



INSTALLATION GUIDE

TOYOTA PRADO 250 SERIES 2025 ON

PN: BT170SY



WINCH BULLBAR

VEHICLE FRONTAL PROTECTION SYSTEM (VFPS)

FOR AIR BAG & ADR COMPLIANT VEHICLES

INDEX

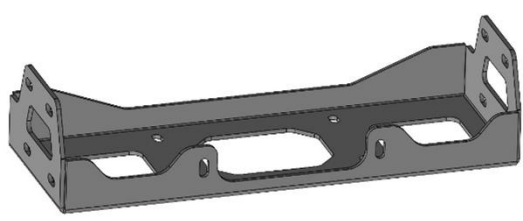
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INSTALLATION KIT

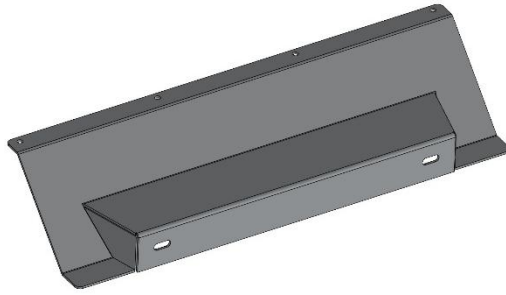
INSTALLATION KIT - BULLBAR

1	-	LH Bullbar Mount	30	-	M12 Spring Washers
1	-	RH Bullbar Mount	26	-	M12 x 1.25 Nuts
1	-	Winch Frame	2	-	M12 Nyloc Nuts
1	-	LH Outer Chassis Support	2	-	M10 x 1.5 x 100 Bolts
1	-	RH Outer Chassis Support	2	-	M10 x 1.5 x 40 Bolts
1	-	LH Inner Chassis Support	2	-	M10 x 1.5 x 35 Bolts
1	-	RH Inner Chassis Support	12	-	M10 Flat Washers
1	-	LH Outer Infill Support	6	-	M10 Spring Washers
1	-	RH Outer Infill Support	6	-	M10 x 1.5 Nuts
1	-	LH Inner Infill Support	2	-	M8 x 50 Bolts
1	-	RH Inner Infill Support	4	-	M8 x 40 Bolts
1	-	Infill Panel	6	-	M8 Spring washers
1	-	Center Under Guard	6	-	5/16 x 1 ¼ x 10g Flat Washer
1	-	LH Side Under Guard	4	-	M6 x 16 Bolts
1	-	RH Side Under Guard	12	-	M6 x 20 Bolts
2	-	Side Under Guard Mount	23	-	M6 x 25 Black Allen Dome Head Bolts
1	-	Camera Mount	28	-	M6 Black Flat Washers
1	-	Wiring Harness	28	-	M6 Flat Washers
4	-	Parking Sensor Extensions	4	-	M6 Spring Washers
1	-	Flare Template	8	-	M6 Nyloc Nuts
2	-	M12 x 35 cap Head Bolts	15	-	M6 Flange Nuts
30	-	M12 x 1.25 x 40 Bolts	4	-	10g x 25 Stainless Screws
58	-	M12 Flat Washers	4	-	Solder Joiners
1	-	Fog Lights	20	-	200mm Zip Ties

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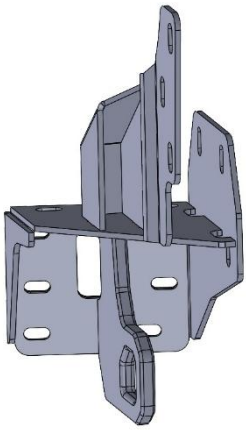
WINCH FRAME
BT170SY_WC6M



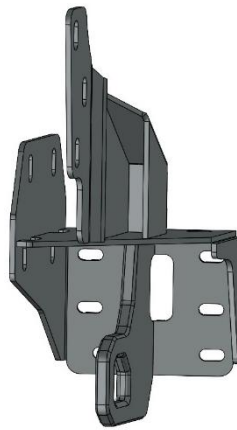
CENTRE UNDER GUARD WELDMENT
BT170SY_A11_CEN BASH



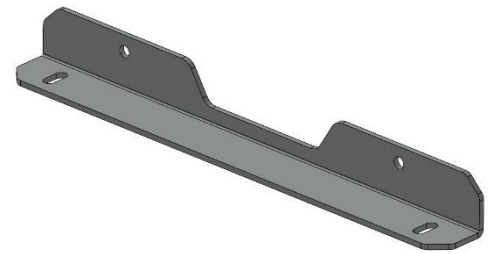
BODY FILL WELDMENT
BT170SY_A12



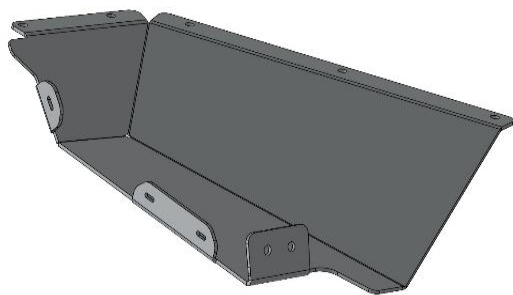
MOUNT ASSEMBLY
BT170SY_A2_RH



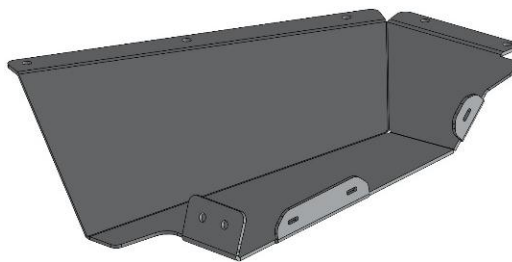
MOUNT ASSEMBLY
BT170SY_A2_LH



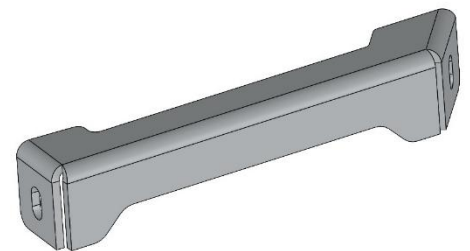
CENTRE UNDER GUARD BRACKET
BT170SY_CUGB6A



SIDE UNDER GUARD LH
BT170SY_SUG4A_LH

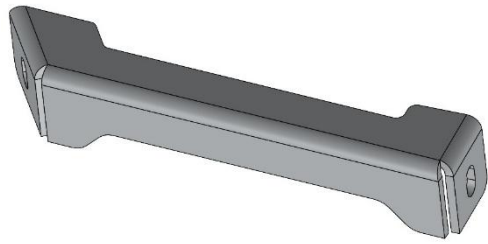


SIDE UNDER GUARD RH
BT170SY_SUG4A_RH

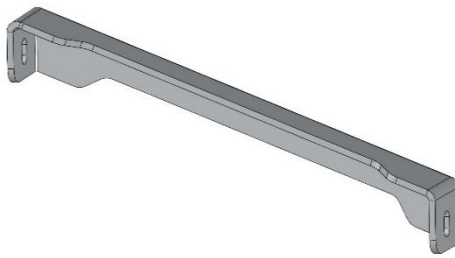


SIDE BODY FILL BRACKET LH
BT170SY_SBF3A_LH

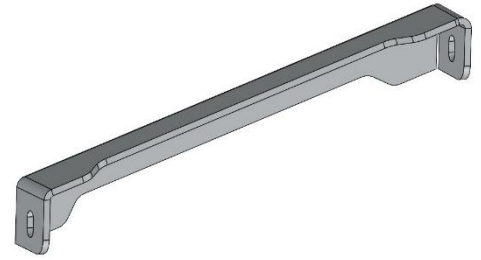
INSTALLATION KIT



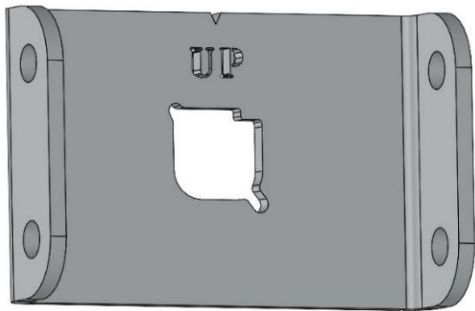
SIDE BODY FILL BRACKET RH
BT170SY_SBFB3A_RH



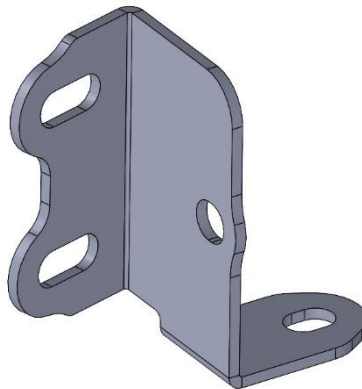
CENTRE BODY FILL BRACKET
BT170SY_CBFB3A_LH



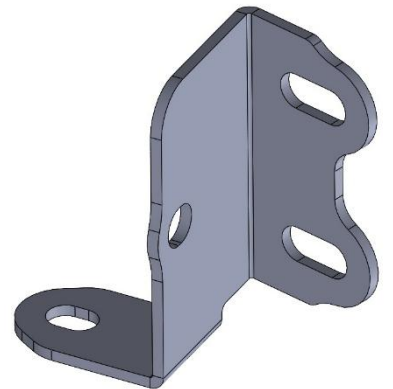
CENTRE BODY FILL BRACKET
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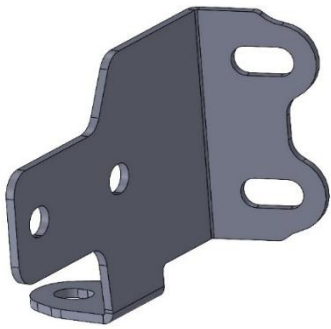
CAMERA MOUNT
BT170SY_CAMM3A_CAMERA



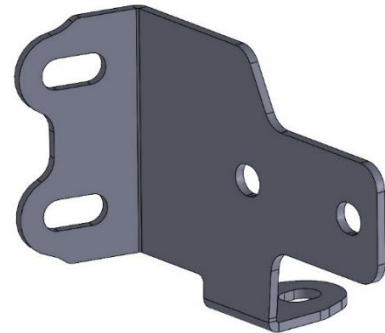
OUTER CHASSIS RAIL BRACKET LH
BT170SY_CRBOUT4M_LH



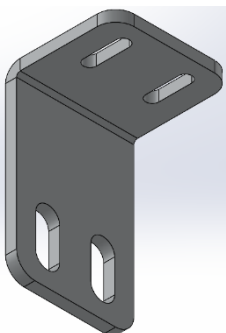
OUTER CHASSIS RAIL BRACKET RH
BT170SY_CRBOUT4M_RH



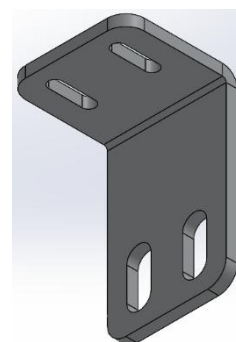
INNER CHASSIS RAIL BRACKET LH
BT170SY_CRBIN4M LH INNER



INNER CHASSIS RAIL BRACKET RH
BT170SY_CRBIN4M RH INNER



SIDE UNDER BODYGUARD BRACKET LH
BT170SY_SUGB6A_LH



SIDE UNDER BODYGUARD BRACKET RH
BT170SY_SUGB6A_RH

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STAGE 1 - VEHICLE PREPARATION

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.

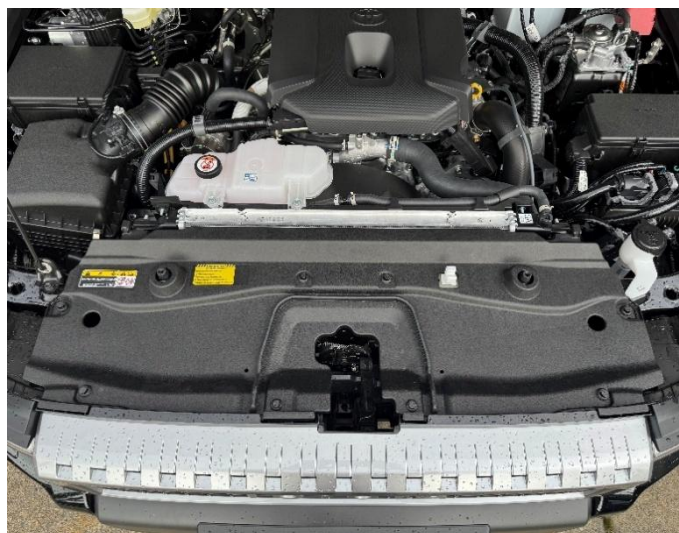
Unwrap ECB Protection bar and disconnect mounts.
Discard bolts.

Ensure these instructions are left with the vehicle owner and/or operator.



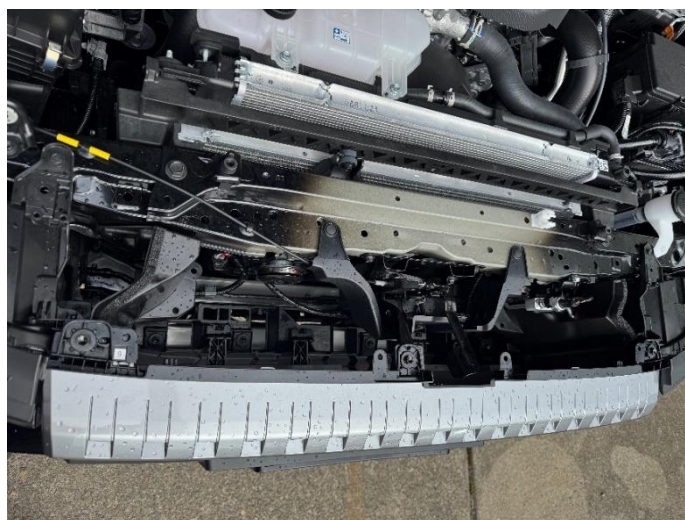
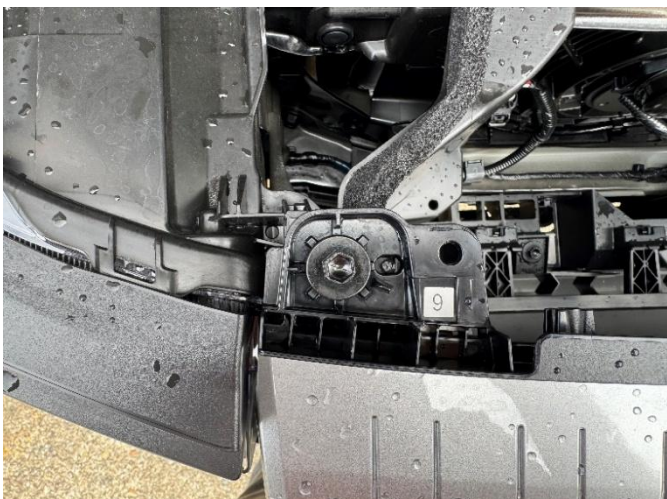
STAGE 2 - RADIATOR COVER

On radiator cover. Push the center of eight (8) plastic clips until they click. Gently lift center cover to dislodge clips and remove.



STAGE 3 - GRILLE ATTACHMENT

From under radiator cover, at rear of grille, remove three (3) 10mm head bolts.



STAGE 4 - LOWER END COVERS

In front of wheel arch, gently lever the center out of the clips and remove three (3) plastic pull clips. On underside three (3) 10mm head screws.



STAGE 5 - FLARE

Disconnect front of flare to allow access to sides of bumper.

Remove one 10mm head bolt and three (3) plastic center pull clips from wheel arch.

Slide trim removal tool under flare onto attachment point. The lever flare away from the bumper and guard.

Block out flare to allow access to sides of bumper.

Caution: Overstress of the flare will result in lighter patches in the coloring of the flare.



STAGE 6 - CENTER UNDERSIDE BOLT COVER

In front of the steel engine cover (underside of vehicle), remove plastic bolt cover, two (2) 10mm head bolts and one (1) plastic center pull clip.



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STAGE 7 - BUMPER

From sides and underside of bumper, remove two (2) 10mm head bolts and one (1) plastic center pull clip from sides of bumper and four (4) 10mm head bolts from underneath bumper



STAGE 8 - BUMPER WIRING

Gently pull bumper away from guard and lower headlight to unclip.

Reach behind bumper on drivers side to disconnect wiring harness for sensors and passengers side for tube for headlight washers and disconnect camera. Poke removed headlight tube up into vehicle or block to avoid losing washer fluid.

NOTE: If grille tops are still in position, tabs where bolts are removed have a pin which will(if careful) retain the bumper.



Passenger Side



Driver Side

STAGE 9 - BUMPER REMOVAL

Lift bumper slightly to remove from grille tabs. Remove from vehicle.



STAGE 10 - BUMPER INFILL

Remove two (2) push pull clips from the lower bumper infill.

Pull away from the alloy cross member to release other clips

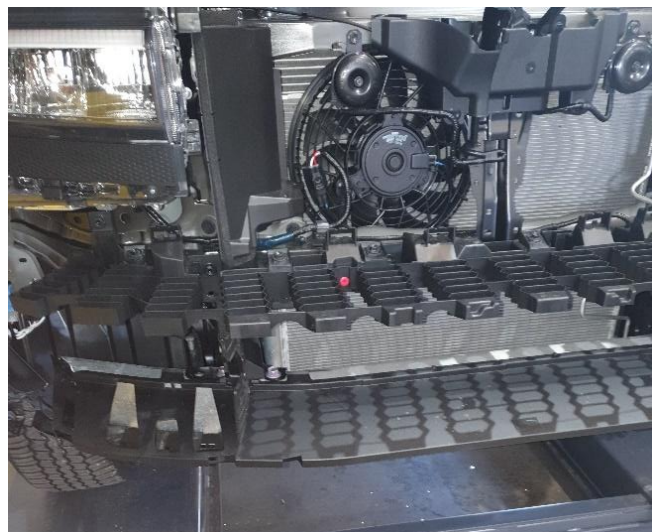


STAGE 11 - TOP HONEYCOMB INFILL

Remove six (6) 10mm head bolts from top of honeycomb infill.

Remove infill from vehicle.

From under infill, remove the infill mounting plastic section from the radiator support, seven (7) 10mm head bolts.



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STAGE 12 - AIR DAMS

Remove air dams from inside of chassis rail, two (2) Push/pull clips and one Christmas tree style clip per side.



STAGE 13 - CROSS MEMBER

From cross member, remove four (4) 17mm head bolts from the top and four (4) 17mm head bolts from bottom.

Remove the cross member.

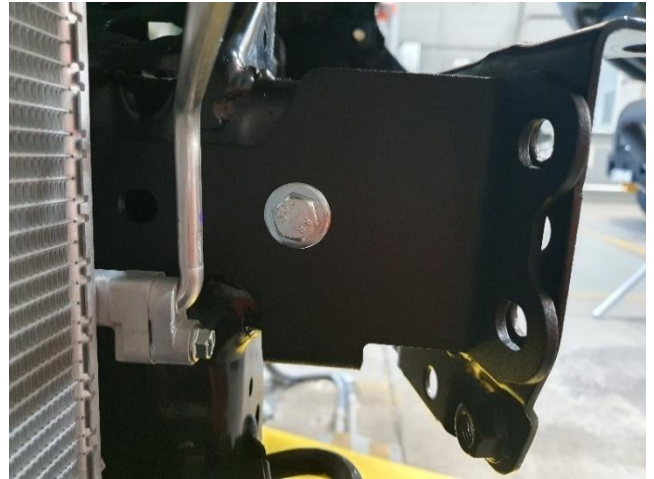
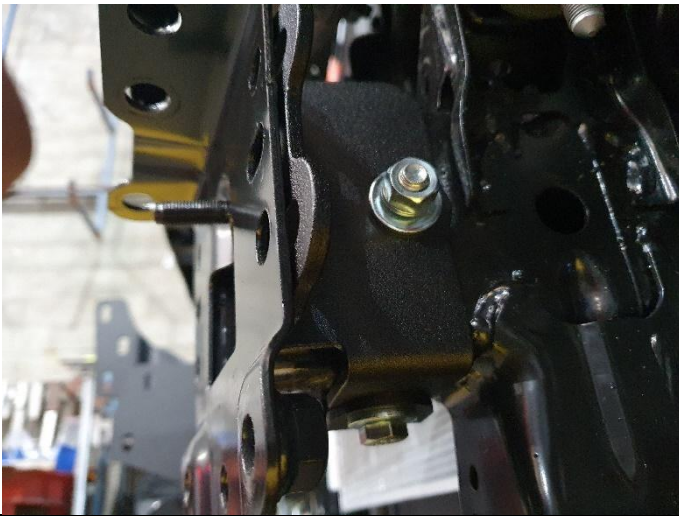


STAGE 14 - SUPPORT MOUNTS

Using one (1) M10 x 1.5 x 100 bolt, flat washer, spring washer and nut, attach rear chassis supports (2) to sides of chassis.

Align front holes and finger tighten only.

Insert one M10 x 1.5 x 40 bolt, flat washers, spring washer and nut up from bottom through both chassis support mounts.



STAGE 15 - BULLBAR MOUNTS

Fit bullbar mount to front of chassis rail with winch mount section to inside using six (6) M12 x 1.25 x 40 bolts, flat washers, spring washers and nuts top bolts and two (2) M12 x 1.25 x 40 bolts, spring washers and flat washers for lower bolts.

Place two upper bolts up from bottom to allow access to front bolts in chassis rail.

Finger tighten only.

Repeat for opposite side.



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STAGE 16 - WINCH MOUNT

Install winch mount between bullbar mounts using eight (8) M12 x 1.25 x 40 bolts, flat washers and nuts.

Align winch frame to top of bullbar mounts and tighten front top bolt only.



STAGE 17 - ALIGN MOUNTS

Centralize bullbar mounts to body of vehicle.

Tighten the outer top bolt first on each side, then completely tighten the rest of the bullbar mount to chassis rail.

Tighten the M10 bolts of the chassis rail supports the final bolts.

Loosen the winch frame bolts and allow them to float, as these will be adjusted and tightened later in the process.



STAGE 18 - WINCH INSTALLATION

Install winch now if required.

STAGE 19 - HEADLIGHT WASHERS

Remove headlight washer from bumper and install into Alloy infill using original removed PK screw.



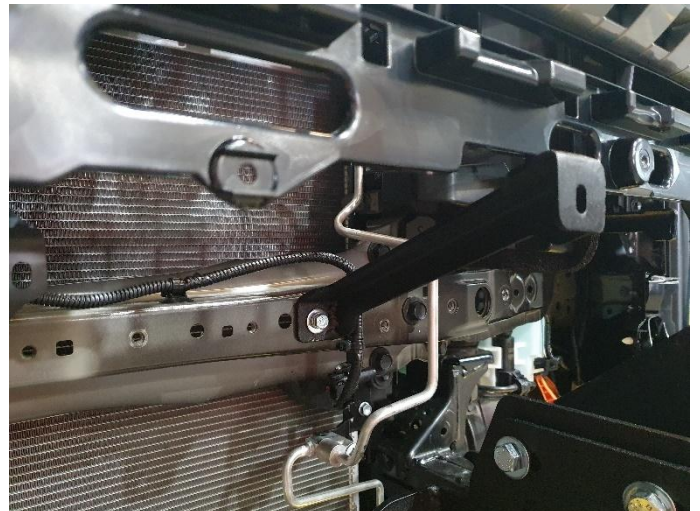
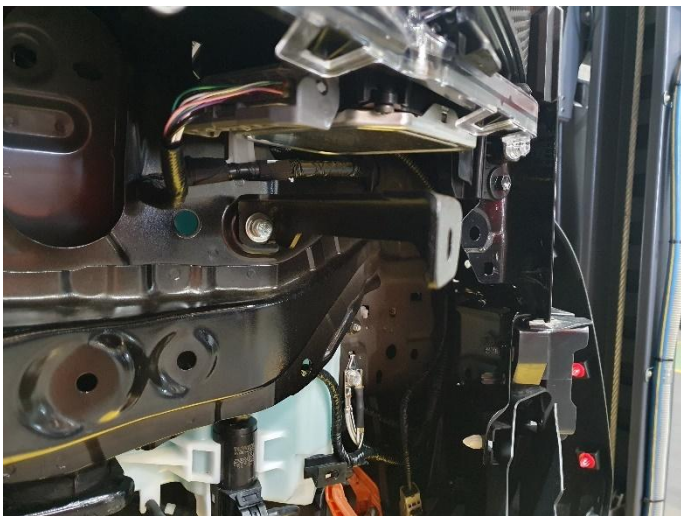
STAGE 20 - INFILL MOUNTS

Install infill mounts onto radiator support where plastic honeycomb mount was removed using M6 x 20 bolts, flat washers and spring washers.

Fingers tighten only until infill is installed. Tighten only as required for fitment.

NOTE: Some spacer washers may be required to get spacing of infill correctly to grille.

CAUTION: Ensure washers are fitted as on LH side of vehicle, bottle is close to radiator support.



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STAGE 21 - GRILLE REFITMENT

Remove grille from top of bumper, three PK screws and four lever clips. Unclip lever clips from rear of grille and gently pull away from bumper.

Refit grill to top mounts using original bolts removed previously. Tighten all bolts.



STAGE 22 - INFILL INSTALLATION

Fit infill to Infill mounts using M6 x 25 black Allen head bolts, flat washers and Nyloc nuts.

Finger tightens only.

Fit the infill to bottom of grille using three (3) black Allen head bolts and flange nuts. Two on outer corners and one in center.

Tighten infill to grille, then work back towards vehicle, tightening bolts as you align the infill.

NOTE: Some spacer washers may be required to get spacing of infill correct to the front of the vehicle.



STAGE 23 - OE WIRING HARNESS/ EXTENSIONS

Remove wiring from bumper.

Carefully zip tie water hose to electrical harness, then zip tie electrical harness to the infill panel. This stops the water hose being blocked when tightening the zip ties.

NOTE: Place the wiring harness over the top of the infill mounts for best wiring direction and minimal rub points.

Connect parking sensor extensions to the original harness ready for bullbar installation.



STAGE 24 - FOG LIGHT WIRING

Cut from wiring harness supplied with ECB Fog Lights, plugs to suit fog lights.

Cut fog light plug from vehicles harness. Using solder joiners supplied, wire fog light plugs to vehicle wiring harness.

Vehicle harness	ECB Harness
White / Black	Black
Green	Red

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STAGE 25 - BULLBAR WIRING HARNESS

A wiring harness has been created to follow the original wiring harness in the vehicle in all except the area at the firewall of the vehicle and should be fastened at 200mm to 300mm intervals.

At this point the harness moves from the underside of the battery tray to the wiring at the side of the AdBlue tank beside the front propeller shaft. This section needs to have some slack allowed to prevent damage to the wiring of the AdBlue tank allowing for the body to chassis movement. The wiring must then be well attached to the wiring of the AdBlue tank to ensure it does not become a hazard to the operation of the propeller shaft.

Installation Kit	
1 – Wiring Harness (IC24TOPRIPDH TR)	30 – Zip ties
Required Tools:	
Side Cutters	Small flat blade screwdriver

STAGE 25.1 - REMOVE SPARE TIRE

Remove spare tire from underside rear of vehicle using jack handle in the tool kit supplied by manufacturer of the vehicle.

From inside the rear door, remove plastic cover on right hand side of center and slide jack handle over top of spare wheel.

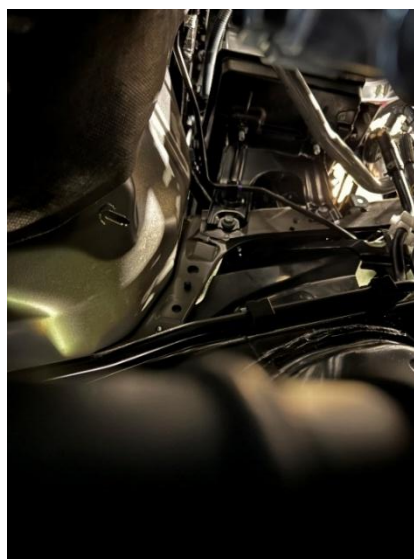
Wind handles anticlockwise to lower spare wheel.

Remove spare wheel.

STAGE 25.2 - ENGINE BAY WIRING

On the LH side of the engine bay, gently pull the front section of the wiring harness under the battery. Drop remaining wiring harness (rear section) below the vehicle to be run to the rear later.

NOTE: The battery tray sits on a raised bracket. The best way to house the harness is between the legs of the tray.

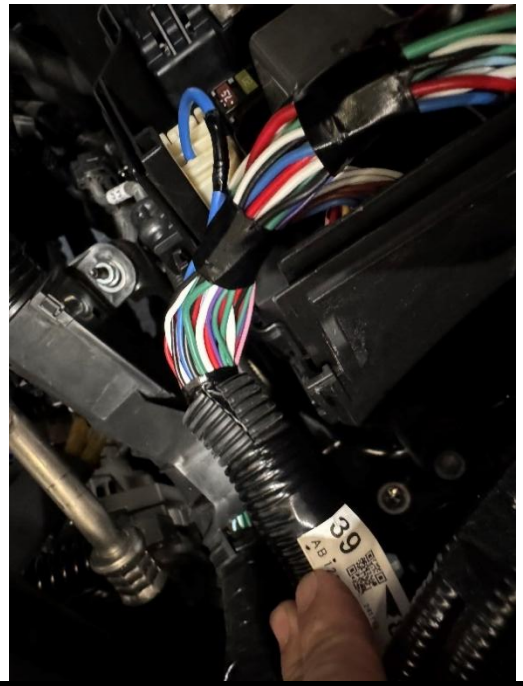


STAGE 25.3 - WIRING AROUND FUSE BOX

Run wiring under or beside the fuse box with the original wiring.

Attach the ground point of the wiring harness to the original 10mm head ground point of the vehicle.

Using this as the first point of attachment, zip tie wiring to original harness both forward to the headlights and rearward to the battery box.



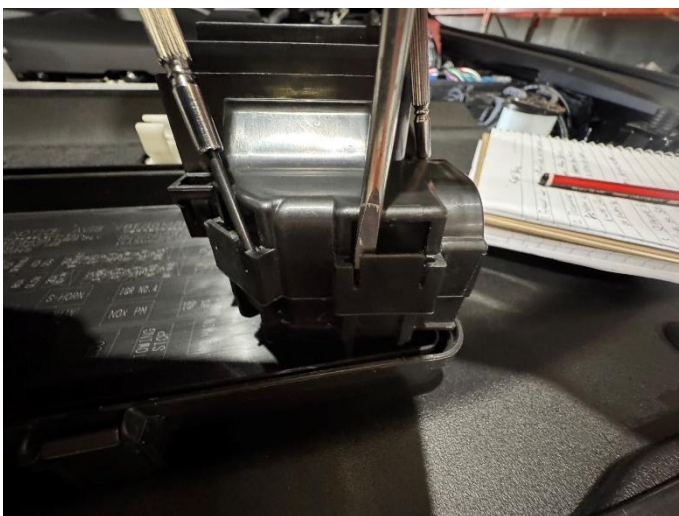
STAGE 25.4 - FUSE BOX

Remove lid of the fuse box.

On the front inner side of the fuse box is the wiring distribution point of the box.

Using a small screwdriver, release the distribution point from the main fuse box.

Release the three points holding the top of the cable holder to the bottom section of the cable holder. This comes apart from the main fuse box very easily.



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STAGE 25.5 - FUSE BOX WIRING

Run the wiring with the original wiring into the fuse box attaching to the harness every 200 to 300mm.

Reassemble the fuse box distribution point to include the single power wire.

Run wiring around the inner edge of fuse box and attach to point as shown in photos.

Reassemble the fuse box.

NOTE: this ignition switched connection only has a connection on one side of the plug. If a second connection is on the other side, do NOT use it. Use secondary connection point.



STAGE 25.6 - LH TO RH LIGHTS WIRING

Wiring runs forward under the headlight and across to the other side with revised bumper via the lower attachment points on the infill panel.

Allow bullbar connections to hang ready for bullbar installation.



STAGE 25.7 - INNER GUARD AND ADBLUE TANK

Attach wiring to inner guard down to chassis rail.

Wiring then jumps chassis rail to wiring on side of AdBlue reservoir.

Ensure to allow a small amount of slack between the inner guard and AdBlue tank to the wiring does not rub on the fuel lines.

Follow AdBlue tank wiring to rear of AdBlue Tank.



STAGE 25.8 - ADBLUE TANK TO REAR TANK CROSS MEMBER

From AdBlue tank, jump wiring to top of chassis rail and attach to vehicle original wiring from floor of vehicle.

Follow original wiring down chassis rail next to fuel tank attaching wiring every 200 to 300mm using zip ties provided.

At rear of fuel tank, wiring moves across top of tank to crossmember above rear axle.



STAGE 25.9 - REAR TANK CROSS MEMBER TO TRAILER WIRING CONNECTOR

On the rear crossmember, wiring crosses to the driver's side of the vehicle with the original vehicle wiring loom.

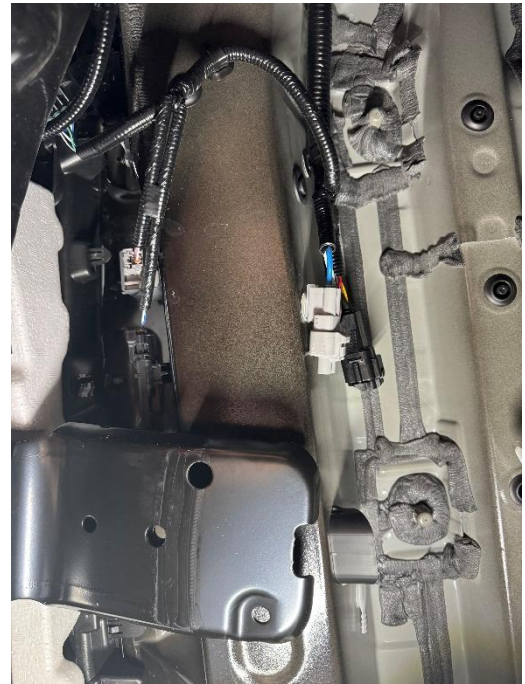
Follow this loom down the driver's side of the vehicle to the trailer wiring connection plug attaching wiring every 200 to 300mm using zip ties provided.



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STAGE 25.10 - TRAILER PLUG CONNECTION

Disconnect trailer wiring or remove wiring blanking plug.
Attach ECB wiring harness to the vehicle wiring. Attach trailer wiring to ECB wiring connector.
Should trailer wiring not be installed, refit blanking plug to empty socket of wiring harness.



EXTRA NOTES

Check length of wiring harness to ensure harness is attached to the original wiring harness at specified distances across whole of harness.

Ensure harness is not against moving parts or sharp edges.

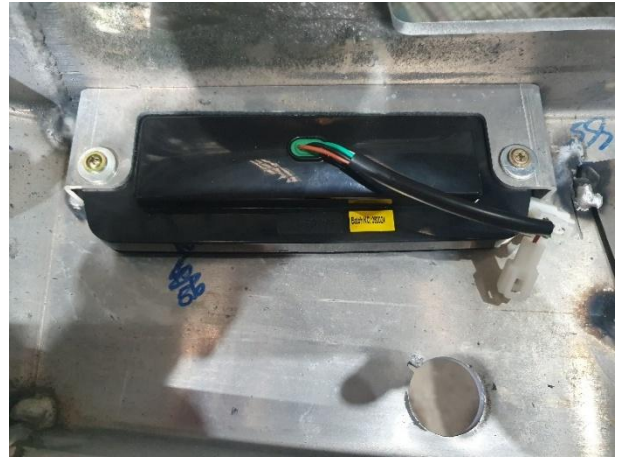
STAGE 26 - LOWER GUARD/BUMPER PODS

From front of pod remove one (1) 10mm head bolt.
In the wheel arch remove two (2) push/pull clips.
Just forward of the wheel arch on the outside, remove one push pull clip and unscrew one (1) red screw clip.
Gently lever pod off guard to release three (3) guard clips.



STAGE 27 - INDICATOR/ PARK LIGHTS

Place the whole light into the cradle behind the bullbar.
Screw in place using the 10g x 25 screws in the bolt kit.
Align with the front hole before tightening.



STAGE 28 - FOG LIGHTS

Insert fog light onto the rear of fog light bracket. Bolt down using four (4) M6 x 20 bolts, flat washers and flange nuts.
Align to hole and tighten.



STAGE 29 - CAMERA

Remove camera from bumper, two (2) PK screws.
Remove camera from steel bracket using T6 Torx Bit. Place camera into bullbar mount and secure using original T6 Torx screws
Attach camera housing to rear of bullbar mount using four (4) M6 x 16 bolts, flat washer to outside and flange nut.
Align and tighten.

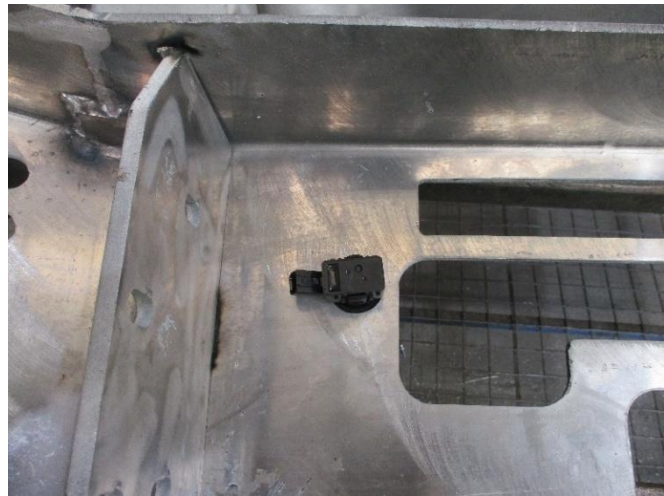


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STAGE 30 - PARKING SENSORS

Remove parking sensors from the bumper and Install parking sensor to plastic mounts in the rear of the bullbar.

NOTE: Parking sensors are different from inner to outer and should be placed in bar in the same place and direction as removed from the plastic bumper.



STAGE 31 - BULLBAR INSTALLATION

Install bullbar to vehicle using six (6) M12 x 1.25 x 40 bolts, flat washers, spring washers and nuts.

Attach bullbar to flared section of the winch frame using two M12 x 35 cap head bolts, flat washer and nyloc nut to rear. Where a winch is installed, use fairlead from winch installation kit. Align winch frame to rear of alloy bar.

Align bullbar to front of vehicle ensuring top of product is level to the vehicle. Tighten all bolts on both bullbar and winch frame.

NOTE: Front of product slopes rearward at bottom of front face. Align using top face as the datum point.



STAGE 32 - TRIM FLARES

Check the template included in this instruction for correct sizing. Cut the template from the page using sharp scissors.

Mask area of flare to be cut.

Place template over the flare ensuring correct location and mark flare with cut line. Check cut line to bullbar top face.

As every fitment is different, cut the flare under the line, then work the cut up till you have 12 – 15mm gap to the top of the bullbar.



STAGE 33 - RE-ASSEMBLE FLARE

Remove all the masking tape and ensure the cut is clean and neat.

Reclip flare back to vehicle using all the original clip as per removed.

STAGE 34 - SIDE UNDERBODY GUARDS

Place side underbody guard into position above bullbar wings.

Fit using five (5) black Allen head bolts, flat washers, and nyloc nuts.

Remove tow points from under vehicle, two 17mm head bolts (per side), retain bolts. Place side under guard mount on top of tow point and refasten using original bolts. Fit the rear side underbody guard, to side under guard mount using two M10 x 1.5 x 35 bolts, flat washers, spring washers and nuts.

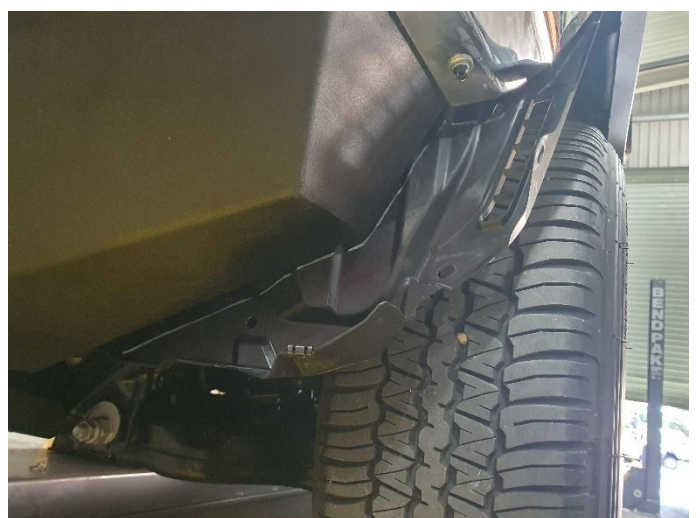
Repeat for opposite side of vehicle



STAGE 35 - INNER GUARD

Cut the inner guard to suit the rear of the bullbar and the underbody guard.

Push the inner guard behind the end cap of the bullbar and above the under guard so it clips behind.



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STAGE 36 - FRONT UNDER GUARD

Remove original center steel underbody guard and the plastic gearbox underbody guard, ten (10) 14mm head bolts.

Install center underbody bracket finger tight to the front crossmember with the angle up at front using original bolts temporarily.

Fit the front alloy under belly guard to the top of the skirt flange using four (4) Allen head bolts, black flat washers and nyloc nuts.

Using two (2) M8 X 35 bolts, attach to front of angle.

Align and tighten Allen head bolts and rear bolts of guard. Do not tighten crossmember bolts yet.



LAST STAGE – CHECK SAFETY FEATURES

Check all safety features working correctly.

Turn off blind spot sensors (refer to vehicle manual).



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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

IMPORTANT INFORMATION

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



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REPLACES: 00.00.00

REVISED: 16.06.25