



## INSTALLATION GUIDE

# FORD RANGER 06-2022

PN: NBF185SY



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

# INDEX

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## PAGE 3

Installation Kit

## PAGE 4

Stage 1 - Vehicle Testing and Preparation

Stage 2 - Remove bumper

Stage 3 - Outer Grille

## PAGE 5

Stage 4 - Underside Bumper

Stage 5 - Inner Guard

Stage 6 - Inner Guard

## PAGE 6

Stage 7 - Number Plate Cover

Stage 8 - Centre Grille

Stage 9 - Bumper Removal

## PAGE 7

Stage 10 - Camera

Stage 11 - Remove Camera

Stage 12 - Sensor Harness

## PAGE 8

Stage 13 - Mount Fitment

Stage 14 - Trim Bumper

Stage 15 - Refit Bumper

## PAGE 9

Stage 16 - Camera Fitment

Stage 17 - Sensor Fitment

Stage 18 - Protection Bar Fitment

## PAGE 10

Stage 19 - Align Protection Bar

Stage 20 - Connect Camera

Stage 21 - Final Checks

## PAGE 11

Final Checks

# INSTALLATION KIT

1 x Pair Mounting Brackets	2 x M5 x 20mm Bolts
1 x Camera Cover	6 x M5 Flat washers
4 x M10 x 1.5 x50mm Bolts	2 x M5 Nyloc nuts
6 x M10 Flat washers	2 x Sensor Housings
4 x M10 Spring washers	1 x 900mm length 10mm Convoluted tubing
2 x M10 x 1.5 Nuts	2 x 150mm Zip ties
2 x M10 x 1.5 Nut and washer on 300 wire	



Camera Cover  
(NBF185\_CC3a)



LH STEEL MOUNT



RH STEEL MOUNT

# FORD RANGER 06-2022 ON

## 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.



## STAGE 2 - RADIATOR COVER

Models equipped without camera and AEB sensor follow steps 13, 14, 18, 19 and 21.

Models with camera and AEB sonar continue with Stage 2.

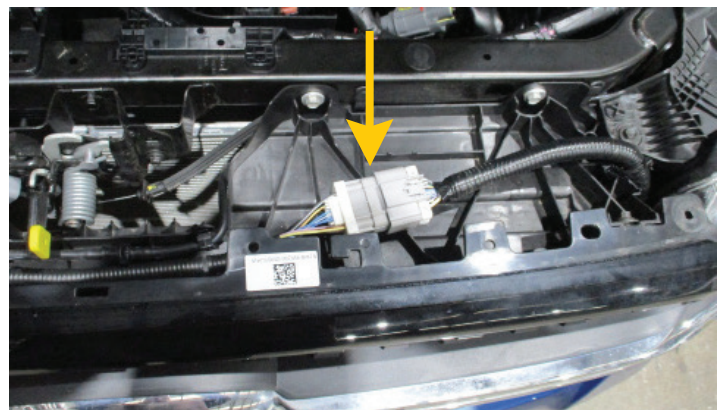
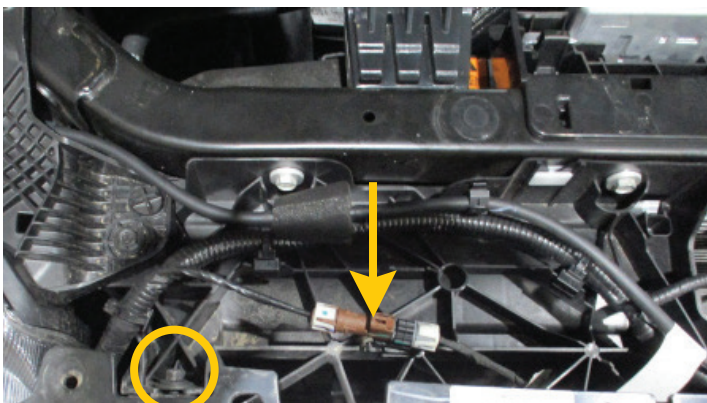
Remove radiator cover 13 plastic scrivets.



## STAGE 3 - OUTER GRILLE

On rear of grille beside headlights remove two (2) x 10mm head bolts.

Disconnect parking sensor / sonar harness.





## STAGE 4 - UNDERSIDE BUMPER

Underside of bumper remove one (1) x T25 Torx screw (per side) and 8mm head bolt (second bolt in from end, per side).



## STAGE 5 - INNER GUARD

From Inner wheel arch remove four (4) x push pull clips from inner flare.

On inner guard cover, remove three (3) x plastic scrivenets. Remove cover to access inner bumper cover/ guard join.



## STAGE 6 - INNER GUARD

Inside of bumper / guard join, remove three (3) x 10mm head bolts (per side).



# FORD RANGER 06-2022 ON

## STAGE 7 - NUMBER PLATE COVER

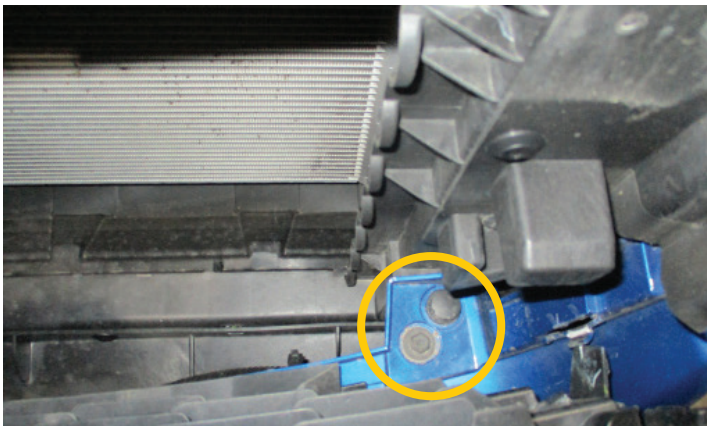
Remove number plate cover two (2) x 8mm head bolts.



## STAGE 8 - CENTRE GRILLE

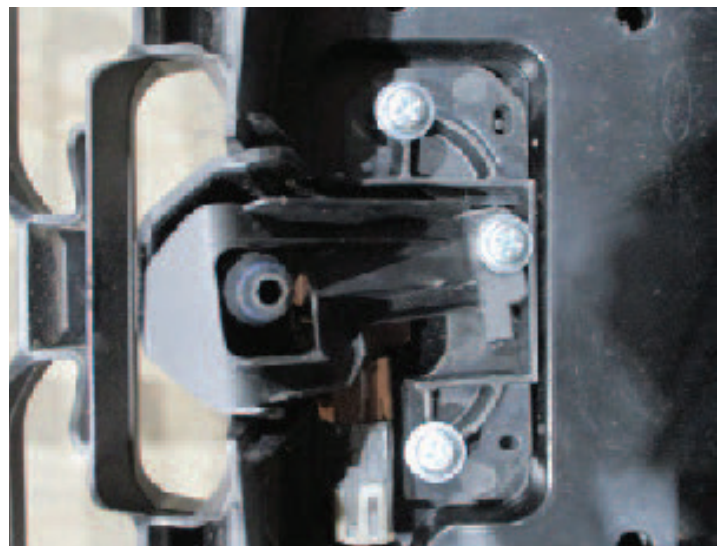
Pull centre grille forward and remove from bumper, three (3) x push pull clips and two (2) x 10mm head bolts.

One clip and bolt per side and one clip in centre.



## STAGE 10 - CAMERA

Disconnect camera cable and camera washer hose from rear of camera housing.





## STAGE 10 - BUMPER REMOVAL

Pull flares away from vehicle. From inside inner guard squeeze retaining clip and gently pull down on bumper to remove.



Remove bumper.



## STAGE 11 - REMOVE CAMERA

Remove camera from bumper three (3) x Philips head screws.



## STAGE 12 - SENSOR HARNESS

Remove two (2) x centre parking sensors.  
**NOTE:** Sensors are sided and directional.

For two centre parking sensor harness unclip from bumper to allow wiring extra length.

To extend wiring, release sensor wiring from main harness.

De-pin connector, feed harness through sensor holes and refit connector. Use QR code for video of process to avoid damage to pins.

Place exposed wires into 10mm convoluted tubing (supplied), cut tubing length to suit.

Feed harness through existing sensor holes.



# FORD RANGER 06-2022 ON

## STAGE 13 - MOUNT FITMENT

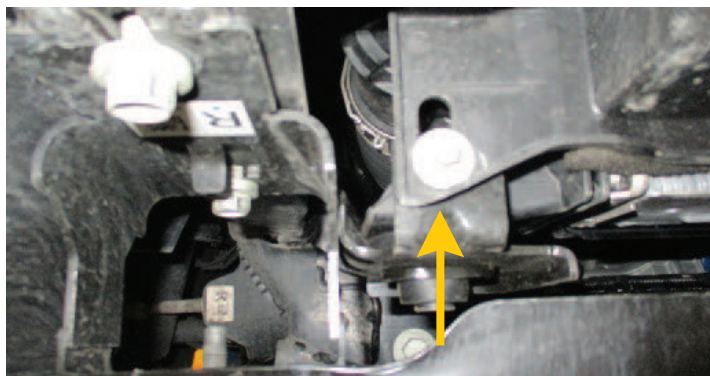
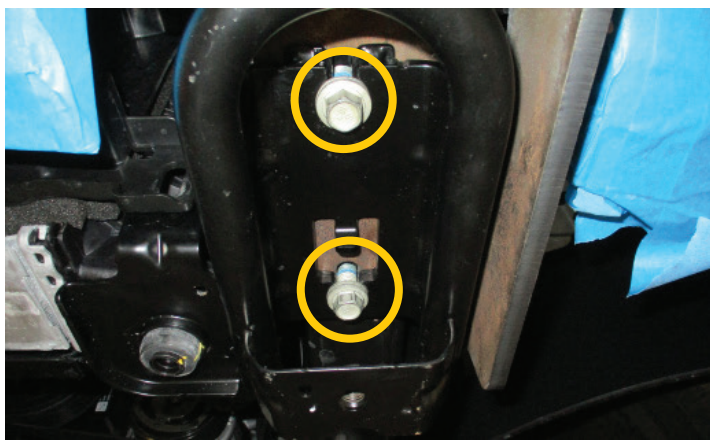
Above underbelly guard support remove 8mm head bolt and slot hole in shroud down by 8mm.

One side at a time remove (2) x 15mm head bolts from genuine tie down / recovery loop and fit ECB steel mounting brackets between chassis rail and tie-down / recovery loop.

Place thread lock onto original bolts and secure mounts. Finger tighten only.

Align mounts and tighten all bolts and replace 8mm head bolt removed from shroud.

**We recommend that the 15mm head tie down recovery loop bolts have Loctite 243b thread lock added to them on assembly. This is not included with the product.**



## STAGE 14 - TRIM BUMPER

Measure steel mounts and trim lower bumper to steel mounting brackets.

Scallop cut out for bolt thread once bumper refitted to vehicle.



## STAGE 15 - REFIT BUMPER

Refit bumper in reverse as per steps 1 to 9.

Feed camera harness and camera washer tubing through bottom of grille.

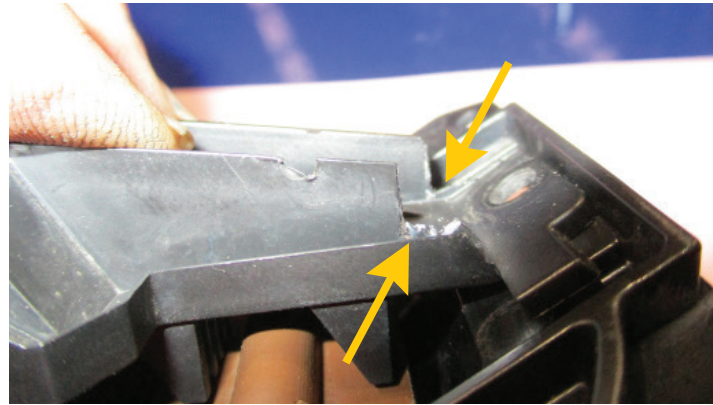




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## STAGE 16 - CAMERA FITMENT

Trim gusseting edge of mount as shown in photo.



Place camera mount onto bracket and protection cover at rear of bracket. Secure with (2) M5 x 20mm bolts, flat washers and Nyloc nuts.

Align and tighten



## STAGE 17 - SENSOR FITMENT

Fit parking sensor to housings and secure at rear with zip tie.

**DO NOT OVER TIGHTEN.**

Connect sensors.



## STAGE 18 - PROTECTION BAR FITMENT

Fit protection bar to vehicle, four (4) x M10 x 1.5 x 50mm bolts, flat washers, spring washers and nuts.

Use nut and washers on wire on front hole.

Finger tighten only.



# FORD RANGER 06-2022 ON

## STAGE 19 - ALIGN PROTECTION BAR

Align protection bar with vehicle and tighten all bolts.



## STAGE 20- CONNECT CAMERA

Reconnect camera and camera washer.

Place supplied convoluted tubing over camera connection and camera washer hose to protect from the elements. Trim to suit.



## STAGE 21 - FINAL CHECKS

Test all safety features are working correctly.



# FINAL CHECKS

## 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.

# WARNING

## MAXIMUM LOAD 5000KG PER RECOVERY HOOK, 8000KG WITH BRIDLE STRAP CONNECTING BOTH POINTS

### **Incorrect use of recovery hooks may result in Vehicle Damage, Personal injury or Death**

- Inspect and discard damaged or worn equipment before each use
- Use of a bridle strap is recommended
- Pull angle should not exceed the maximum turning angle of wheels, damage to vehicle may result
- Maximum shackle rating 4.75t complying with AS2741
- ECB recommends taking a 4WD safety course before use





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1800 069 145  
WWW.ECB.COM.AU  
29 SNOOK ST CLONTARF, QLD 4019

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