



**WORLD'S BEST
ALLOY BULLBARS**

**Strongest Built
Australian Made
Lifetime Warranty**

PN: NBM231SY

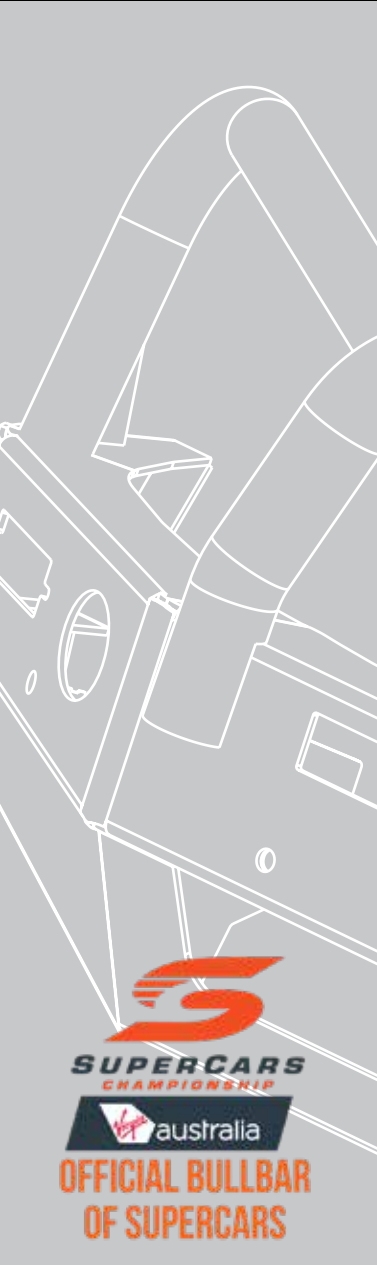


Fitting Guide & Owners Manual

MITSUBISHI OUTLANDER PHEV

05/2018 on

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



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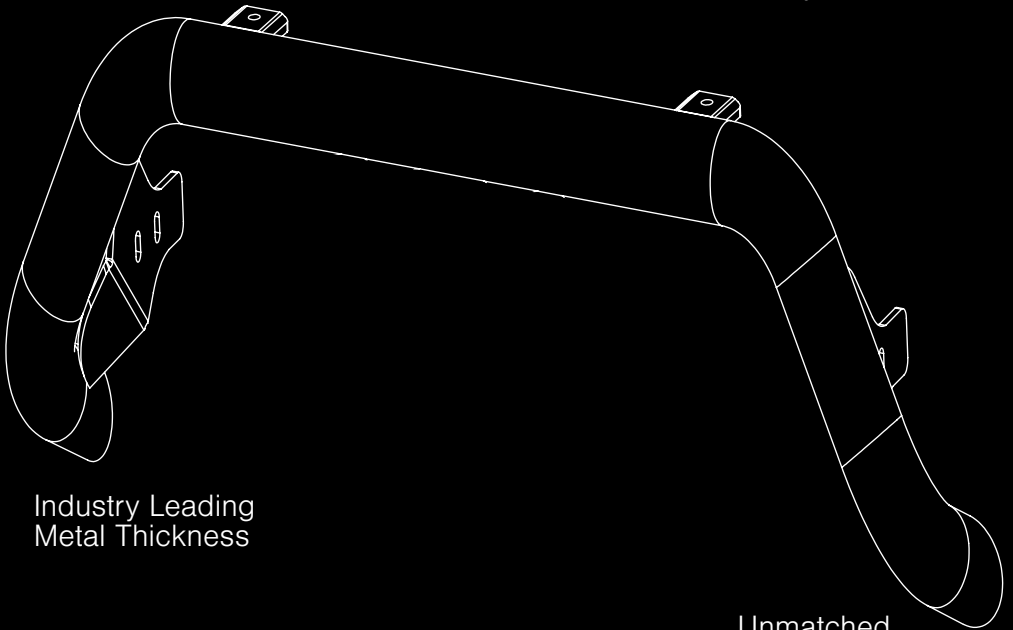
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Final Checks & Installation Kit
Finished Product

The Features of ECB

Rust Free

Hi-Tensile Alloy



Industry Leading
Metal Thickness

Unmatched
Strength

Fully Welded
Construction

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 over 46 years 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. Infact 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. With over 40 years 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) push pull clips.



Stage 3.

- From outer edge of grille remove two (2) plastic push pull clips, pull firmly on grille to release three (3) lower clips
- Remove grille.



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Stage 4.

- Remove three (3) push pull clips from wheel arch (perside) and one (1) push pull clip from rear wing to guard (per side).
- From top of bumper between headlights remove five (5) plastic clips and three (3) 10mm head bolts.



Stage 5.

- From under side of bumper remove eight (8) clips and four (4) scrivenets. Two (2) 10mm head bolts from lower grille.
- Unplug washer line and wiring harness from near driver side headlight and remove bumper.



Stage 6

- Remove four (4) 10mm head bolts and five (5) push pull clips from underbody guard and remove guard.



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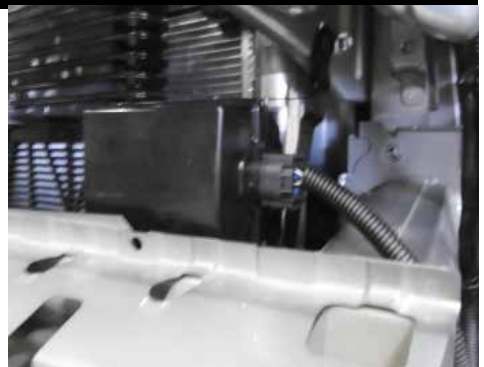
Stage 7.

- Remove three (3) push/pull clips from top of air dam along front edge.
- Remove two (2) 12mm head bolts from lower cooler bracket to bumper support and remove bracket to cooler one (1) 12mm head bolt per/side.
- Remove two (2) 12mm head bolts from oil cooler bracket to bumper support.



Stage 8.

- Disconnect sonar from harness. Remove two (2) 12mm head bolts from bumper support and one (1) 12mm nut top of sonar carefully remove unit.
- On passenger side of bumper support disconnect temperature sensor from mount, using a chisel or similar tool remove sensor mount from bumper support.



Blow filings clear and treat all exposed metal with a rust inhibitor

Stage 9.

- Remove four (4) plastic push/pull clips from front air duct and remove.
- Remove four (4) 12mm head bolts from end of chassis rail (per side).
- Remove two (2) 12mm head bolts from lower front edge of air dam.
- Remove bumper support.



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Stage 10.

- Using ECB steel mounting bracket as a guide mark and trim the smallest amount of air dam for steel mounting bracket to fit (per side).



Stage 11

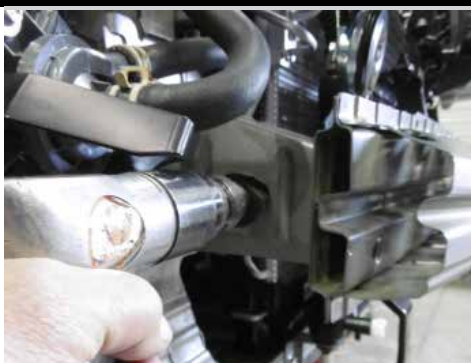
- Refit bumper support using original equipment fixings.



Stage 12.

- Remove washer line from crash can.
- Enlarge front outer hole in crash can to fit tube spacer.

Blow filings clear and treat all exposed metal with a rust inhibitor



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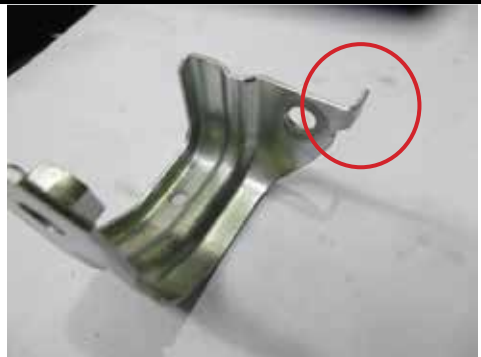
Stage 13.

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



Stage 14.

- Flatten out tab on cooler mounts with a hammer.



Stage 15.

- Install one (1) M8 x 1.25 x 100mm bolt, tube spacer, flat washer, spring washer and nut (supplied) (per side) into crash can. Ensure steel mounting brackets are parallel and vertical.

NOTE: Tube spacers are different sizes, drivers side is 64mm and passenger side is 72mm.

- Refit cooler mount into bumper support using two (2) M8 x 1.25 x 35mm bolt, spring washer and flat washer (supplied). Use original equipment fixings into cooler.
- **Tighten all bolts.**



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Stage 16.

- Remove sonar unit from original mount and refit to ECB steel mount with original equipment nuts.
- Fit plastic cover plate onto mount using three (3) M6 x 20mm bolts, flat washers and nyloc nuts (supplied).



Stage 17.

- Install ECB steel sonar mount onto back of bumper support using two (2) M8 x 1.25 x 35 bolt, spring washers and flat washers (supplied).



Stage 18.

- Install sonar unit and mount onto mount using two (2) M6 x 30 Bolts, flat washers and nyloc nuts.
- Extend wiring harness to sonar by 200mm using single core wire and joiners (supplied). Reconnect sonar.



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Stage 19.

- Remove centre parking sensors and extend wire harness by 150mm using single core wire and solder joiners.



Stage 20.

- Refit bumper in the reverse steps of 2 to 4.



Stage 21.

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



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Stage 22.

- Fit protection bar to outside of steel mounting bracket using four (4) M10 x 1.5 x 40 bolts, flat washers, spring washers and nuts (supplied).
- Align protection bar to vehicle and **tighten all bolts.**



Stage 23.

- Refit under body guard with original equipment fixings.



Stage 24.

- Test all electrical equipment for correct operation.
- Test drive vehicle to ensure parking sensors and driver aids are working correctly.

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 steel mounting brackets	2 - M8 x 1.25 x 100mm bolts
1 - Sonar mount	12 - M8 flat washers
1 - Sonar bracket	10 - M8 spring washers
1 - Plastic sonar cover	2 - M8 nuts
2 - Plastic sensor spacers	3 - M6 x 20mm bolts
1 - 10Nb spacer tube 64mm long	2 - M6 x 30mm bolts
1 - 10Nb spacer tube 72mm long	10 - M6 flat washers
4 - M10 x 1.5 x 40mm bolts	5 - M6 nyloc nuts
8 - M10 flat washers	6 - 150mm lengths single core wire
4 - M10 spring washers	5 - 200mm length single core wire
4 - M10 x 1.5 nuts	20 - Solder joiners
2 - M8 x 1.25 x 30mm bolts	4 - 150mm zip ties
4 - M8 x 1.25 x 35mm bolts	

Finished Product



Warranty Registration

Contact Details

Name: _____

Address: _____

Product: _____

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.

Or Register Online

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



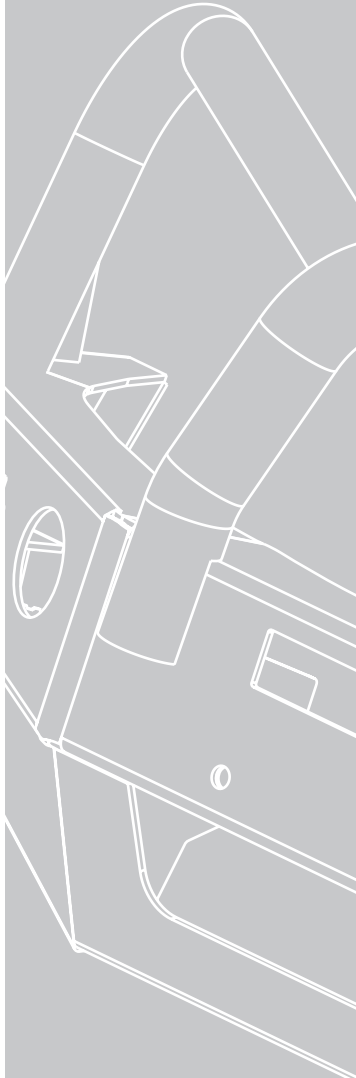
PN: NBM231SY
Please post to PO Box 122,
Margate QLD 4019

Notes

Full Name

Date

REPLACES: N/A
REVISED: 19.07.19



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Strongest Built Australian Made Lifetime Warranty

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