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REPLACES: EAM102SY

REVISED: 15.01.18

EAM105SY

FITTING INSTRUCTIONS

NW PAJERO 11/11- BIG TUBE™ PROTECTION BAR VEHICLE FRONTAL PROTECTION SYSTEM (VFPS) FOR AIR BAG & ADR COMPLIANT VEHICLES

Check installation hardware before commencing.

Special Requirements: Should vehicle not have original equipment fog lights, an aftermarket wiring harness will need to be installed.

NOTE: On drivers side of Exceed model, there is a siren box mounted to the outside of the chassis rail. The mounting bolts, although they look like rivets are actually M8 bolts with a break away section for security. To remove these bolts, drill with small drill bit and use an "easy out" to remove threaded section. Or a second method is, with small chisel, place a slit in the outer edge of the rivet section. Use the chisel or a punch to rotate the rivet section anti-clockwise to undo the bolt. Remove from vehicle. **See figure 1 and 2.**

- 1. Remove grille. Seven plastic clips along top and gently pull up to release three plastic clips under.
- 2. Remove steel protection guard from vehicle tow bracket area.
- 3. Remove front of inner guards to allow access to rear of bumper. Two plastic screw clips and one 10mm head bolt (flare to inner guard), three plastic clips (chassis rail) and two plastic clips on lower inner guard (each side).
- 4. Disconnect fog lamp wiring harness (passenger's side under grille, beside headlamp).
- 5. Disconnect headlight washer hose, (driver's side under grille, beside headlamp) by squeezing rippled edges of tube joiner. Drain into clean bucket or similar to allow re-use of fluid.
- 6. Remove bumper skin. Two plastic clips and two 10mm bolts in lower centre where steel protection guard removed, two plastic clips under number plate mounts, one 10mm head self tapper (each side) at top side bumper returns (access under flare), six plastic clips along top centre (where grille removed to access), and two 10mm head bolts under ends of bumper to lower bumper support. Gently ease flare away from vehicle until clips release, taking care not to damage flare. **See figure 3.** Carefully pull top edge of bar down to release from positioning lug (10mm head bolt retaining clip at top side bumper returns) and pull out away from guard to release plastic clips. Do not discard any clips or bolts.
- 7. Using hole-marking template, mark where rear steel mounting bracket is to be drilled on inside of chassis rail. Line up template with inside bottom of tow bracket on vehicle chassis and mark hole, **see figure 4.**
- 8. Centre punch mark and drill 10mm hole through inside edge of chassis only. **Note: Blow filings clear and treat all exposed metal with paint or a rust inhibitor.**
- 9. On Exceed model only: Remove siren box from outer chassis rail on drivers side of vehicle.
- 10. Place outer chassis washer plate into position, flat on outside of chassis rail. **See figure 5.** On drivers side, align M8 holes. Lower hole should match position of hole previously drilled on other side of chassis rail. Centre punch mark and drill 10mm hole. Using a die grinder or similar, enlarge top and bottom holes only to allow fitment of chassis spacer tubes. (centre hole should be right next to inbuilt chassis spreader) **See figure 6. Note: Blow filings clear and treat all exposed metal with paint or a rust inhibitor.**



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- 11. Wire and assemble fairlead roller and winch to ECB winch frame according to instructions supplied with winch. Do not mount control box to ECB winch frame at this time.
- 12. Place ECB winch mount into position on vehicle. From outside of chassis rail, install 3/8 x 6 bolt, flat washer and tubular chassis spacer, with square tubular spacer between ECB steel mount and chassis rail. Do not fit outer plates or nuts at this time.
- 13. Fit 3/8 x 1 ½ bolts and washer on wire into four front cross member/ ECB winch frame attachment points on underside. Attach using flat washers, spring washers and nuts (supplied). Centre bolts in slots. **TIGHTEN ALL BOLTS.**
- 14. Drill 10mm hole through chassis using front and centre hole in steel mounting bracket as a guide. **Note:** Blow filings clear and treat all exposed metal with paint or a rust inhibitor.
- 15. Insert 40 x 6 round alloy washer plate and steel spacer (supplied) between chassis and ECB winch frame. **See figure 7**. Insert 3/8 x 6 bolt and flat washer, outer bolt plates over bolts, chassis spacer tube (supplied) from chassis side. **See figure 8**. Use 3/8 nut, flat washers and spring washers (supplied). **FINGER TIGHTEN ONLY.**
- 16. **On Exceed model:** Refit siren box to outside of drivers chassis using M8 x 30 bolts, spring washers and flat washers. On rear hole, install 40mm alloy washer between siren box and chassis rail.
- 17. Using 10mm hole in steel mounting bracket as a guide. Drill 10mm hole in lower cross member. **Note: Blow filings clear and treat all exposed metal with paint or a rust inhibitor.** Place lower chassis support in position on lower bolts. Use two 3/8 x 1 1/4 bolt, flat washers, spring washers and nut (per side) (supplied). **FINGER TIGHTEN ONLY.**
- 18. Attach control box and control box bracket to winch frame using two M6 x 30 bolts, flat washers and nyloc nuts. Complete wiring to vehicle as per instructions included in winch. Test winch for correct operation.
- 19. Disconnect indicator and parking lights on vehicle. Install ECB quick click wiring harnesses (supplied) between disconnected harness and indicator / park lights on vehicle. Run wiring out from under lights ensuring clearance from sharp edges and moving parts.
- 20. Disconnect fog light wiring from bottom of plastic bumper cover. Feed wiring under bumper cover top mounting frame between headlights using zip ties and convoluted tubing to cover centre of wiring. See figure 9. Attach to frame allowing enough wiring to reach fog lights in Protection bar. Caution: Care must be taken to avoid sharp edges and moving parts as damage may occur. Connect ECB Quick Click fog light wiring harness (supplied) to original wiring harness.
- 21. Trim entire grille and bottom half of bumper to allow protrusion of ECB winch frame. Trim line is across bottom where flare meets bumper, from front corner of flare to lower corner of original equipment grille opening. **See figure 10 and 11.**
- 22. Remove original equipment fog light from bumper cover (if fitted).
- 23. Refit original bumper assembly and grille to vehicle as per reverse of steps 1-6. Feed wiring indicator harness through fog light holes to assist in later connection. Original equipment fog harness exits bumper across top of ECB winch frame.



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- 24. Mark inner edge of plastic bumper through hole in side plates of winch frame. Pull bumper cover forward to drill 6mm hole in centre of marked area. **See figure 12.** Fit inner edge of bumper to winch frame with a 6mm spacer washer between bumper and winch frame using M6 x 30 bolts, flat washers and nyloc nuts.
- 25. Fit ECB LED indicator / park lights (supplied) into protection bar as per instructions supplied with the LED indicator kit. **NOTE: Ensure park light is to outside. See figure 13.**
- 26. Attach ECB fog lights to protection bar. Place M6 x 20 bolts, spring washers (supplied) through light mount from inside and attach nut to top. Slide assembly into light mount in Protection bar and centralize light to hole. **TIGHTEN FIRM ONLY. NOTE:** Do not fit ECB light trims to protection bar at this point. **See figure 14.**
- 27. Fit 6mm clip lock trim to rear of protection bar. **NOTE:** Trim off lower edge on an angle so trim will sit flush with end of protection bar. **See figures 15, 16 and 17.**
- 28. Fit 6mm clip lock trims to edges of skirt beside fairlead rollers.
- 29. Attach protection bar to outside of steel mounting brackets. Use six ½ x 1 ½ bolts washers spring washer and nut (supplied). **DO NOT TIGHTEN.**
- 30. ALIGN PROTECTION BAR WITH VEHICLE. See figures 18 and 19.
- 31. TIGHTEN ALL BOLTS
- 32. Connect and check operation of ECB indicator / park lights, ECB fog lights and headlamp washers. Adjust headlamp washers if required.
- 33. Aim ECB fog lamps at low beam height. **TIGHTEN IN POSITION**.
- 34. Attach ECB fog light trims (supplied) to protection bar.
- 35. Reattach steel protection guard to vehicle.
- 36. Remove attachment clip from lower bolt in bumper (for inner guards) and attach to ECB under body guards. Attach ECB under body guards to rear edge of ECB Protection Bar using three M6 x 20 bolts, flat washers and nyloc nuts (supplied) (per side). Finger tighten only. Attach rear of under body guard and inner guards to body of vehicle where lower bar mount brackets where removed using original bolts. Holes will need to be drilled in inner guard to allow fitment. Fit flare, plastic bumper cover and inner guard to ECB under body guard on outer corner. **Tighten all bolts. See figure 20.**

ENSURE NUMBER PLATE IS CLEARLY VISABLE

Note: When fitting/refitting the licence plate to the vehicle, ensure there is no obstruction to licence plate vision in accordance with local authorities. If required relocate licence plate to an alternate location.

Further VFPS Notes:

- a) Do not attach VFPS to the vehicle using anchorages not intended for this purpose (e.g. engine mounting bolts).
- b) Do not use this product for any vehicle make or model, other than those specified by the VFPS manufacturer.
- c) Do not remove the plaque or label from the VFPS.
- d) Do not modify the structure of the VFPS in any way.
- e) No accessory or fitment should project forward of the VFPS forward profile.

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f) ENSURE THESE INSTRUCTIONS ARE LEFT WITH VEHICLE OWNER AND/OR OPERATOR. **IMPORTANT INFORMATION**

Periodically check bolts and nuts for correct tightness, especially if travelling on rough roads.

FITTING KIT

1 – Steel winch frame	$6-\frac{1}{2}$ nuts.
2 – Lower Chassis supports	3 – M8 x 30 bolts
2 – Outer chassis washers	3 – M8 flat washers
1 – Control box mount	3- M8 spring washers
1 – Mean mother mount (MOTHERCB_B4MS)	8 – M6 x 30 bolts
1 – Pair Under body guards (W)	8 – M6 x 20 bolts
8 – 40 x 11 x 6 round alloy washer plates.	26 – M6 flat washers.
4 – 78mm long, 10 Nb chassis tube spacers.	6 – M6 spring washers
6 – 20mm long, 25mm square box tube spacers	2 – M6 nuts
$8 - 3/8 \times 1 \frac{1}{4}$ bolt and washer on 500mm wire.	10 – nyloc nuts
6 – 3/8 x 6 bolts	1 – ECB LED Indicator / Park light kit.
$4 - 3/8 \times 1 \frac{1}{4} \text{ bolts}$	1 – Quick Click Indi / Park kit (IC10KLUGECB100H)
32 - 3/8 flat washers.	1 – ECB fog light kit.
18 - 3/8 spring washers.	1 – Quick Click fog wiring kit (IC10D40S1004ECBH)
18 – 3/8 nuts.	4 – ECB fog light trims
$6 - \frac{1}{2} \times 1 \frac{1}{2}$ bolts.	1 – 2100mm length 6mm clip lock trim
$12 - \frac{1}{2}$ flat washers.	2 – 200mm length 6mm clip lock trim
$6 - \frac{1}{2}$ spring washers.	5 – 150mm Zip ties



Figure 1: Using chisel to place cut in edge of security bolt.



Figure 2: View of security bolt when removed from vehicle.



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Figure 3



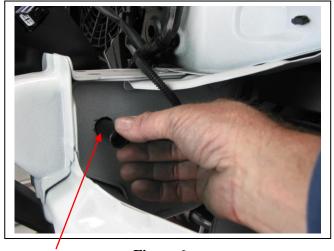
Figure 4



Figure 5: Placement of outer chassis washer



Figure 6 Enlarging outer chassis hole to 17mm for chassis spacer



Spacer tube Figure 6

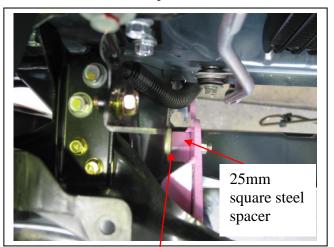


Figure 7 6mm alloy chassis spacer

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Figure 8: Install lower chassis support. Drill three lower mount holes into chassis rail



Figure 10: Remove grille from opening



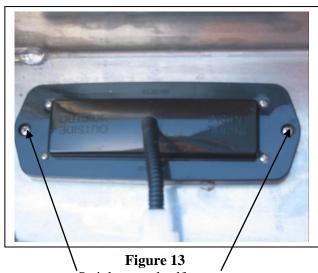
Figure 12: Drill marked hole to 6mm. insert 6mm alloy washer between bumper and winch frame when fitting.



Figure 9: Wiring attached to underside of top bumper support panel.



Figure 11: Trim lower section from side of grille opening to bottom of flare on bumper.



Stainless steel self-tappers



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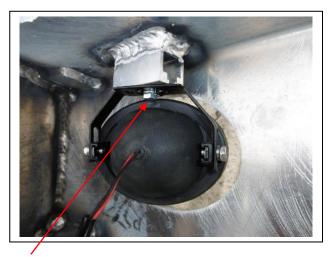


Figure 14 M6 bolt

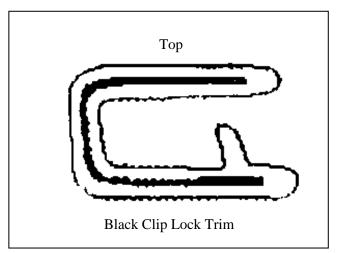


Figure 15

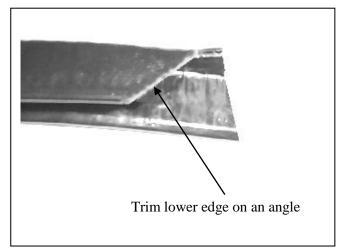


Figure 16

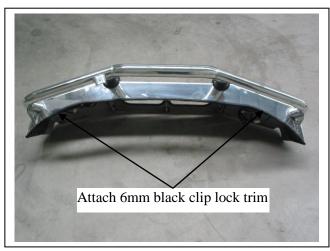


Figure 17



Figure 18 – Front view shown



Figure 19 – Side view shown

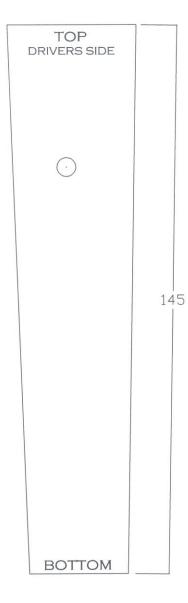
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Figure 20 – Under body guard fitted.

HOLE MARKING TEMPLATE

Cut out and line up top with bottom of tow bracket.





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We value your comments

Dear Fitter,

ECB would like to know how you went with the installation of this product. We value your comment and may need to contact you to clarify some details so please complete your contact details clearly.

We would appreciate if you could complete as many of the following details as possible.

Your Name:	Your contact No.	
Product Part No.	Product Invoice No. Make, model, and year of vehicle: Company your from/Company product purchased from:	
Product Description:		
Product Work Order No.		
Date of fitment:// Was the fitting hardware supplied complete? If no what was not supplied	Yes	No
Did the installation go well? Please provide comments	Yes	No
Please draw diagrams if you need to.		

Post to Reply Paid 122 PO Box 122 Margate QLD 4019 **Fax to** (07) 3283 1168



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Final wrap check:

East Coast Bullbars (ECB Pty Ltd)

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DESPATCH CHECKLIST EAM105SY

		EAW11055Y		
ICZBKCM105				
Woi	rk Order #			
	Finish:			
	Transport:			
	Due Date:			
0	1 – ECB wind	ch frame.	See other side of	
0	1 - pair lower	r chassis mounts	this page for	
0	() 2 – outer chassis washers		photos of all	
0	1 – control bo	ox mount	mounts	
0	1 – Pair Allo	y under body guard (W)		
0	1 – Bolt Kit.			
0	1 – ECB LEI	O Indicator / Park lights kit.		
0	O 1 – Quick Click Indi / Park kit (IC10KLUGECB100H)			
0	O 1 − ECB fog light kit.			
0				
0				
0	1 – 2100mm length 6mm clip lock.			
0	2 – 200mm length 6mm clip lock.			
0	2 – ECB Overriders – FITTED TO BAR			
0	5 – 6mm Air Scoops – FITTED TO BAR			
STOP	Is this	s product "the best it can		
Wrapper's initials / Checker initials If NO fix before continuing				
All parts che	ecked and comp			
Nut a	nd bolts:		Date//	
Order	r control:		Date//	

_Date__/__/__



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