



INSTALLATION GUIDE

TOYOTA HIACE 2019 ON

PN: BT190SY



❖ **FITS 6TH GEN H300 VEHICLES**

VEHICLE FRONTAL PROTECTION SYSTEM (VFPS)
FOR AIR BAG & ADR COMPLIANT VEHICLES

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INSTALLATION KIT

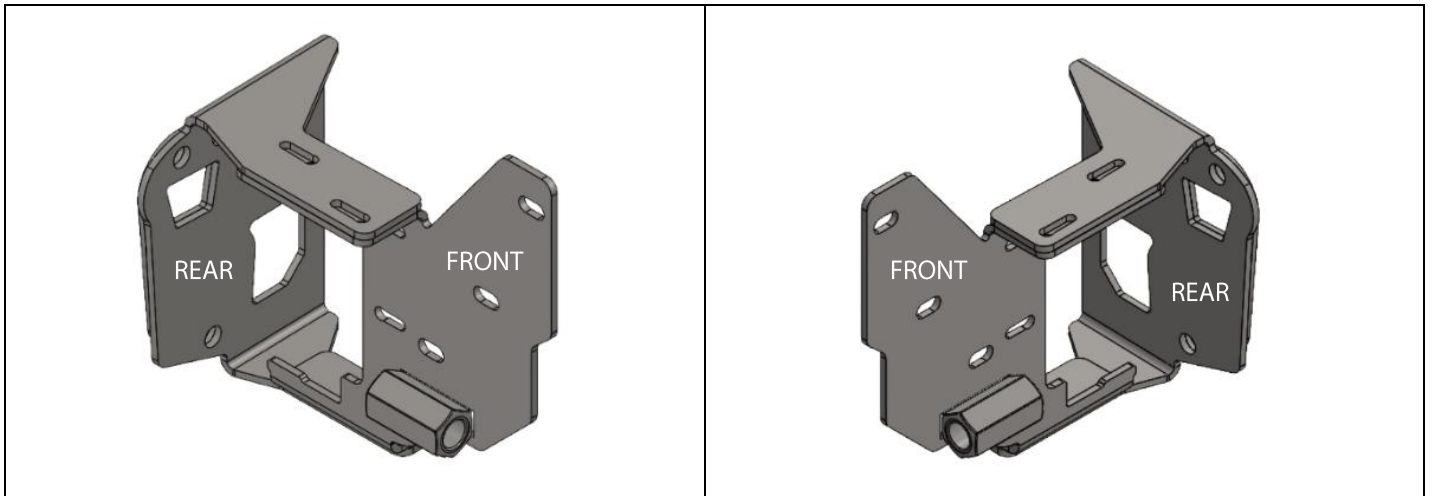
INSTALLATION KIT - PROTECTION BAR

1	-	Pair rear mounting brackets (BT190_B6M)	6	-	M6 flat washers
1	-	Pair front mounting brackets (BT190_A6M)	4	-	M6 flange nuts
1	-	Pair support brackets (BT190_M6M)	2	-	M6 nyloc nuts
2	-	ECB Tow hooks M24 x 260mm	1	-	Perspex sonar cover
6	-	M12 x 1.75 x 40mm bolts	1	-	Indicator/park/DRL kit
12	-	M12 flat washers	1	-	Quick click kit (IC15TOHLOIPDH)
6	-	M12 x 1.75 Nyloc nuts	2	-	Parking sensor mounts (ICSENSELC300)
2	-	M10 x 1.5 x 85mm bolts	1	-	Pair sensor extensions (IC21TOCCSP1H)
10	-	M10 x 1.5 x 30mm bolts	2	-	Alloy Sensor Bracket (BT186_S3A)
8	-	M10 x 1.25 x 40mm bolts	2	-	Sensor Clip Insert (BT190_PSBUSH)
30	-	M10 flat washers	8	-	Solder Joiners
10	-	M10 Spring washers	4	-	200mm Lengths Single Core Wire
2	-	M10 x 1.5 nut plate on 200mm wire	1	-	2500mm lengths 6mm clip lock
10	-	M10 x 1.5 Nyloc nuts	2	-	1200mm lengths 3mm clip lock
2	-	M6 x 30mm bolts			

FASTENER TORQUE SETTINGS:

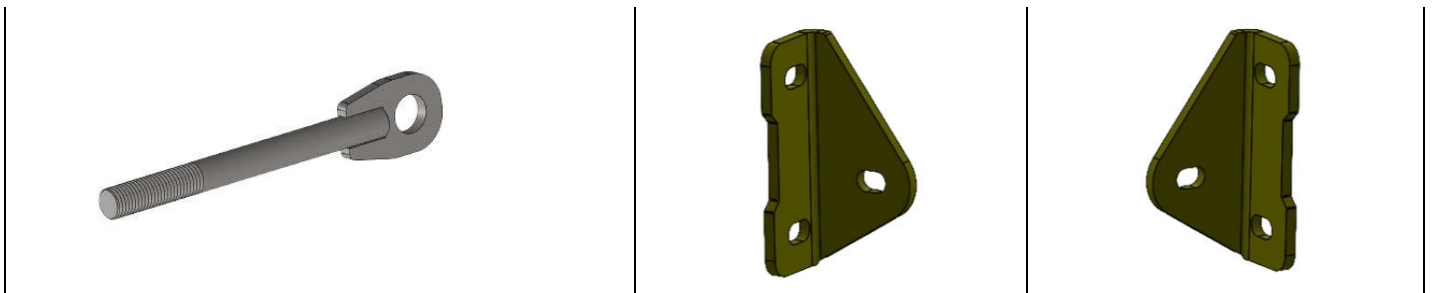
Diameter	Thread Pitch	Recommended Assembly Setting	
M12	1.75	77 Nm	56.8 lbf.ft
M10	1.5	44 Nm	32.5 lbf.ft
M6	1.0	7 Nm	5 lbf.ft

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Steel mounting Bracket
Left Hand

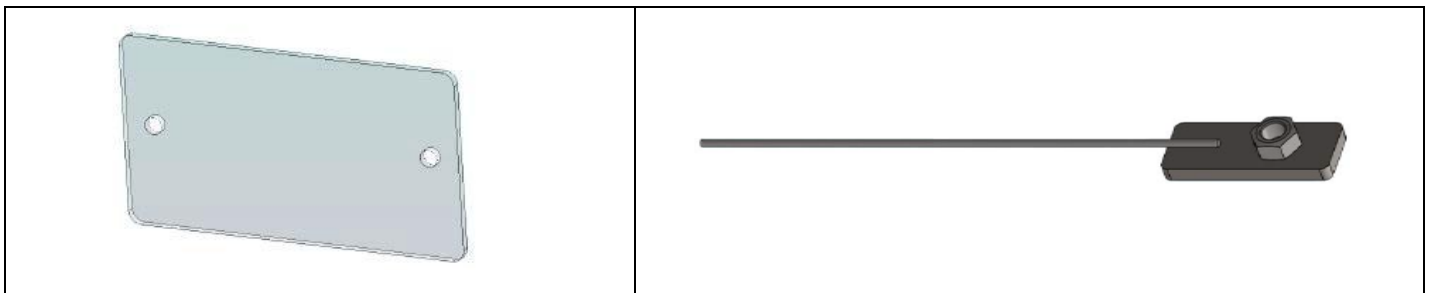
Steel mounting Bracket
Right Hand



2 x ECB Tow hooks

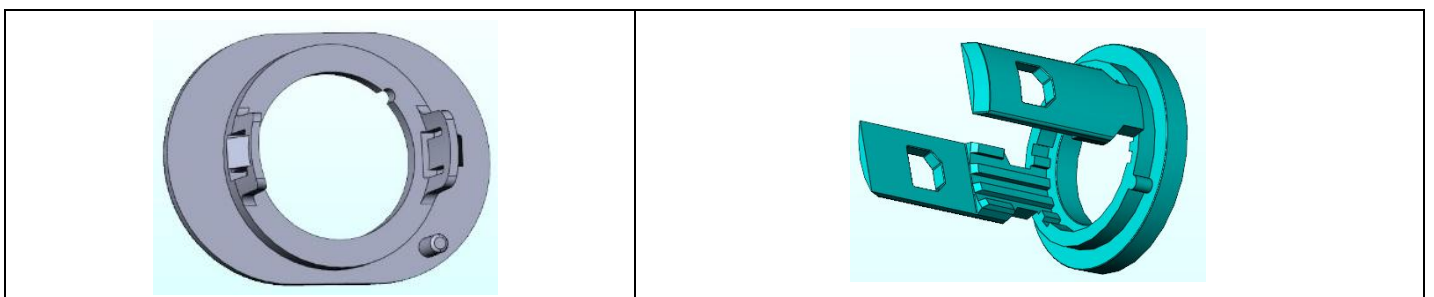
Steel support bracket

Steel support bracket



Perspex sonar cover

M10 x 1.5 nut plate on 200mm wire



OVAL FLAT OUTER SENSOR CLIP

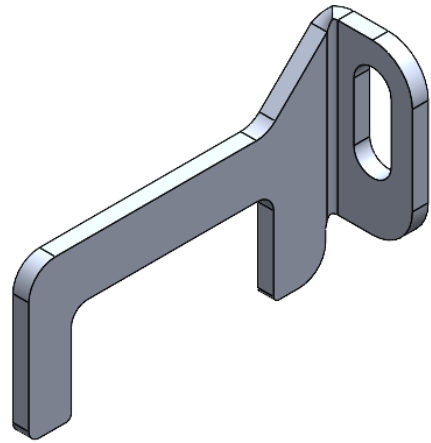
300 SERIES SENSOR INNER CLIP

INSTALLATION KIT

THESE PARTS TO SUIT EARLIER MODEL PARKING SENSORS



Sensor Clip Insert (BT190_PSBUSH)



Alloy Sensor Brackets (BT186_S3A)

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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.

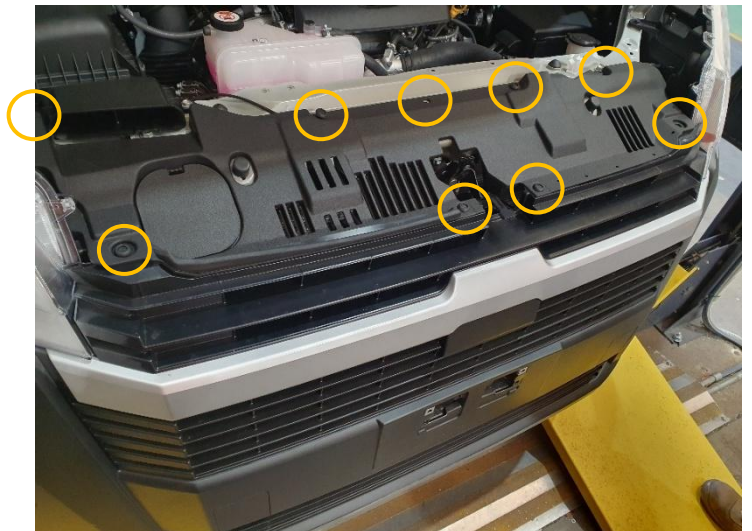
Unwrap ECB Protection bar and disconnect mounts. Discard bolts.

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



STAGE 2 - TOP RADIATOR COVER

Remove top cover from grille, nine (9) push/ pull plugs



STAGE 3 - TOP BUMPER FIXINGS

Remove three (3) 10mm head bolts beside headlight and centre of grille and four (4) 10mm head bolts top of grille.

Pull bumper up slightly and forward to unclip.



STAGE 4 - ELECTRICS DISCONNECTION

Disconnect parking sensors and sensors next to bonnet latch.

Two connectors, one rear of sonar unit, another left side of upright.



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STAGE 5 - REMOVAL OF SPLASH GUARDS

Underside of vehicle remove fourteen (14) push/ pull plugs, two (2) 10mm head screws and four (4) 10mm head bolts.

Remove plastic splash guard.



STAGE 6 - INNER WHEEL ARCH

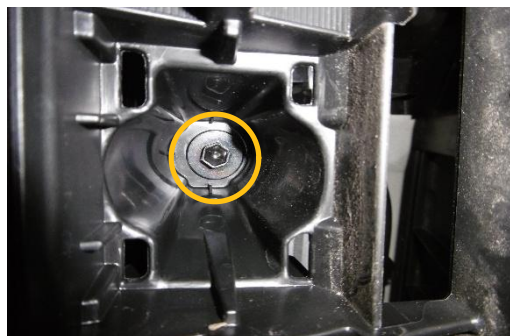
Remove one (1) push/ pull plug, per side under guard bumper join.



STAGE 7 - LOWER BUMPER

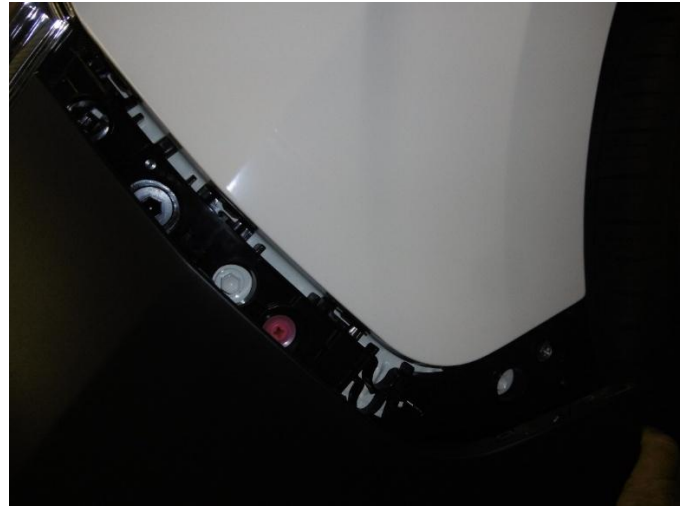
Front of bumper, in lower grille remove tow point cover. Unclip lower section by pushing down on clips and remove cover.

Remove two (2) 10mm head bolts,



STAGE 8 - REMOVE BUMPER

Gently pull bumper away from guard at wheel arch at rear working towards center unclipping plastic retainers.
Repeat same on opposite side and remove bumper.



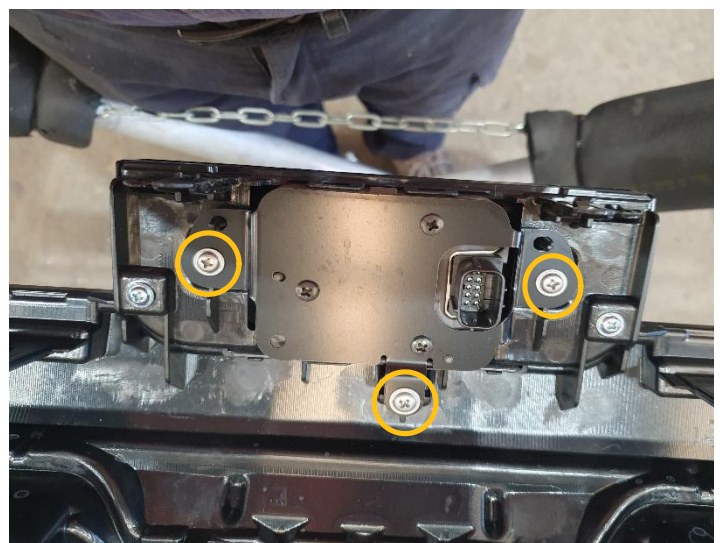
STAGE 9 - AIR DAMS

Remove foam from bumper support.
Remove upper and lower air dams, two (2) push/ pull clips either side of center air dam.
Gently pull side air dams away from vehicle.



STAGE 10 - REMOVE RADAR

Unclip top of grille from bumper. Remove three (3) Phillips head screws one (1) each side of radar and one (1) in center.
Carefully remove radar.
Reattach grilles and bumper.



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STAGE 11 – RADAR INSTALLATION

Place two (2) M6x30mm bolts, M6 flat washers through sonar unit from rear, flat washers and nuts.

Tighten all bolts.

Place M6 nut and M6 washer on each bolt.

Fit to protection bar as per picture. Place plastic cover on front and secure using M6 flat washers and M6 nyloc nuts.

Align and tighten.

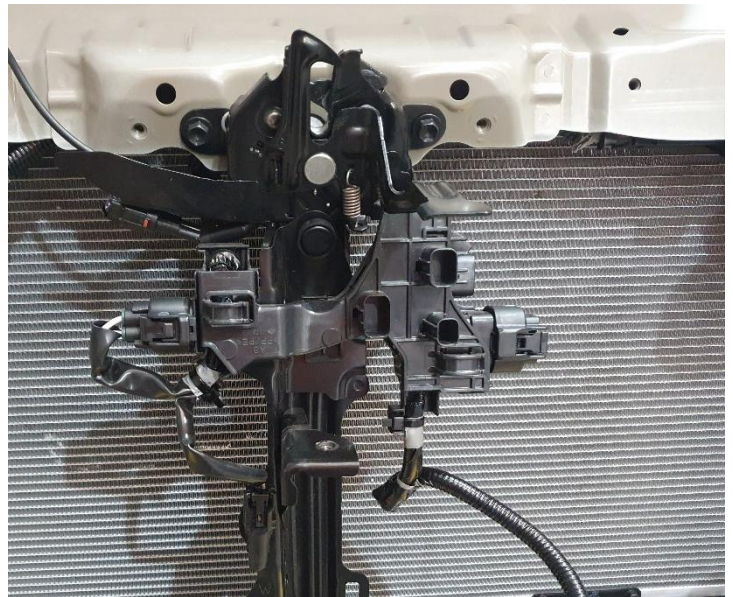


STAGE 12 – RADAR WIRING

Unclip junction box just under bonnet release and redirect radar wiring out of opposite side of box, reclip box once done.

Remove tape to allow full harness length.

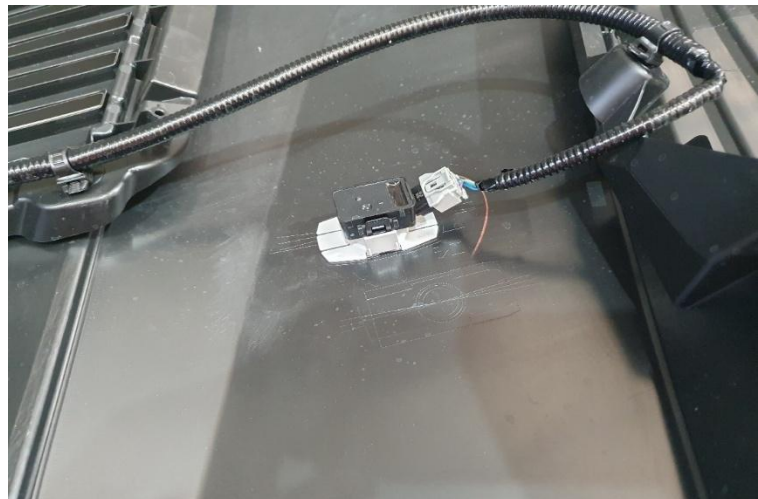
Feed harness through grille once bumper refitted.



STAGE 13 – REMOVE PARKING SENSORS

Remove parking sensors from housings in bumper.

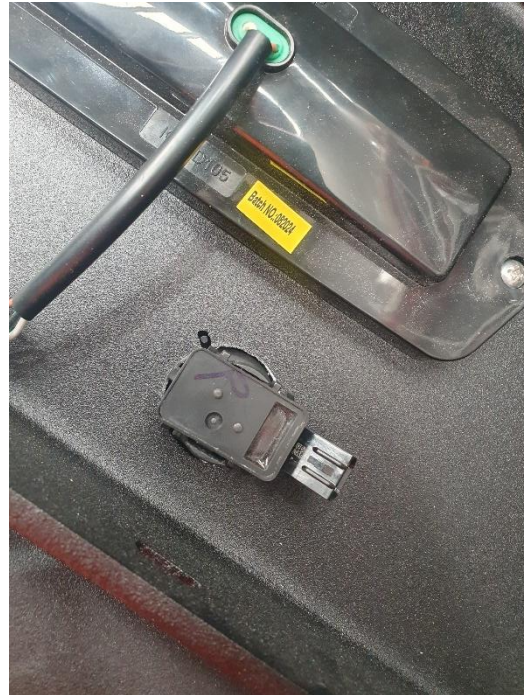
Ensure silicon ring comes with sensor and is not removed.



STAGE 14 – INSTALL PARKING SENSORS

- ❖ For MY2025 and onwards

Fit parking sensors to sensor housing in same direction as they were in bumper.



STAGE 14B - PARK SENSOR INSTALLATION

- ❖ For MY2024 and earlier models

Fit parking sensors to Protection Bar using brackets supplied, M6 x 20mm bolts, flat washers and Nyloc nuts (supplied).

CAUTION: light pressure only is required. Excessive pressure will cause false readings from sensor.



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STAGE 15 – PARKING SENSOR HARNESS

Extend parking sensor harness with extension harness. (supplied).



STAGE 16 – REMOVE PARK/ DRL LIGHTS

Remove Park lights/DRL's from bumper five (5) Phillip's head screws.

Should bumper park light/DRL's not be present in the bumper, drill hole midway down the blanking infill large enough to fit wiring harness.

This is to allow access for fog light and DRL harness.



STAGE 17 – LIGHT WIRING

Connect indicator/ park light to connector at rear of headlight with patch harness supplied.

Ensure harness is clear of any sharp edges and moving parts.



STAGE 18 - INDICATOR FITMENT

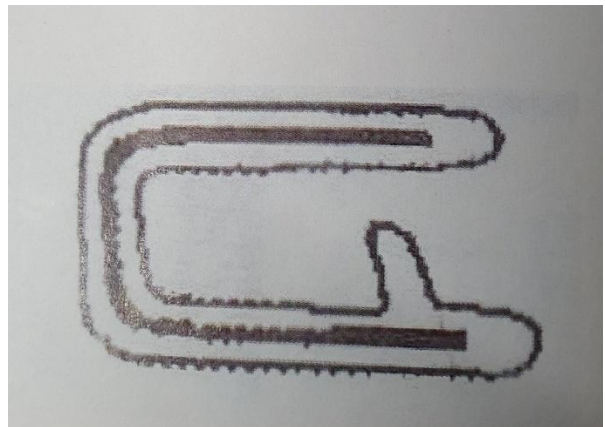
Fit ECB LED indicator/ park/ DRL lights into protection bar as per instructions supplied with LED indicator kit.



STAGE 19 - CLIP LOCK TRIM

Attach 6mm clip lock trim to top of ECB protection bar.

NOTE: Trim off lower edge on an angle so trim will sit flush with end of protection bar.



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STAGE 20 - BUMPER TRIM

Use template (supplied) with this instruction, check measure to ensure correct sizing.

Using a sharp pair of scissors, cut template and join where required.

Mask up area to be cut to avoid any damage. Mark cut lines using template and ensure lines are straight and correct.

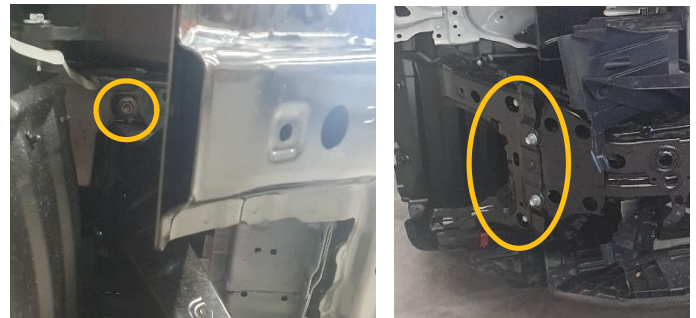
Trim bumper using jigsaw or similar.



STAGE 21 - OUTER SUPPORTS

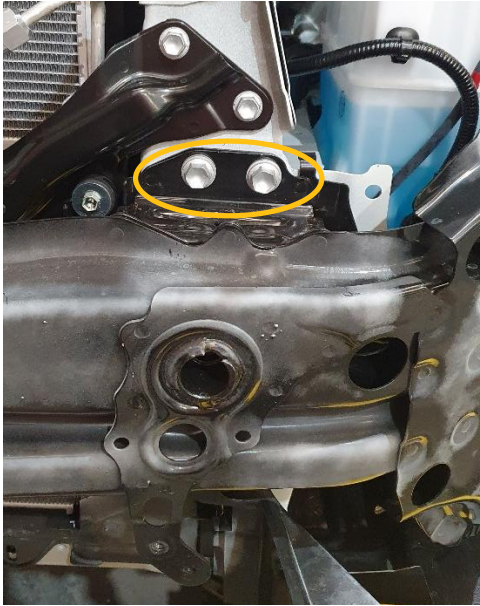
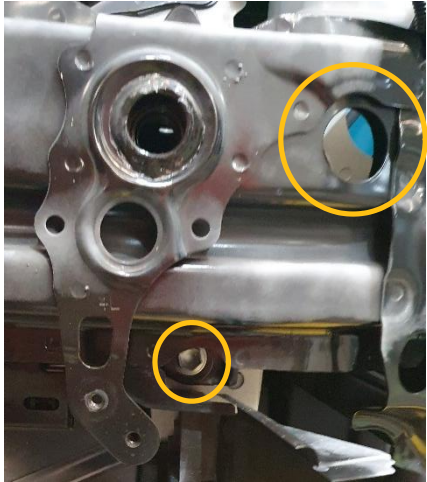
On end of bumper support, remove four (4) 14mm head bolts and one (1) push pull clip per side.

Rear of crash member outer edge on side of chassis rail, remove one (10) 12mm nut, remove outer supports.



STAGE 22 - BUMPER SUPPORT

Remove main rail (4) four 14mm head bolts per side.
Lift bumper support as removing.

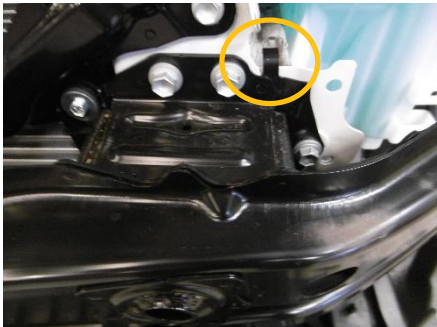


STAGE 23 - SUPPORT BRACKET INSTALLATION

On top of bumper support, flatten hanger hooks out to remove from the mounting area.

Place nut plate on wire through hole in rear of bumper support. From front using tow pin hole in cross member, secure support plate using M10 x 85mm bolt, M10 spring washer and M10 flat washer. NOTE: Place hole to bottom of mount. See photo stage 24, L/H side shown.

Repeat for R/H side.



Nut plate on wire

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STAGE 24 – MOUNT INSTALLATION

Place inner mounting bracket between end of rail and bumper support. Use M10 x 1.25 x 40mm bolts, M10 spring washer and M10 flat washer to secure bumper support back to chassis rail.

Fit front mount to rear mount using M10 x 1.5 x 30mm bolts, M10 flat washers and M10 x 1.5 Nyloc nuts, finger tighten.

Secure support brackets to front mounts, M10 x 1.5 x 30mm bolts, M10 flat washers and M10 x 1.5 Nyloc nuts.

Align mounts and tighten all bolts.



STAGE 25 – BUMPER REFITMENT

Refit bumper as per reverse of removal.



STAGE 26 – PROTECTION BAR FITMENT

Fit protection to vehicle using M12 x 1.75 x 40mm bolts, M12 flat washers and M12 x 1.75 Nyloc nuts.

Align protection bar with vehicle, tighten all bolts.

Connect sensors and sonar.

Check fit of tow hooks to ensure fitment to skirt.

Refit under belly guard.



STAGE 27 – CONNECTIONS, CHECKS AND TESTING

Test indicators/park/DRL lights, bumper lights, parking sensors and sonar for correct operation.

Test drive vehicle to ensure all driver assist perform as intended.

Place tow hooks into tool kit of vehicle. Inform owner of tow hook placement.

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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