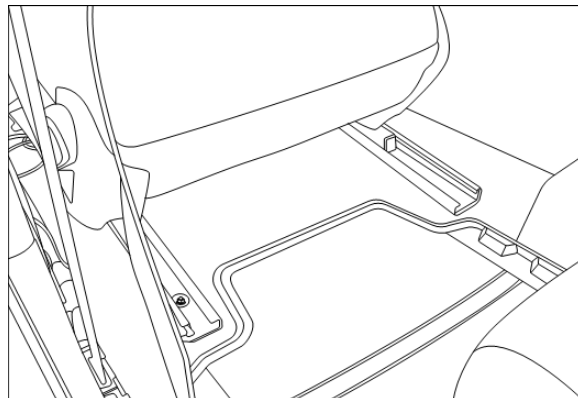


TOWBAR INSTALLATION INSTRUCTIONS

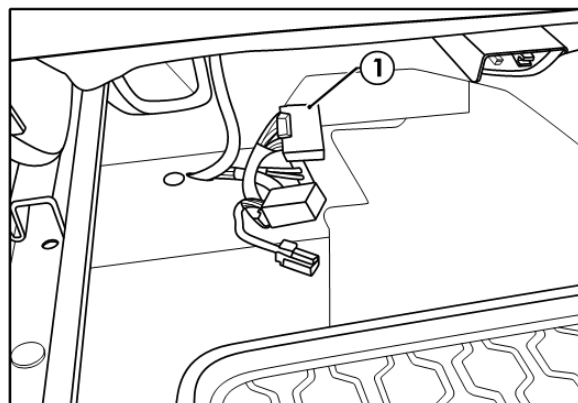
PART NUMBER 03294XW

FORD RANGER PX X-BAR

11. Underneath the front passenger seat, remove the plastic cover (if applicable).



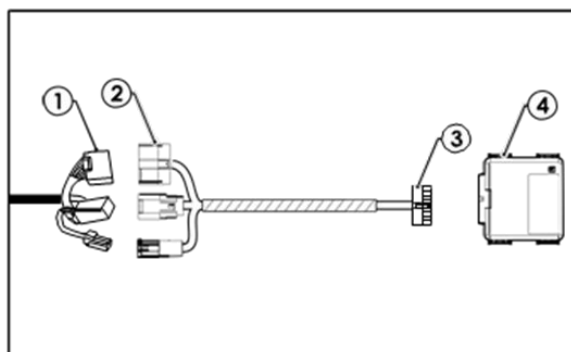
12. Locate the vehicle CAN, Trailer, Power connectors (1) from underneath the floor carpet (bracket may or may not be present).



13. Connect the vehicle CAN, Trailer, Power connectors (1) to the harness patch mating connectors (2).

14. Connect the harness patch connector (3) to the ECU (4) (WLE70003).

15. Attach the supplied velcro tape to ECU and mount in a suitable location.





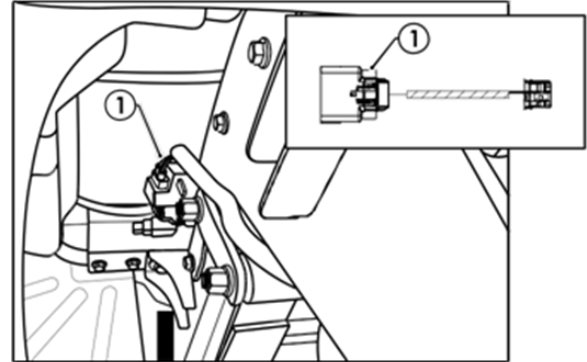
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PART NUMBER 03294XW

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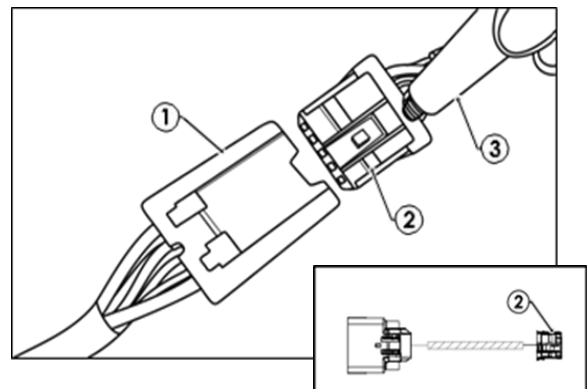
16. On the LHS rear under carriage, locate and disconnect the blanking connector from the vehicle 16-way connector.

17. Connect the patch harness 16-way connector (1) to the mating vehicle 16-way connector.

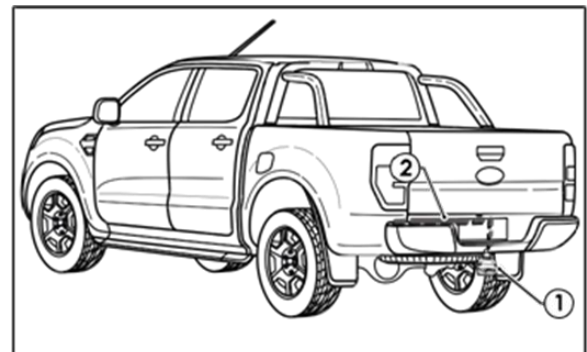


18. Connect the tail harness (1800mm) 8-way connector (1) to the trailer patch 8-way mating connector (2).

19. Waterproof the trailer patch 8-way connector (1) and the tail harness 8-way male connector (2) using silicone or grease (3).



20. Route the tail harness (tail length 1800mm) (2) from the towbar mounting (1), towards the trailer patch blue connector.





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PART NUMBER 03294XW

FORD RANGER PX X-BAR

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21. Test the trailer wiring harness function using a light board or multi-meter.
 22. Secure all harnesses using supplied cable ties (not supplied).
 23. Place the fitting instructions in the glove box after fitment.
 24. For Comfort and Safety features. To be enable this vehicle must be coded. Once coded the features of MS System Support OE functionality. Please read the Owner's Manual for proper operation and understanding.
 25. Next step is coding of vehicle. Pay attention to the "Smart Code" instruction (Appendix).
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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.**

i 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.

i 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.



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.

i Regularly inspect for wear and check the tightness of the Smart Pin Nut. Follow instructions below to re-tighten 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 **350 Nm** using a calibrated torque wrench (Fig. 6).

