



## INSTALLATION GUIDE

**TOYOTA KLUGER 03-21 ON**

**PN: BT35SY**



**BULLBAR WITH BUMPER LIGHTS  
VEHICLE FRONTAL PROTECTION SYSTEM (VFPS)  
FOR AIR BAG & ADR COMPLIANT VEHICLES**

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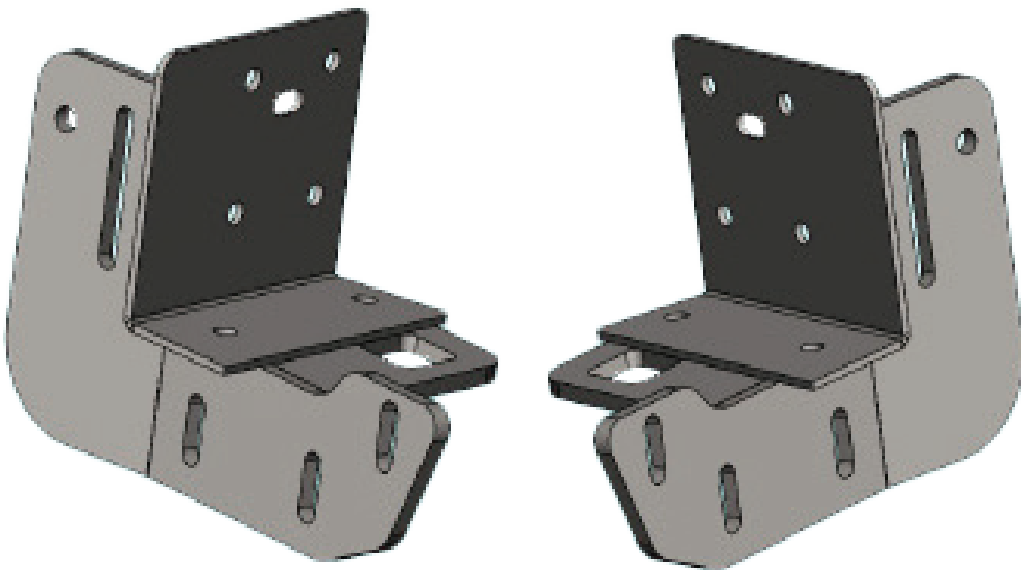
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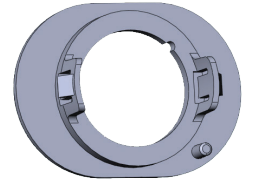
Final Checks

# INSTALLATION KIT

1 - Pair Ecb Steel Mounting Brackets	2 - M6 Spring Washers
2 - Tube Spacers 10nb 112mm Long	2 - M6 Nuts
4 - 40 X 40 X 4mm Spacer Washer 13mm Holes	2 - 8-18 X 12 Self Drilling Screws
6 - M12 X 1.25 X 40mm Bolts	1 - Indicator / DRL / Park Light Kit
12 - M12 Flat Washers	8 - Cable Locks
6 - M12 Spring Washers	1 - Bumper Light Kit
6 - M12 Nuts	1 - Quick / Click Bumper Light Harness
2 - M10 X 1.5 X 140mm Bolts	2 - Bumper Light Trims
2 - M10 X 1.25 X 35mm Bolts	4 - Parking Sensor Plastic Inserts (ICSENS 21KLU INS)
6 - M10 Flat Washers	4 - Extension Wires 150 Long
2 - M10 Spring Washers	8 - Solder Joiners
2 - Nyloc Nuts	1 - 6mm Clip Lock 2600mm Long
2 - M10 X 1.25 Nut And Washer On 300mm Wire	1 - Convoluted Tubing 500mm Long
2 - M6 X 20 Bolts	



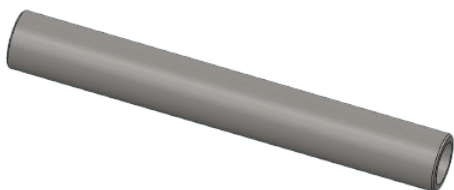
Pair ECB Steel Mounting Brackets  
Fitted to Bar



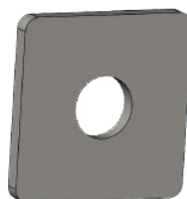
Flat Oval  
Outer Brackets



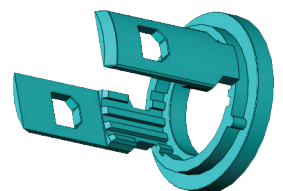
Kluger Insert  
(ICSENS 21KLU IST)



2 x 10NB x 112mm spacer tube  
In Bolt Kit



4 x 40 x 40 x 4mm Spacer Washer  
with 15mm Hole  
In Bolt Kit



LC300 Inner Sensor  
Mounts

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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.

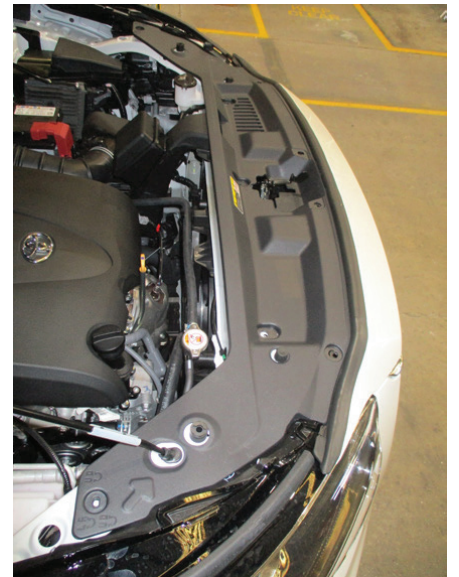
Apply parking brake and lift bonnet.

Unwrap ECB Protection Bar and disconnect mounts.  
Discard bolts.



## STAGE 2 - RADIATOR COVER

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



## STAGE 3 - BUMPER TOP BOLTS

Remove four (4) x 10mm head bolts from top and center mounts.  
Grille and bumper will be removed in one piece.





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## STAGE 4 - WHEEL ARCH/BUMPER BOLTS

Under front of vehicle, from front ends of inner guards, remove three (3) x 10mm head screws (per side).



## STAGE 5 - SPLASH GUARD BOLTS

From underside of front edge of plastic splash guard/bumper join, remove ten (10) x 10mm head screws.



## STAGE 6 - SPLASH GUARD BOLTS

On center splash guard, remove three (3) x 10mm head bolts and two (2) x push pull clips. Remove center under body guard.



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## STAGE 7 - FLARE CLIPS

From rear of flare, remove one (1) x 10mm head bolts, two (2) x plastic push pull clips.



## STAGE 8 - DISCONNECT ELECTRICAL

Pull inner guards rearward away from front of bumper and wheel arch to allow access to rear of flare.

Disconnect bumper sensor and camera wiring loom from behind bumper on drivers side. Unclip wiring from rear of fog light assembly (per side).



## STAGE 9 - DISCONNECT FLARE

Unclip flare to second clip past guard/bumper join.

Lower clips are accessed from rear of bumper whilst top two clips are push only style clips which need to be carefully levered out.





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## STAGE 10 - BUMPER REMOVAL

Gently unclip bumper from retaining clips where bolts are removed from inner guard and pull guard sides outwards to release from guard.

Carefully remove bumper from vehicle.



## STAGE 11 - REMOVE POLYSTYRENE INFILLS

Remove polystyrene infill from bumper supports.



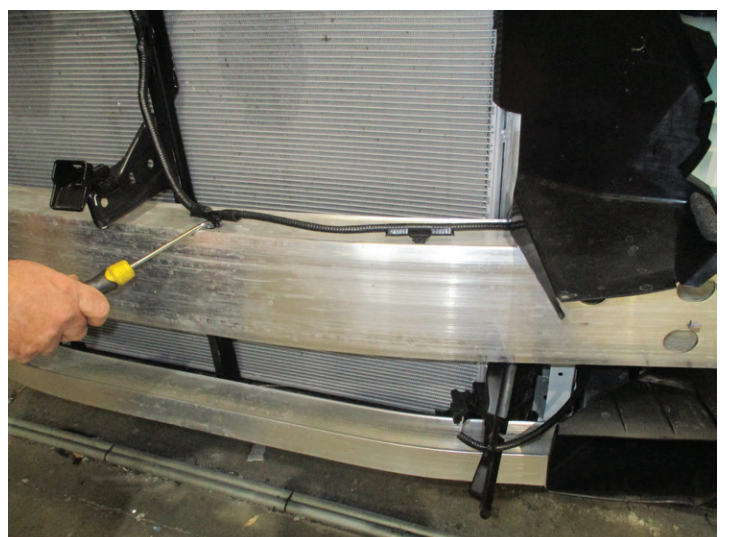
From passenger side of vehicle, remove transmission cooler shroud, three (3) x 10mm head bolts. Retain for re-fitment.



## STAGE 12 - WIRING REMOVAL

From top of Alloy bumper support, remove wiring and allow to hang.

This will be refitted later.

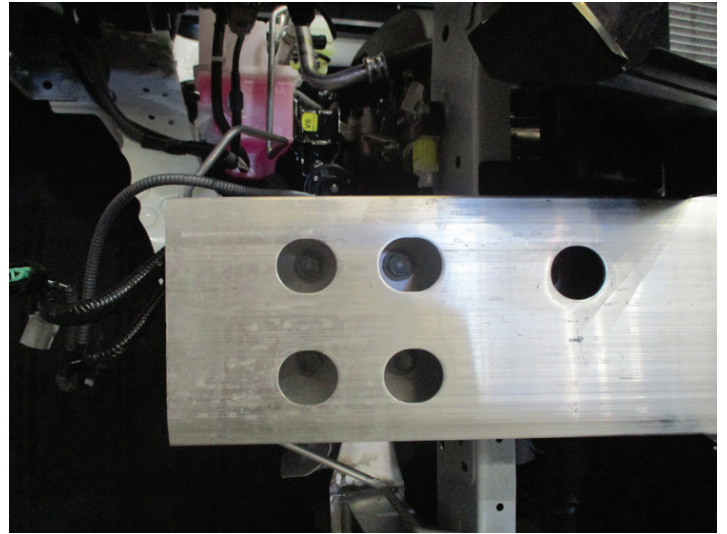


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## STAGE 13 - ALLOY BUMPER SUPPORT

Remove top Alloy bumper support, eight (8) x 14mm head bolts, accessible from holes in front of support. Retain for re-fitment.

Remove lower Alloy bumper support, two (2) x 12mm head nuts. Retain for re-fitment.



## STAGE 14 - CHASSIS PREPARATION

Using a step drill or similar, enlarge outer hole in rail to allow access for tube spacer.

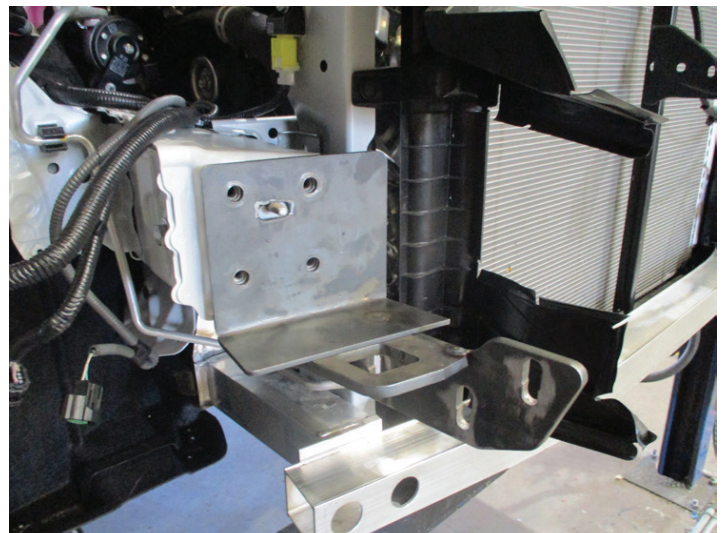
**Blow filings clear and treat all exposed metal with a rust inhibitor.**



## STAGE 15 - STEEL MOUNT INSTALLATION

Fit steel mounting brackets (supplied) onto the end of chassis rails.

In rear hole previously enlarged fit M10 x 1.5 x 140mm bolt, flat washers, tube spacer and Nyloc nut per side (supplied). **FINGER TIGHT AT THIS STAGE.**



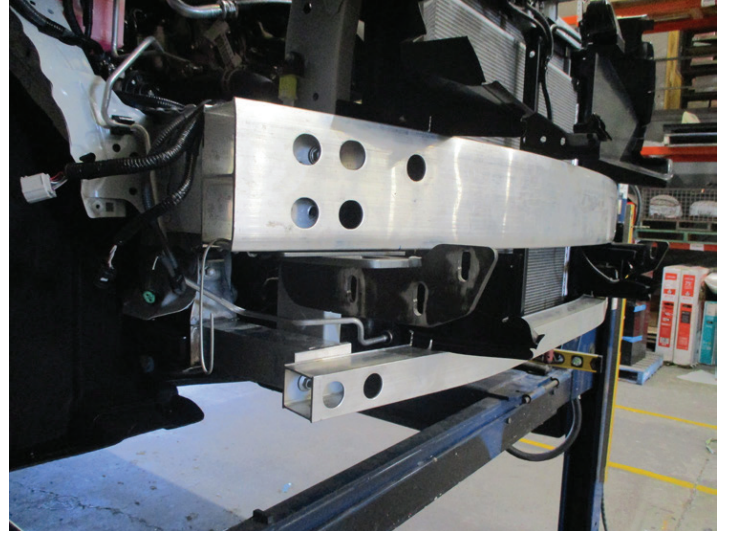


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## STAGE 16 - BUMPER SUPPORT RE-FITMENT

Refit Alloy bumper support using original equipment bolts.

Align mounts and tighten all bolts.



## STAGE 17 - STEEL MOUNT INSTALL

Using steel mounting bracket as a guide drill a 10mm hole into under side of top Alloy support per side.

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

Attach using M10 x 1.25 x 35mm bolt, spring washer, flat washer, steel spacer washer and nut and washer on wire per side (supplied).

**Tighten all bolts.**

Refit lower Alloy bumper support using original equipment nuts.



## STAGE 18 - TRANSMISSION SHROUD TRIM

Using steel mount as a guide, mark and cut shroud on transmission cooler to fit around steel mount.

Refit transmission shroud at a later stage.



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## STAGE 19 - PARKING SENSOR RELOCATION

Remove bumper sensors from bumper. Install sensor spacer to top of sensor and relocate to plastic sensor mounts in Protection Bar.

Remove fog lights and tow point trims in bumper to allow access for wiring to get to rear of Protection Bar.

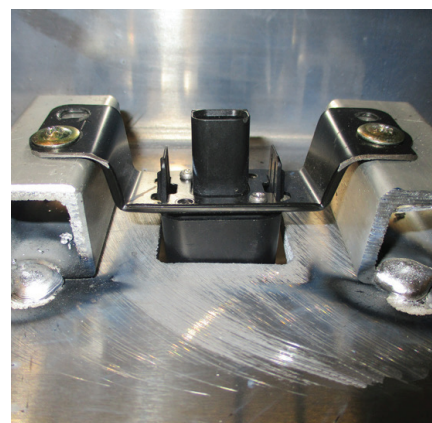
Disconnect wiring from rear of bumper and feed wiring through hole for inner wiring and fog light hole for outer wiring. Wiring is not extended.



## STAGE 20 - CAMERA RELOCATION

Remove camera from behind grille and relocate to Protection Bar using two (2) x self tapping screws (supplied).

Extend camera wiring with solder joiners and 160mm wire extensions (supplied).

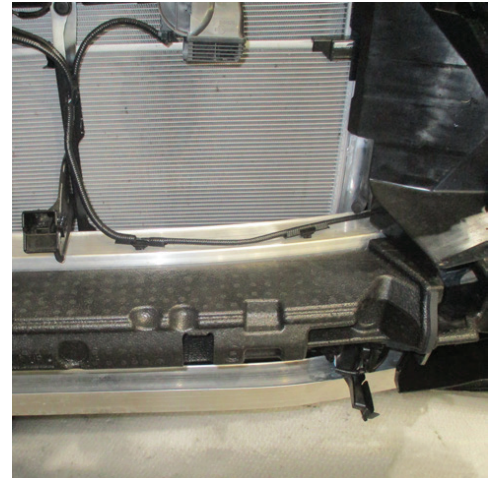




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## STAGE 21 - WIRING RE-FITMENT

Refit wiring to top of Alloy support.



Trim polystyrene infill for access to tie down point on steel mounting bracket and refit.

**DO NOT FIT LOWER POLYSTYRENE AT THIS STAGE.**



## STAGE 22 - LOWER GRILLE TRIM

Using steel mounting bracket measurement as a guide, mark and trim lower grille for access to tie down point and Alloy mount to fit through to steel mount.





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## STAGE 23 - BUMPER RE-FITMENT

Refit bumper as per reverse steps of 2 to 10.

Connect all wiring.



## STAGE 24 - BUMPER LIGHT WIRING

Splice ECB wiring harness into wiring harness behind headlight using cable locks (supplied).

Ensure harness is clear of sharp edges and moving parts.

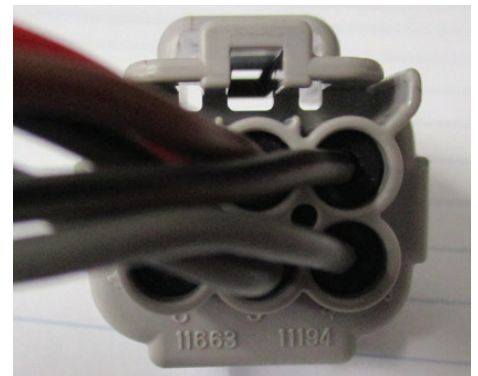
**NOTE:** Pin out information is correct on donor vehicle at the time of development.

Please check all connections are correct for the vehicle you are working on.



2 Pin Plug

PIN NUMBER	COLOUR	USE
1	BLUE	INDICATOR

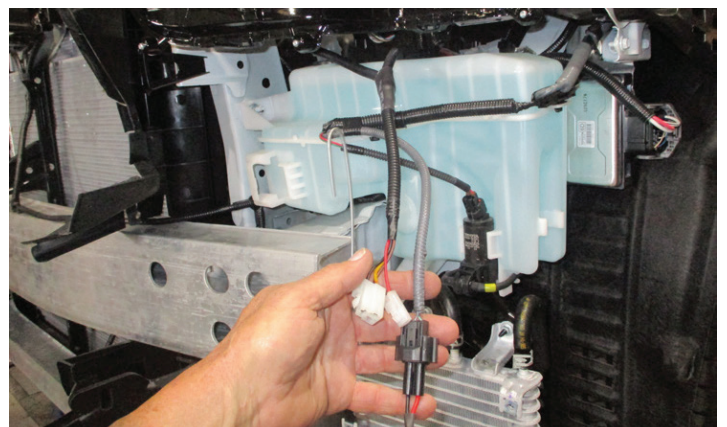


6 Pin Plug

PIN NUMBER	COLOUR	USE
2	LT GREEN	PARKING LIGHT
3	PURPLE	DRL
4	WHITE/BLACK	EARTH

## STAGE 25 - BUMPER LIGHT WIRING

Connect ECB Quick Click bumper light wiring harness (supplied) into original wiring harness.



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## STAGE 26 - INDICATOR/PARK LIGHT FITMENT

Fit ECB LED indicator/park lights into Protection Bar as per instructions supplied with the LED indicator kit.

**NOTE:** Ensure park light is to top.

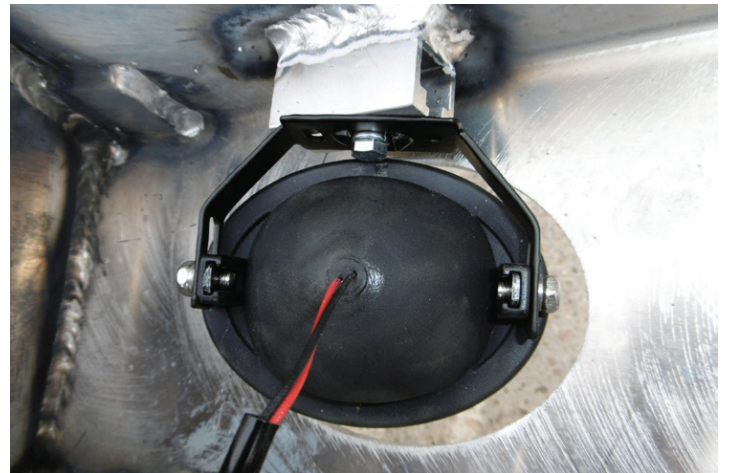


## STAGE 27 - BUMPER LIGHT INSTALLATION

Attach ECB bumper lights to Protection Bar. Place M6 x 20 bolts, spring washers (supplied) through light mount from inside and attach nut to top. Slide assembly into light mount in Protection Bar and centralise light to hole.

**TIGHTEN FIRM ONLY.**

Install bumper light surrounds (supplied) to bumper light openings. Large side of surround to inside of opening.

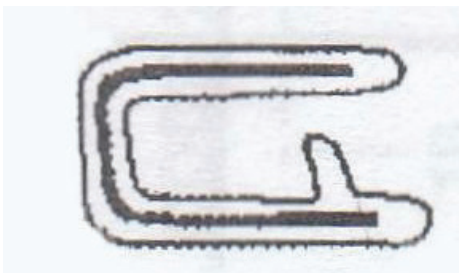


## STAGE 28 - CLIP LOCK TRIM

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

**NOTE:** Trim off lower edge on an angle so trim will sit flush with end of Protection Bar.

Attach 3mm clip lock trim (supplied) to tow point openings in side skirts. Place join to top and seal with silicon for best results.





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## STAGE 29 - PROTECTION BAR INSTALLATION

Fit Protection Bar onto steel mounting brackets using M12 x 1.25 x 40mm bolts, flat washers, spring washers and nuts (supplied).

Access bolts from under side of bumper.

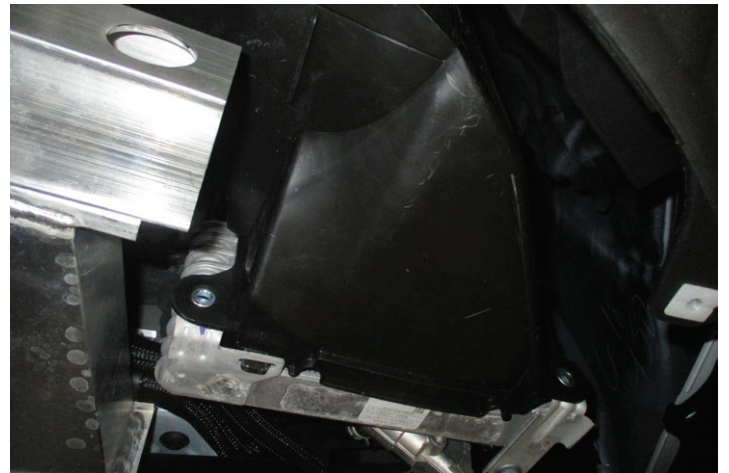


## STAGE 30 - TRANSMISSION SHROUD FITMENT

Refit transmission shroud with original bolts.

Refit lower polystyrene.

Refit under body guard with original bolts and clips.



## STAGE 31 - CONNECT, CHECK AND TEST

Connect all electrical equipment and check for correct operation.

Road test vehicle to ensure all safety systems are working correctly.





# FINAL CHECKS

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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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