



## INSTALLATION GUIDE

# TOYOTA PRADO 250 SERIES 2025 ON

PN: NBT170SY



## NUDGE BAR

VEHICLE FRONTAL PROTECTION SYSTEM (VFPS)

FOR AIR BAG & ADR COMPLIANT VEHICLES

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# INSTALLATION KIT

## INSTALLATION KIT - NUDGE BAR

1	-	1 – LH Mounting Bracket	16	-	16 – M10 Flat Washers
1	-	1 – RH Mounting Bracket	8	-	8 – M10 Spring Washers
1	-	1 – LH Support Bracket	2	-	2 – M8 x 1.25 x 40 Bolts
1	-	1 – RH Support Bracket	4	-	4 – M8 Flat Washers
2	-	2 – Spacer Plates	2	-	2 – M8 Spring Washers
4	-	4 – M12 x 1.25 x 50 bolts	2	-	2 – M8 x 1.25 Nuts
4	-	4 – M12 Spring Washers	2	-	2 – Parking Sensor Extension Harness
4	-	4 – M12 Flat Washers	1	-	1 – 300mm Length Convuluted Tubing
8	-	8 – M10 x 1.5 x 35 Bolts	10	-	10 – 200mm Zip Ties
8	-	8 – M10 x 1.5 Nuts			

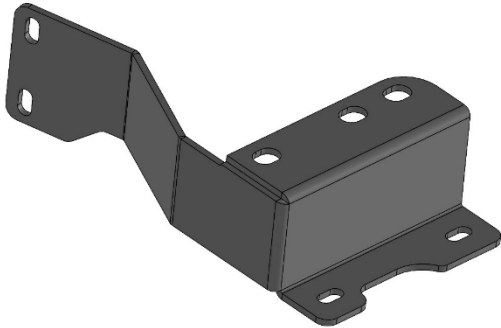
## REQUIRED TOOLS

Basic Socket Set	Steel ruler
Basic Screwdriver set	Low tack masking tape
Torque Wrench	Scissors
Jewelers Torx set	Jigsaw or similar multitool with blade suitable for cutting plastic
Trim Removal Tool	File
Tape Measure	Touch up paint

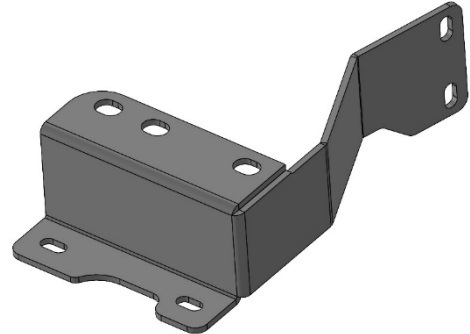
## FASTENER TORQUE SETTINGS:

Bolt Size	Torque Setting (Nm/ Lb)	Bolt Size	Torque Setting (Nm/ Lb)
M12 x 1.25	96 / 72	M8 x 1.25	25 / 18.75
M10 x 1.5	51 / 38.25		

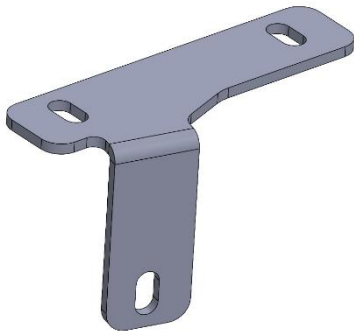
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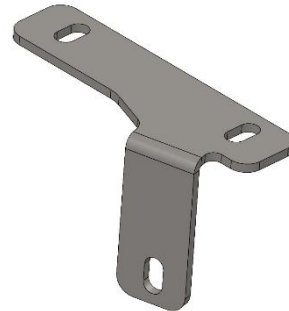
Left Hand Mount  
(NBH170\_MB5M\_LH)



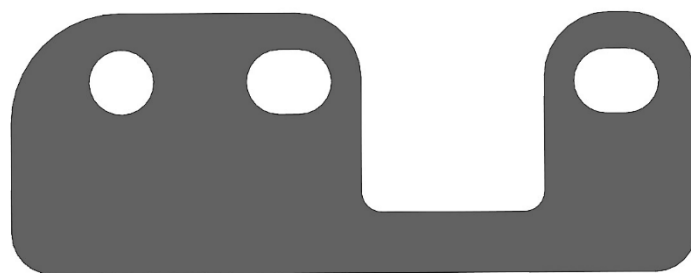
Right Hand Mount  
(NBH170\_MB5M\_RH)



Left Hand Support Mount  
(NBH170\_SB5M\_LH)



Right Hand Support Mount  
(NBH170\_SB5M\_RH)



Mount Spacer  
(NBT170SY\_SPB4M)

## 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.

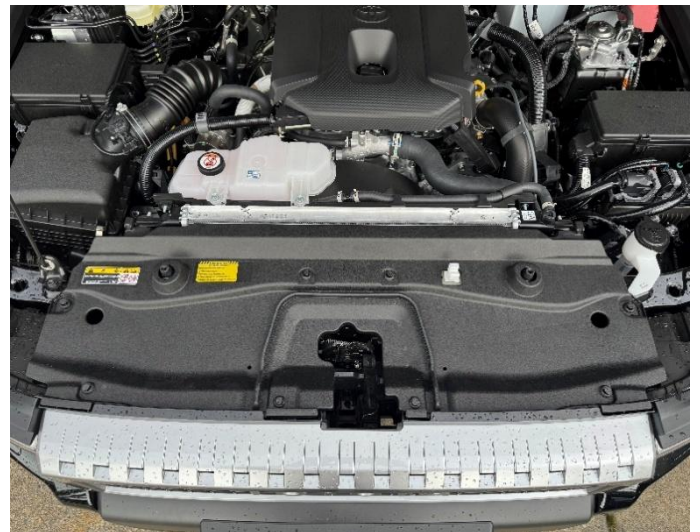
Unwrap ECB Protection bar and disconnect mounts. Discard bolts.

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



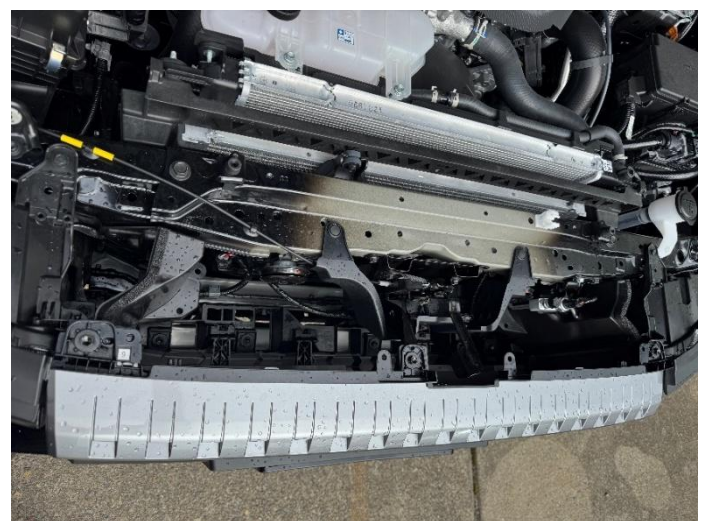
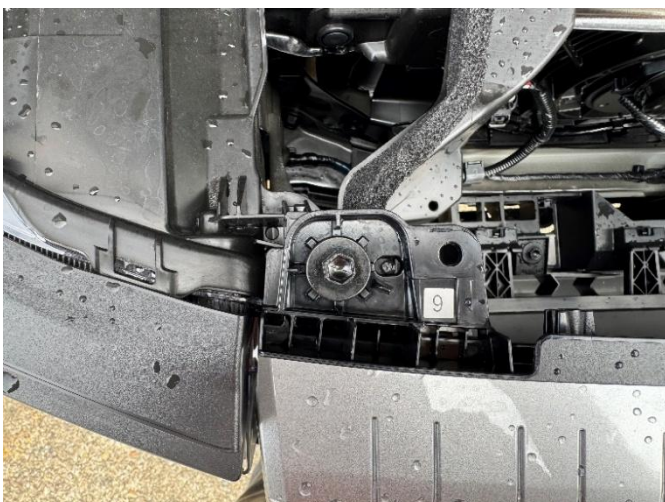
## STAGE 2 - RADIATOR COVER

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.



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## 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.



## 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, lighting and passengers side for tube for headlight washers and disconnect camera. Block removed headlight tube up 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

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## 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

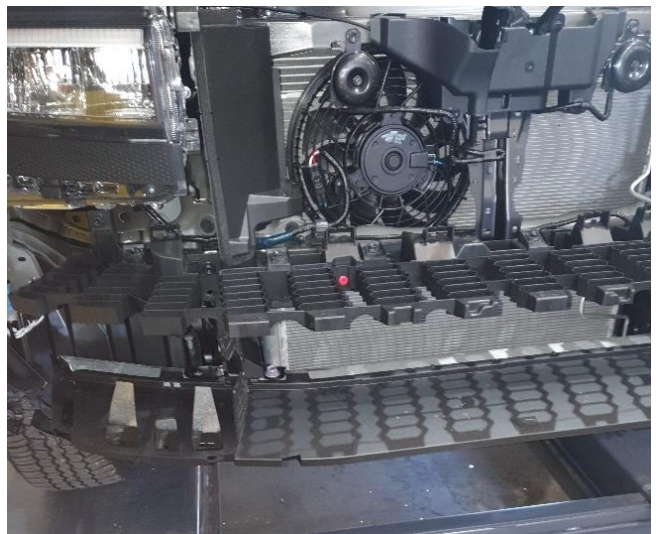


## STAGE 11 - TOP HONEYCOMB INFILL

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.



## 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

Install support mount to hole in front of body mount section of chassis rail using one (1) M8 x 1.25 x 30 bolt, flat washer, spring washer and nut.

Finger tightens only.



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## STAGE 15 - MOUNT INSTALLATION

Fit bar mount on top of support mount and spacer plate to alloy cross member using two (2) M12 x 1.25 x 50mm bolts, spring washers and flat washers.

Attach mount to support Mount using M10 x 1.5 x 35 bolts, flat washers, spring washers and nuts.

Repeat for opposite side of vehicle.

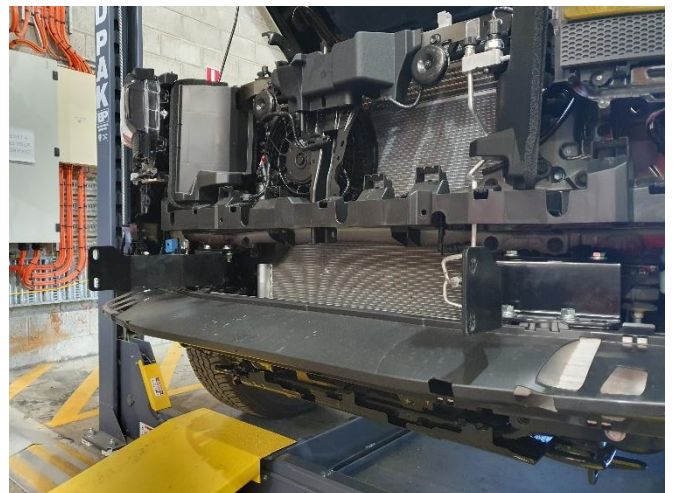


## STAGE 16 - MOUNT ALIGNMENT

Measure the Alloy protection bar mounts inside to inside.

Centralize mounts to the body of the vehicle using the above measurement between the mounts.

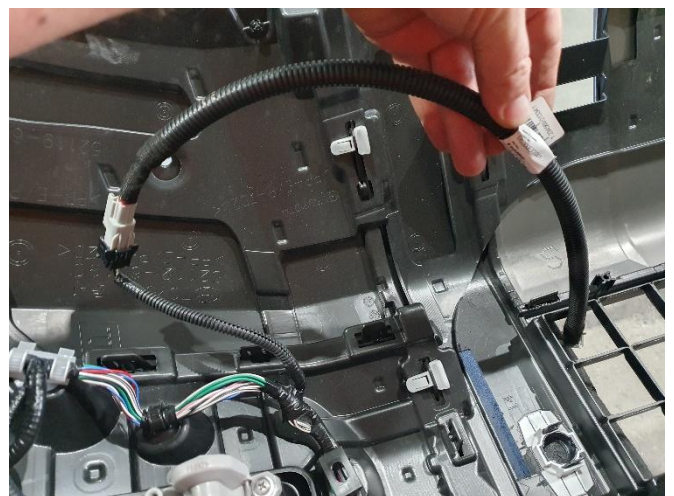
TIGHTEN ALL BOLTS.



## STAGE 17 - PARKING SENSORS

Remove the centre parking sensors from the rear of the bumper.

Install parking sensor extension harness to remove sensor connections. Feed parking sensor extensions through bumper for future reconnection.

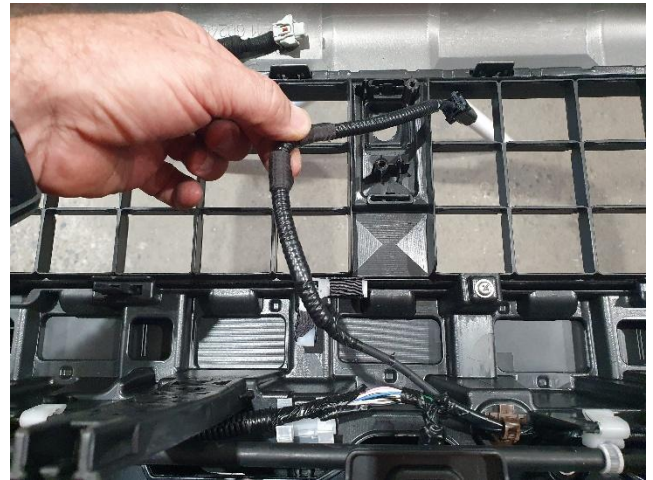


## STAGE 18 - FRONT CAMERA AND WIRING

Remove camera from camera mount, two (2) T6 Torx screws.

Carefully remove wiring from right angle holder. Open wiring at join to main harness for camera and remove back to sonar wiring. Retape original harness.

Rehouse camera wiring to convoluted tubing (supplied) and relocating the wiring to allow enough wiring to exit the bumper for camera connection.



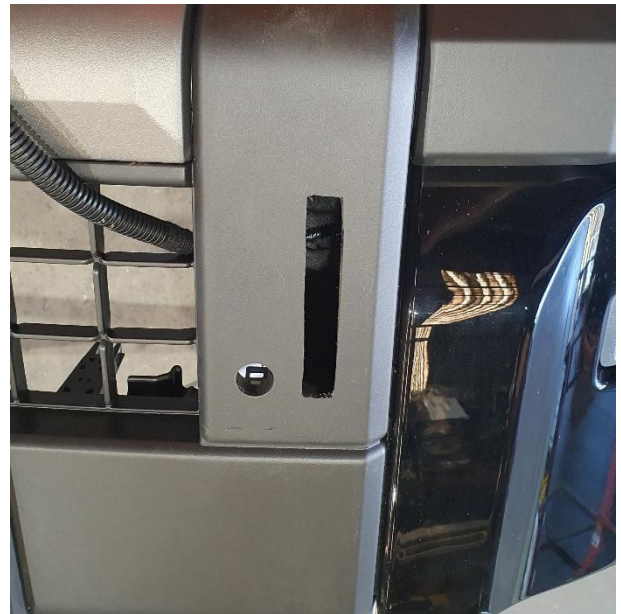
## STAGE 19 - MARK BUMPER TRIM

Tape expected trim area of bumper using paper masking tape.

Check template supplied with this instruction for correct sizing using scale point. Align parts of template and join with clear tape. Cut template from A4 sheets.

Using template mark bumper for trim.

Hold the bumper up to vehicle and check the marked area of the bumper for correct measurements according to the mounts on your vehicle.



## STAGE 20 - BUMPER TRIM

Drill corners of cut to 5mm. Using a jigsaw or similar, trim sides of marked area to remove section.

Clean cut to ensure good quality completed finish.



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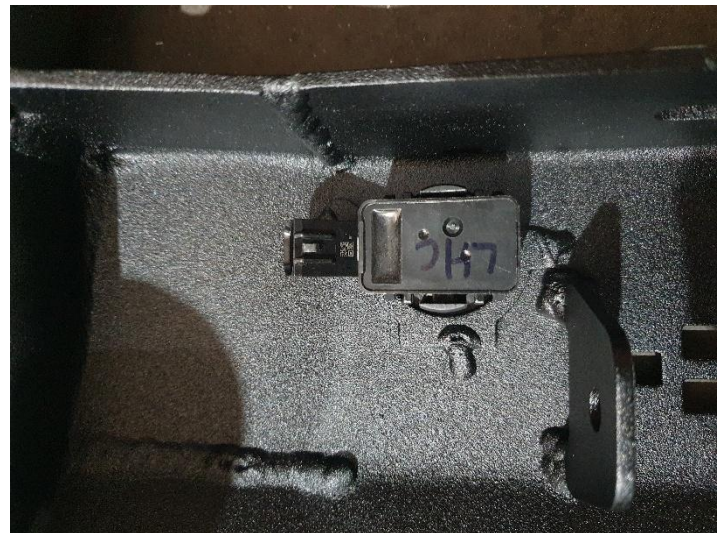
## STAGE 21 - REFIT BUMPER

Refit bumper to vehicle via reverse of steps 2 to 10.

Please ensure bumper infill is replaced.

## STAGE 22 - PARKING SENSOR FITMENT

Install the sensor into the sensor housings on the front of the product.



## STAGE 23 - CAMERA INSTALLATION

Install the camera into the protection bar using the original T6 Torx screws removed.



## STAGE 24 - INSTALL PROTECTION BAR

Fit Protection Bar to the Mounting brackets using M10 x 1.5 x 35 bolts, flat washers, spring washers and nuts.

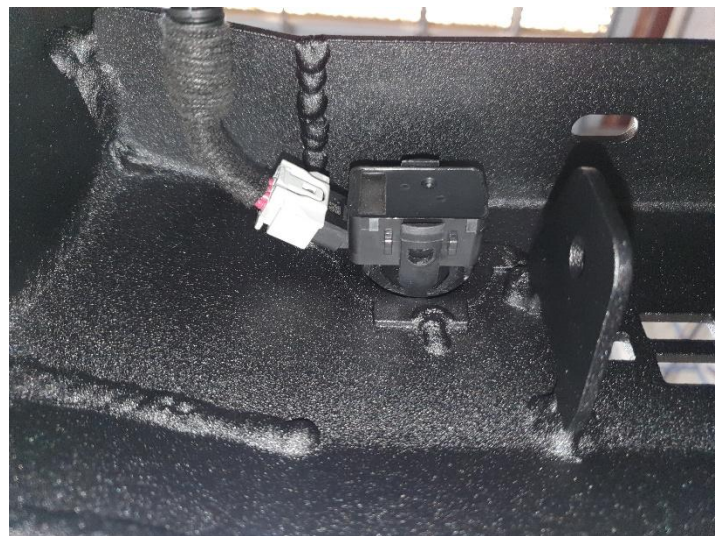
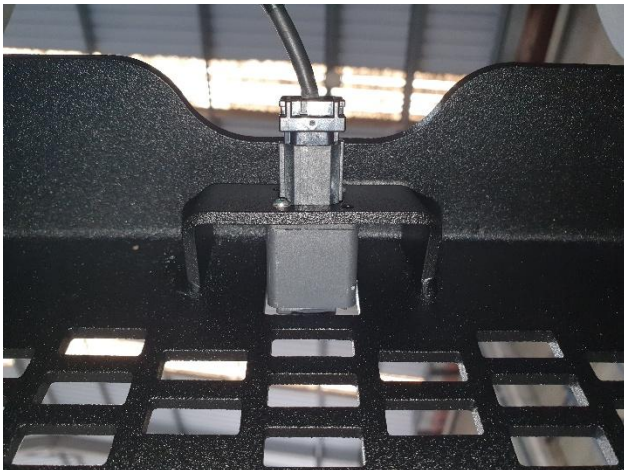
Align the Product with the front of the vehicle.



## STAGE 25 - CONNECT SENSORS

Connect parking sensors and camera.

Reconnect battery and test all sensors are working correctly.



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## LAST STAGE – CHECK SAFETY FEATURES

Check all safety features working correctly.

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



## 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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