



**WORLD'S BEST
ALLOY BULLBARS**

**Strongest Built
Australian Made
Lifetime Warranty**

PN:NBM230SY



**Fitting Guide &
Owners Manual
Mitsubishi Outlander
MY19 05/2018 ON**

76mm Nudge Bar
VEHICLE FRONTAL PROTECTION SYSTEM (VFPS)
FOR AIR BAG & ADR COMPLIANT VEHICLES



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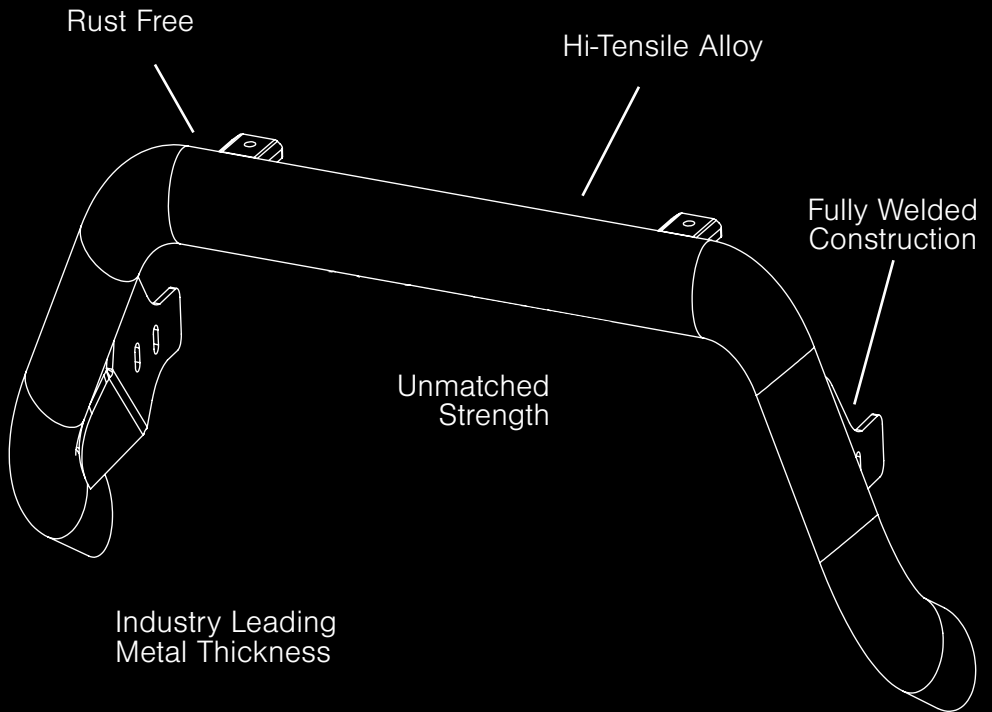
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The Features of ECB



ECB's Benefits

Built to Perform - Not to a Price

ECB are proud to claim that their channels are not jigsaw puzzles that are bolted together, or even multiple sections welded together. Where any welding is required, it is done to the highest standards by qualified welders, not machines.

Anti-Corrosive Nature of Alloy

The composition of ECB's alloy has a very high resistance to corrosion. Rust not only looks unappealing but greatly reduces the strength of the metal. Rust can and will weaken the structural integrity of a steel bullbar effectively rendering it useless over time.

Australian Made

Established in 1971, we utilise decades of experience designing, engineering and building products in Australia to suit Australian conditions. We can ensure the best quality controls and help support the local economy and employ over 90 proud Australians.

Weight Saving Benefits

An ECB alloy bullbar is typically half the weight of a steel bullbar. Unnecessary suspension upgrades are not required. The reduced weight also contributes to increased fuel economy and less wear and tear on tyres, suspension and braking components.

Welds That Work

ECB uses only the strongest welds and welding techniques to ensure every product is as structurally sound as possible. MIG (Metal Inert Gas) welding techniques are employed ensuring the welds are as thick as the thickest section of alloy's being joined together.

Lifetime Warranty

ECB provide a lifetime warranty and consumer guarantee on all of our manufactured products. This guarantee highlights the confidence in our ability and provides complete peace of mind for your purchase for the lifetime you own your vehicle.

Product Care

Polished Products

Being a premium mirror polished finish, regular maintenance will be required to keep that iconic ECB shine. We recommend using our own brand of Aluminium Polish. This formula has been tried and tested and in our opinion is the world's best standard.

Directions: Apply a small quantity of Aluminium Polish to a clean soft cloth and rub the metal surface. The longer the rubbing the brighter the surface becomes. Wipe off Aluminium Polish with clean soft cloth. Also suitable for motorised buffing machines.

Note: There are more specific details on the polish bottle. Please read before use.

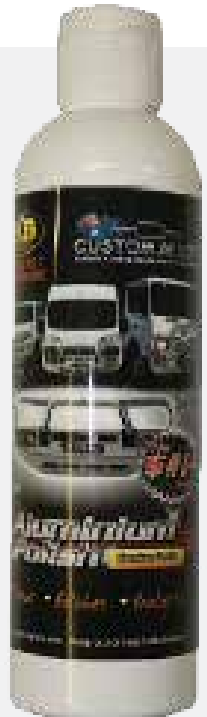
Powdercoated Products

Our powdercoated finishes are very low maintenance. In fact there is actually very little you will ever need to do for this product. Just clean it as you would your car and it will stay looking good as new.

ECB Aluminium Polish

When you're looking for that showroom finish look for your polished automotive products, you can depend on the no compromise quality of East Coast Bullbars Aluminium Polish. This specifically designed product is the best polish available and we guarantee that this \$#!+ works. Within our decades of manufacturing polished alloy products we have trialled a large range of different polishes on the market and believe without a doubt that nothing beats the finish quality of East Coast Bullbars Aluminium Polish.

East Coast Bullbars Aluminium Polish is excellent for use by hand and is ideal for polished bullbars, nudge bar and stainless steel products. This polish will clean, polish and protect your product from the elements whilst bringing your products back to that showroom finish look.



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Stage 1

- Test drive vehicle to ensure all driver assists are correctly working and to gauge effectiveness. Park on a flat level surface.
- Apply parking brake and lift bonnet.
- Unwrap ECB Protection bar and disconnect mounts. Discard bolts.
- Ensure these instructions are left with the vehicle owner and/or operator.



Stage 2

- Remove trim from top of radiator support, twelve (12) plastic push pull clips.



Stage 3

- From outer edge of grill, remove two (2) plastic push pull clips, pull firmly on grille to release three lower clips.
- Remove grille.



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Stage 4

- Remove one (1) 10 mm head bolt from wheel archflare per side.
- Gently pull flare away from vehicle remove flare.
- Remove two (2) push pull clips from wheel arch (per side) and one (1) push pull clip from rear wing to guard per side.
- From top of bumper between headlights remove five (5) plastic push pull plugs.
- Remove three (3) 10mm head bolts from underside of bumper and two (2) from lower grill.



Stage 5

- Remove four (4) hex plastic screw clips from underside of bumper and six (6) push pull clips from underbelly guard.



Stage 6

- Unplug fog light/sensor and camera from drivers side of bumper reinforcement.
- Unclip headlight washer washer hose from bumper.
- Carefully pull out on rear wing to unclip bumper from gaurd and then forward from headlight to remove.



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Stage 7

- Using 18mm drill, enlarge front hole in outer section of crash can for tube spacer.
- **NOTE : Blow filings clear and treat all exposed metal with a rust inhibitor.**
- Remove lower air dams.



Stage 8

- On passenger's side of bumper support disconnect temperature sensor from mount and using a chisel or similar tool, remove mount from bumper support
- **NOTE : Blow filings clear and treat all exposed metal with a rust inhibitor.**



Stage 9

- Disconnect transmission cooler hoses
- Remove cooler from bumper support, three (3) 12 mm head bolts, two (2) at base one (1) at top.



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Stage 10

- Remove cover at bonnet release bracket, two (2) push pull clips.
- Remove two (2) 12mm head bolts from rear of sonar mount back of bumper support and one (1) 12mm nut top from sonar support bracket. Carefully remove sonar. Retain nut and bolts.



Stage 11

- Remove bumper support rail, four (4) 12mm head bolts each side.
- Retain bolts for refitment.



Stage 12

- Refit sonar to support mount, moving across to drivers side by four (4) holes. Drill 8mm hole through support rail, refit sonar to bumper support using original bolt.
- **Note: Blow filings clear and treat all exposed metal with a rust inhibitor.**
- Use M8 x 1.25 x 45mm bolt , flat washer, spring washer and nut (supplied) in hole previously drilled in rail. **Do not tighten.**



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Stage 13

- Refit bumper support.
- Install top steel bracket to sonar and attach top bracket to bonnet release bracket using three (3) M8 x 1.25 x 30mm bolts, flat washers, spring washers and nuts (supplied).
- Using original bolt, remount top of cooler to bracket.
- **Tighten all bolts.**



Stage 14

- Extend wiring harness to sonar by 200mm using single core wire and joiners (supplied). Reconnect sonar.



Stage 15

- Remove bottom mounting brackets from transmission cooler and install transmission cooler to steel bracket (supplied).
- Mount transmission cooler to bumper support using one (1) M8 x 1.25 x 45mm bolt, flat washer, spring washer and nut (supplied).
- Reconnect hosing to intercooler using hosing (supplied) and join together using zip ties (supplied) gently.



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Stage 16

- Remove centre sensors from bumper and extend wiring by 150mm using single core wire and joiners (supplied).
- **CAUTION:** Using too long an amount of wire will cause these sensors to stop working. Try to keep the amount of wire used to a minimum.



Stage 17

- Install ECB steel mounting brackets in side of crash can and bumper support, use two (2) M8 x 1.25 x 30mm bolts, flat washers and spring washes (supplied) for lower radiator support.



Stage 18

- Install one (1) M8 x 1.25 x 100mm bolt, spacer tube, flat washers, spring washer and nut (each side) (supplied) for crash can . Ensure steel brackets are parallel and vertical.
- **NOTE:** Tube spacers are different sizes, drivers side is 64mm and passenger side is 72mm.
- On petrol vehicles, install one (1) M8 x 1.25 x 30mm bolt, spring washer and large flat washer into rear of bumper support.
- **Tighten all bolts.**



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Stage 19

- Refit temperature sensor onto black bumper locator.



Stage 20

- Using steel mounting brackets as a guide mark and cut lower grill in bumper.



Stage 21

- Fit bumper onto vehicle in reverse of stages 3 and 5, do not fit under body guard at this time.



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Stage 22

- Fit parking sensors to protection bar, place 3mm plastic spacer in sensor mount then sensor, secure with zip ties (supplied).



Stage 23

- Fit protection bar to outside of ECB steel mounting brackets using four (4) M10 x 1.25 x 40mm bolts, flat washers, spring washers and nuts (supplied).
- Align protection bar to vehicle and **tighten all bolts.**
- Refit under body guard.



Stage 24

- Connect sensors and camera
- Test sensors and camera to ensure correct operation.
- Test drive vehicle to ensure correct operation of driver aids.

Final Checks & Installation Kit

Ensure Number Plate is Clearly Visible

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

1. Do not attach VFPS to the vehicle using anchorages not intended for this purpose (e.g. engine mounting bolts).
2. Do not use this product for any vehicle make or model, other than those specified by the VFPS manufacturer.
3. Do not remove the plaque or label from the VFPS.
4. Do not modify the structure of the VFPS in any way.
5. No accessory or fitment should project forward of the VFPS forward profile.
6. **Ensure these instructions are left with the vehicle owner and/or operator.**

Important Information

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

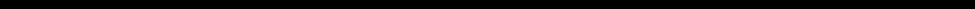
Installation Kit

1 - Pair ECB steel mounting brackets	18 - M8 flat washers
1 - Top oil cooler bracket	12 - M8 spring washers
1 - Lower oil cooler bracket (bent mount)	2 - 5/16 x 1 1/4 flat washer
	7 - M8 x 1.25 nuts
1 - 10Nb spacer tube 64mm long	6 - 150mm length 3mm single core wire
1 - 10Nb spacer tube 72mm long	4 - 200mm length 3mm single core wire
4 - M10 x 1.25 x 40mm bolts	20 - Solder joiners
8 - M10 flat washers	6 - 150mm zip ties
4 - M10 spring washers	2 - 3mm clear plastic parking sensor spacers (EAMB100SY).
4 - M10 x 1.25 nuts	
2 - M8 x 1.25 x 100mm bolts	1- 340mm length transmission cooler hose
2 - M8 x 1.25 x 45mm bolt	1- 300mm length transmission cooler hose
8 - M8 x 1.25 x 30mm bolts	

Finished Product



Notes



A series of 18 horizontal lines for writing notes, spaced evenly down the page.

_____ Full Name

_____ Date

Warranty Registration

Contact Details

Name: _____

Address: _____

Product: NBM230SY _____

Email: _____

Phone: _____

Work Order Number: _____

You can find this on the silver label
of your ECB product.

By submitting this registration you automatically subscribe to ECB's mail outs.
You can unsubscribe at any time.

Register Online

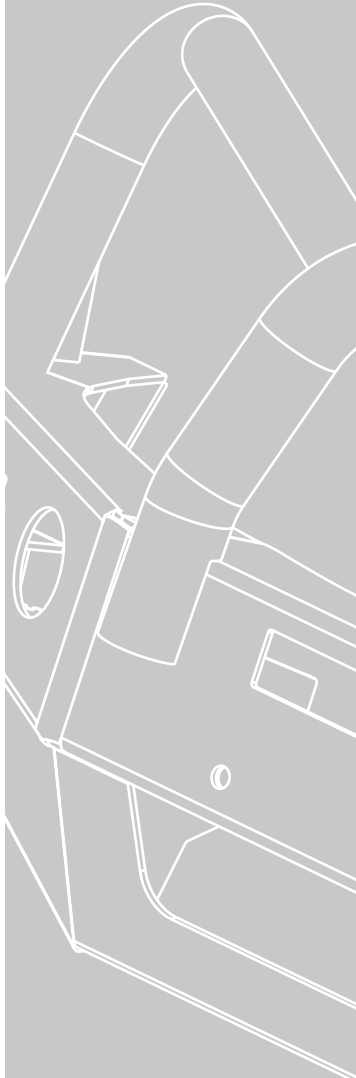
For online registration please go online to www.ecb.com.au/warranty-registration
If you have any questions please contact our national office on 1800 069 145 or
www.ecb.com.au.



PN: NBM230SY
Please post to: PO Box 122,
Margate QLD 4019

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