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REPLACES: 01.03.06 REVISED: 21.07.10

MK31SY / NBK31SY

FITTING INSTRUCTIONS

FOR AIR BAG & ADR COMPLIANT VEHICLES

KIA GRAND CARNIVAL 01/06- MIDI TUBE AND 76MM NUDGE BAR VEHICLE FRONTAL PROTECTION SYSTEM (VFPS)

Check installation hardware before commencing.

- 1. Lift bonnet.
- 2. Remove plastic radiator cover. Thirteen plastic PK clips. **See figure 1.**
- 3. Remove headlight assemblies. Two 10mm bolts (per assembly) disconnect wiring and place in a safe area. **See figure 2.**
- 4. With headlight assemblies now removed, remove two plastic PK clips and one 10mm bolt (each side) from bumper cover. **See figure 3.** Disconnect fog lamps.
- 5. Remove plastic under guard from lower chassis. Three 10mm head bolts and eight plastic PK clips. See figure 4.
- 6. Remove three plastic PK clips (each side) from lower inner guards. Remove one PK self-tapper (each side) from top of bumper cover side returns. Remove five plastic clips securing lower bumper cover. Pull plastic inner guards clear of bumper cover and slide bumper cover off vehicle.
- 7. Remove two 10mm head bolts from air intake box on passenger side and move clear for access. See figure 5.
- 8. Three holes (each side) are to be drilled in chassis. Working on one side at a time hold steel mounting plate (supplied) level at top and flush at front, mark centre of lower hole. **See figure 6.** Centre punch mark and drill a 10mm hole in chassis. **Blow all filings clear and treat exposed metal with a rust inhibitor.** Fit steel mounting plate to chassis. Use 3/8 x 1 ½ bolt, nut and washers (supplied). Align level. **See figure 7. TIGHTEN IN POSITION**.
- 9. Using steel mounting plate holes as a guide drill top two 10mm holes in chassis. **See figure 8. Blow all filings** clear and treat exposed metal with a rust inhibitor. Use 3/8 x 1 ½ bolts, nuts and washers (supplied) **TIGHTEN IN POSITION.**
- 10. Repeat for other side ensuring steel mounting plates are aligned with each other. Refit air intake box. **See figure 9.**
- 11. Slide bumper cover onto vehicle against steel mounting plates. Mark where trimming is required and remove bumper cover. Trim approximately 10mm wide and approximately 75mm deep into bumper cover and lower black trim. **See figure 10.** Trim lower black trim in a radius where 76mm tube will sit. **See figures 11, 12 and 13.**
- 12. Refit bumper cover and head light assemblies to vehicle. Ensure all wiring is reconnected.
- 13. Hold plastic under guard against steel mounting plate and mark where trimming is required. Trim as necessary and refit to lower chassis. See figures 14 and 15.



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- 14. Fit protection bar to inside of steel mounting plates. Use 3/8 x 1 ½ bolts and washers on wire (supplied) to access front holes. Use 3/8 flat washers, spring washers and nuts (supplied). Use 3/8 x 1 ½ bolts, nuts and washers (supplied) for rear holes. **FINGER TIGHTEN ONLY**.
- 15. Position protection bar as high as possible on steel mounting plates for maximum ground clearance. **See figures**16 and 18 for side views and figures 17 and 19 for front views. FOR MIDI TUBE Ensure adequate clearance under driver's side 180° loop for towing bracket fitment. See figure 20. TIGHTEN ALL BOLTS/NUTS.

ENSURE THESE INSTRUCTIONS ARE LEFT WITH VEHICLE OWNER AND/OR OPERATOR

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.
- 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

2 – Steel mounting plates.	10 - 3/8 nuts.
$6 - 3/8 \times 1^{1/4}$ bolts.	18 - 3/8 flat washers.
$2 - 3/8 \times 1\frac{1}{2}$ bolts.	10 - 3/8 spring washers.
$2 - 3/8 \times 1\frac{1}{2}$ bolts and washers on 300mm wire.	



Figure 1 Shown removing plastic cover



Figure 2 – Shown removing passenger side headlight assembly



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Plastic PK clips

Figure 3

10mm head bolt



being removed

Plastic under guard Figure 4



Figure 5 Air box on passenger side moved



Figure 6



Figure 7 – Driver's side shown, level off bottom

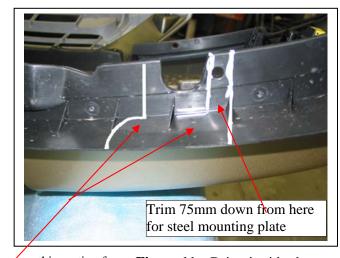


Figure 8 – Shown drilling driver's side

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Figure 9 – Passenger side air intake box refitted



Remove this section for 76mm tube clearance **Figure 11** – Driver's side shown

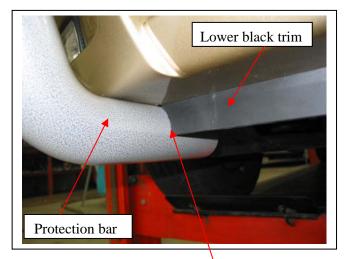


Figure 13 Radius trimmed to fit neatly around 76mm tube

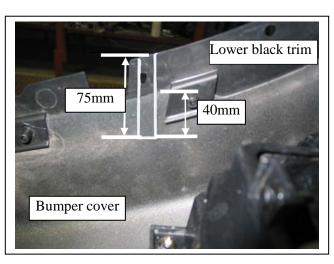


Figure 10 – Shown looking from inside of bumper cover. Trim lower black trim, then trim into bumper cover approximately 40mm (approximately 75mm in total).



Figure 12 – Driver's side shown with section of lower black trim removed and approximately 40mm into bumper cover for steel mounting plate.



Figure 14 – Passenger side shown



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Figure 15 – Driver's side shown

Plastic under guard trimmed around steel mounting plate



Figure 16 – 76mm Nudge Bar side view shown



Figure 17 – 76mm Nudge Bar front view shown



Figure 18 – Midi Tube side view shown



Figure 19 – Midi Tube front view shown



Original towing eyebolt Figure 20



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

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



Final wrap check:

East Coast Bullbars (ECB Pty Ltd)

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DESPATCH CHECKLIST MK31SY / NBK31SY

1411 (0)	
Work Order #	
Finish:	
Transport:	
Due Date:	
O 2 – Steel mountingO 1 – Bolt Kit	See other side of this page for photos of all mounts
Is this product If NO fix before	t "the best it can be" Yes// Wrapper's initials / Checker initials re continuing
All parts <u>checked</u> and <u>compl</u>	eted by:
Nut and bolts:	Date//_
Order control:	Date//_

_Date__/__/__



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