



FORD RANGER/EVEREST NEXT GEN MY2022 ONWARD FRONT CAMERA RELOCATION KIT

IMPORTANT! – READ BEFORE INSTALLATION

- When installed in accordance with these instructions, the front protection bar does not affect the operation of the vehicles SRS airbags.
- This product must be installed exactly as per these instructions using only hardware supplied.
- Take a few moments to read instructions thoroughly before beginning work.
- In the event of damage to any bar component please contact OFFROAD ANIMAL to arrange repair/replacement of components.
- Do not use this product for any vehicle make or model other than that specified on these instructions.
- Do not remove labels from this product.
- This product and its fixings must not be modified in any way unless stated in these fitting instructions.
- The installation of this product is recommended for trained personnel.
- These instructions are correct at time of publication. OFFROAD ANIMAL cannot be held responsible for the impact of any changes subsequently made by the vehicle manufacturer. If you find something has changed please contact us to let us know!
- During installation it is the duty of the installer to check correct operation/clearances of all components.
- If Instructions are to be printed for reference in the workshop, it is recommended that they are printed in colour, for best legibility.

GENERAL CARE AND MAINTENANCE

Only wash the product with a PH neutral car wash to prevent paint damage and discolouration.

Plastic parts may be maintained with silicone spray.

Do not use acidic or alkaline based cleaning products.

It is important to perform regular checks (pre trip or on an annual basis) on the installed product. Checks include:

- Visual inspection for damage (eg. cracks, chips, dents etc.)
- Electrical wiring is not rubbing anything or worn out
- Bolts are torqued to correct specification (see torque guide below)

For touching up small stone chips, Offroad Animal recommends the following paint products:

- Dupli-Color Trim & Bumper Paint Black (TB101)
- VHT Hood, Bumper & Trim Paint Black (SP27)

BOLT TORQUE SETTINGS

Use the following bolt torques on all general fasteners, unless otherwise specified.

GENERAL FASTENERS	
Size	Torque Nm
M5	5 Nm
M6	9 Nm
M8	22 Nm
M10	44 Nm
M12	77 Nm

Use the following bolt torques on all structural front bar mount and tow point fasteners, and rear towbar fasteners, unless otherwise specified.


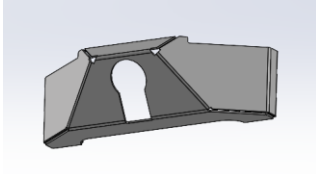

FRONT BAR MOUNTS AND TOW POINTS + REAR TOWBAR	
Size	Torque Nm
M10	57 Nm
M12	100 Nm
M14	164 Nm
M16	248 Nm

Always use a torque wrench to set correct torque settings. Ensure torque wrench is set to Nm unit of measurement. Otherwise perform conversion to lb-ft.

PARTS LISTING

IMPORTANT: Check all parts are present before beginning work! Contact OFFROAD ANIMAL if something is missing.

Main Parts – In the Box

Qty	Part Number	Description	Image
1	B-0767	Ford Ranger Next Gen Camera Relocation Bracket	
1	B-0768	Ford Ranger Next Gen Front Camera Cover Bracket	
1	LM-FRA-NG-CAM-900	Ford Ranger Next Gen - Camera Extension Loom 900mm	

Small Parts – Contained in Small Parts Kit Bag

Qty	Part Number	Description
2	M4 FLANGE NUT	Bolt, Hex, M12X30X1.75P GR8.8 ZP
2	M4 FLAT WASHER	Flat Washer M4, 8mmODx0.8mm
2	M4X12 PAN	SCREW, PAN HEAD PHILLIPS, M4X12X0.7 GR4.6 ZP
2	M5 Flat washer	M5 FW
2	M5X15 BHCS	SCREW, BUTTON HEAD CAP, M5X15X0.8 GR12.9 ZP
2	ZT-BLK-200-2	Zip Tie, Black Nylon 200x2mm

TOOLS REQUIRED

The following tools will be required to install the product.

Hand Tools	Power Tools	Workshop Equipment
Digital Angle Gauge Metric Spanner / Socket set Metric Hex Key Set Straight Edge tool Torx Driver Set Trim Tool Side Cutters	Not Required	Not Required

WORKSHOP SAFETY

It is the responsibility of the installer to always complete works in a safe manner. Make sure the following safety equipment is available and precautions are observed whilst fitting this product.

<p>Hearing Protection</p> 	<p>Always wear ear protection when using power tools.</p>
<p>Eye Protection</p> 	<p>Ensure eye protection is always worn when cutting or drilling.</p>
<p>Manual Handling</p> 	<p>Do not attempt to lift bar assemblies or rock sliders on your own.</p> <p>Always use two people to lift or use mechanical Lifting aid such as hydraulic lifting trolley.</p>
<p>Vehicle Support</p> 	<p>Always ensure vehicle is properly supported when working on it. Do not attempt to fit products whilst suspension work is being carried out. Do not work under a vehicle supported only by a jack.</p>



<p>Before beginning work, ensure car is parked in a convenient and accessible location.</p> <p>DO NOT turn on or move car whilst any camera or radar systems are disconnected. Failure to observe this precaution will result in system errors that will need car to be taken to Ford Dealership to resolve.</p> <p>WARNING: Take care when handling the camera wiring, in particular the Plugs. The miniature co-axial plugs are quite fragile and can be damaged if mishandled.</p> <p>Always plug and unplug applying force only on the plug housing axially in the direction of the connection.</p> <p>1. Unpack Kit and ensure all parts are present</p>	<p>TOOLS REQUIRED</p>
	<p>FASTENERS</p>



2. Zero the digital angle gauge on a flat reference surface

It is convenient to use the ground for this step. Be aware that if completing relocation as part of bar install for time efficiency the vehicle angle relative to the ground may change with suspension movement due to additional weight from the bar.

TOOLS REQUIRED

Digital Angle Gauge

FASTENERS



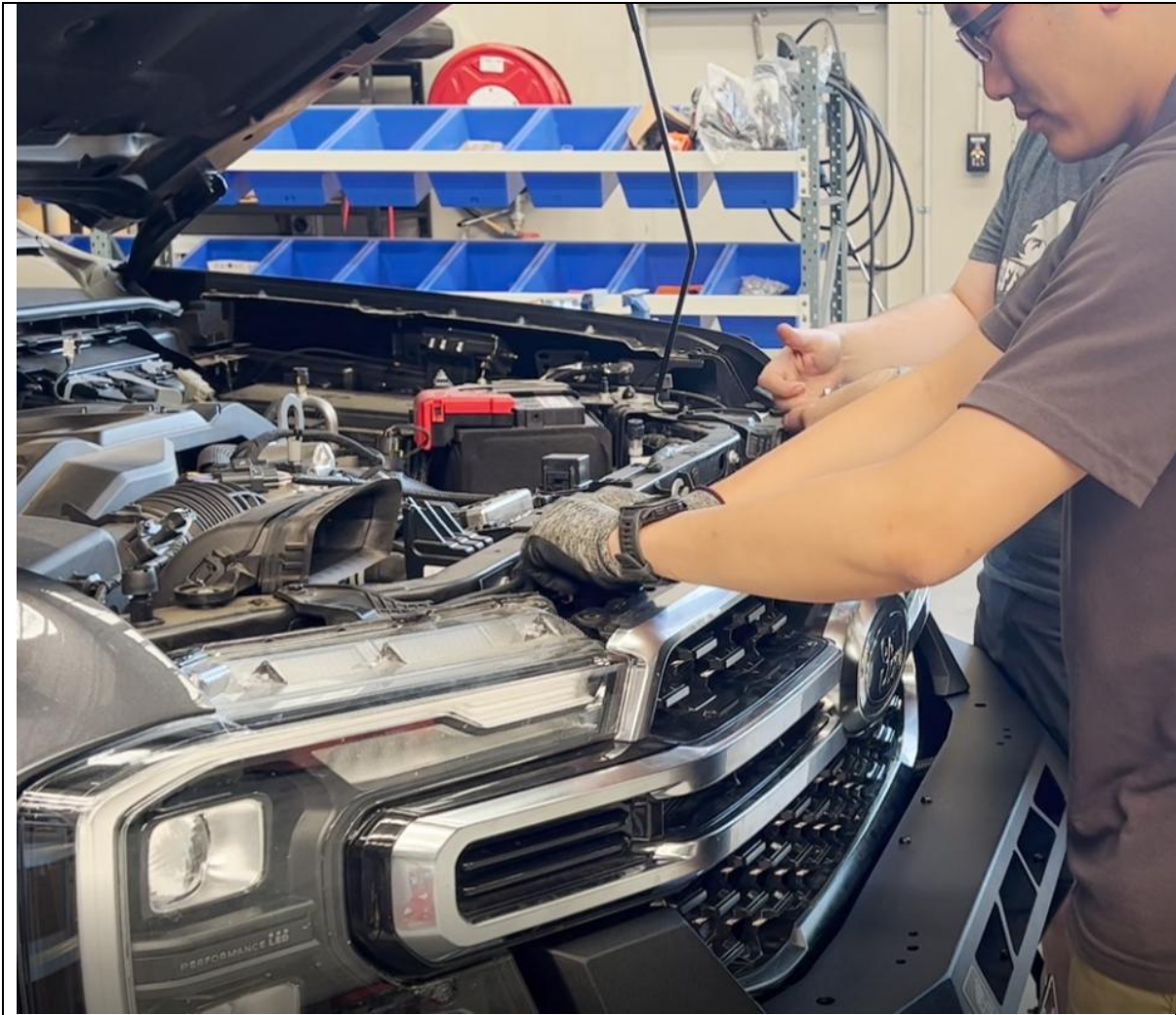
3. With the assistance of a straight edge tool, measure the angle of the front camera and record it below

CAMREA ANGLE = _____ Degrees

TOOLS REQUIRED

Digital Angle Gauge
Straight Edge

FASTENERS



4. Remove the grille from the vehicle.
5. Follow the same steps as shown in main bar fitting instructions. This will involve removing the top cover, 2x bolts securing top and 1x bolt securing bottom grille support bracket + popping out clips from headlights.

TOOLS REQUIRED

8mm Spanner
Trim Tool

FASTENERS



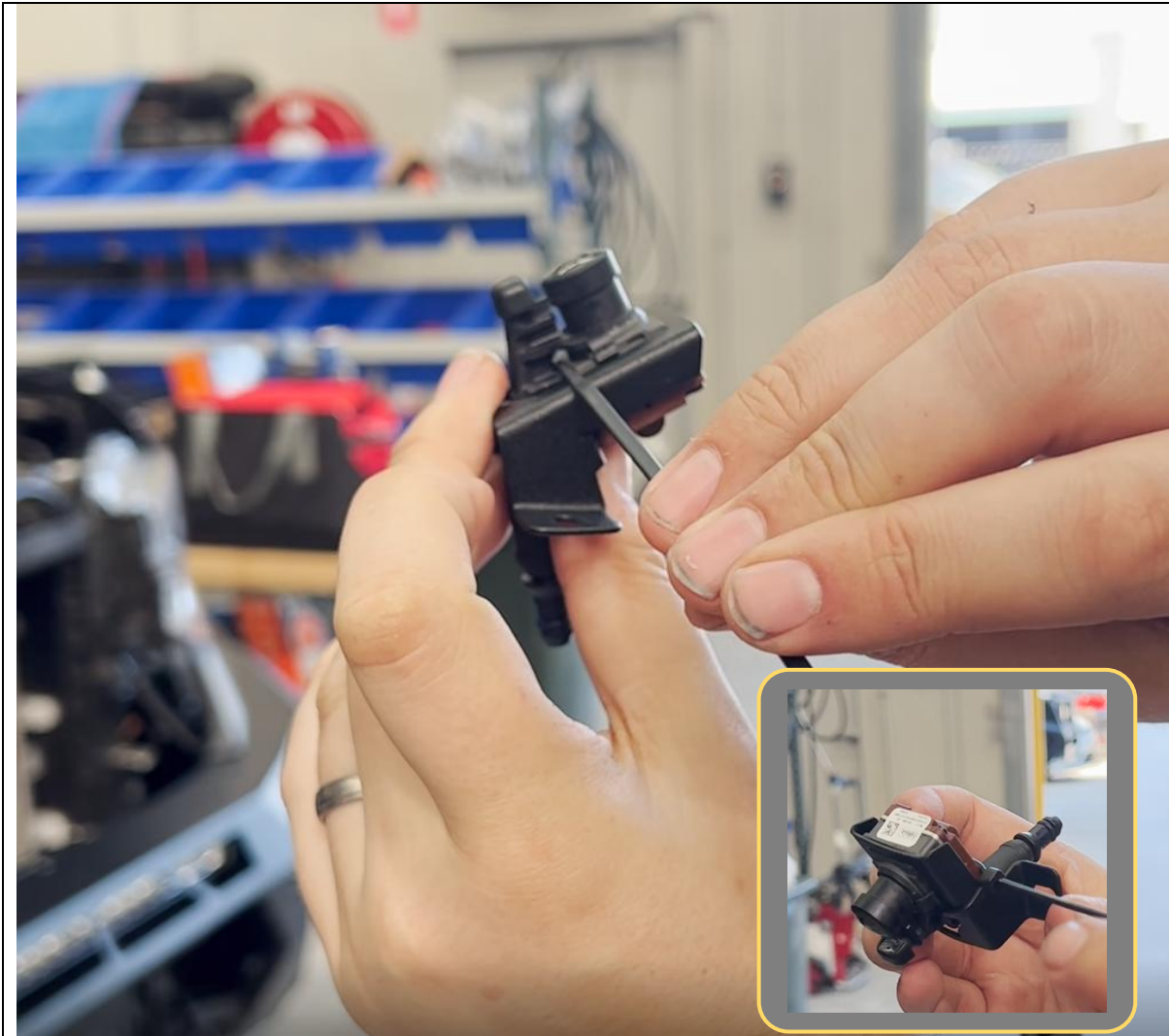
<p>6. Remove the camera housing from the grille, by removing the 3x T20 Screws securing it.</p>	<p>TOOLS REQUIRED</p> <p>T20 Torx Bit</p>
	<p>FASTENERS</p>



<p>7. Remove the camera module from the housing.</p> <p>8. Disconnect the wiring loom and washer hose from the camera module.</p> <p>WARNING: Take care when handling the camera wiring, in particular the Plugs. The miniature co-axial plugs are quite fragile and can be damaged if mishandled.</p>	<p>TOOLS REQUIRED</p>
<p>Always plug and unplug applying force only on the plug housing axially in the direction of the connection.</p>	<p>FASTENERS</p>



<div>9. Using a trim tool, release all the clips securing the hose and wiring harness to the grille.</div> <div>10. Remove the harness and hose by sliding under the main cross beam on the grille.</div> <div>11. Re-fit the camera housing to the grille using OE Torx screws.</div>	<div>TOOLS REQUIRED</div> <div>T20 Torx Bit</div>
	<div>FASTENERS</div>



12. Fit the camera to the re-location bracket, from the rear. The camera should fit and be located precisely in the cutout in the bracket.

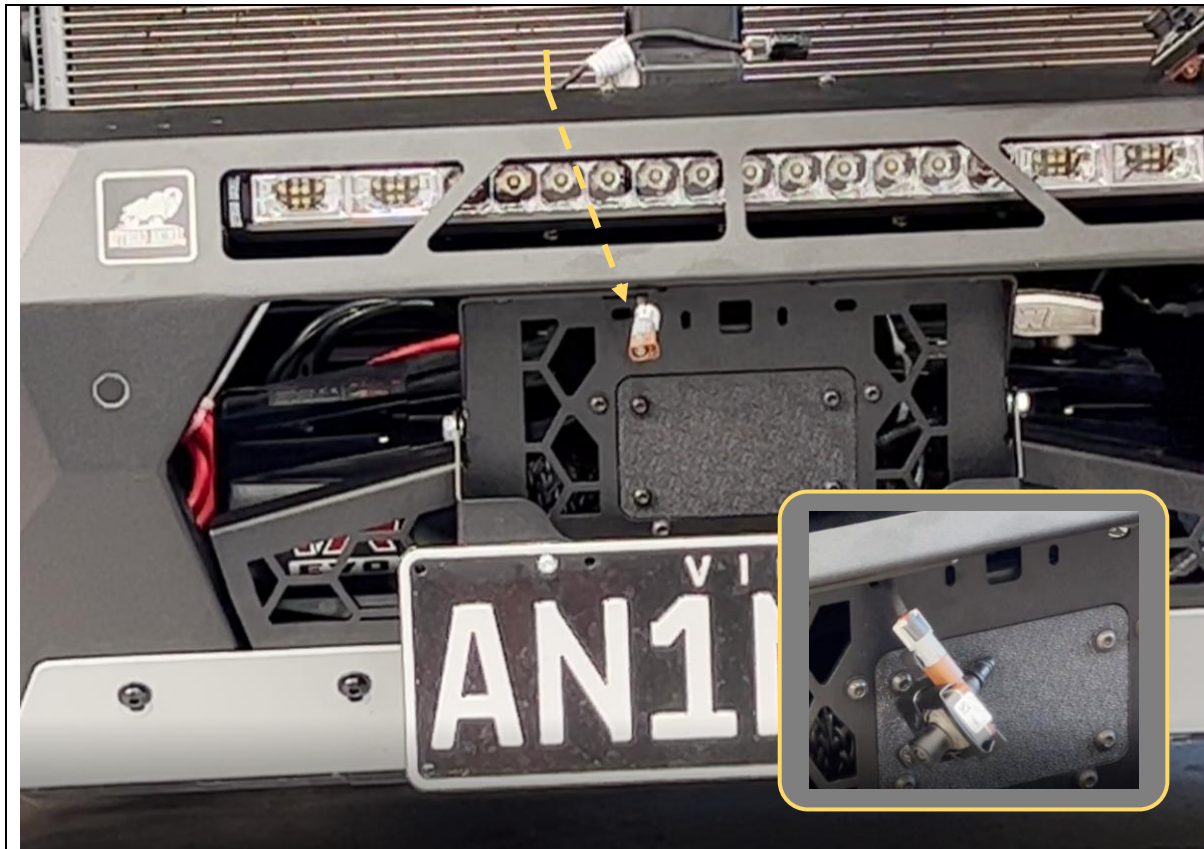
13. Using supplied cable tie, secure the camera to the bracket, through the gap between bottom of lens and washer nozzle, as shown in the above image.

14. Cable tie does not need to be super tight, just hold the camera against the bracket.

TOOLS REQUIRED

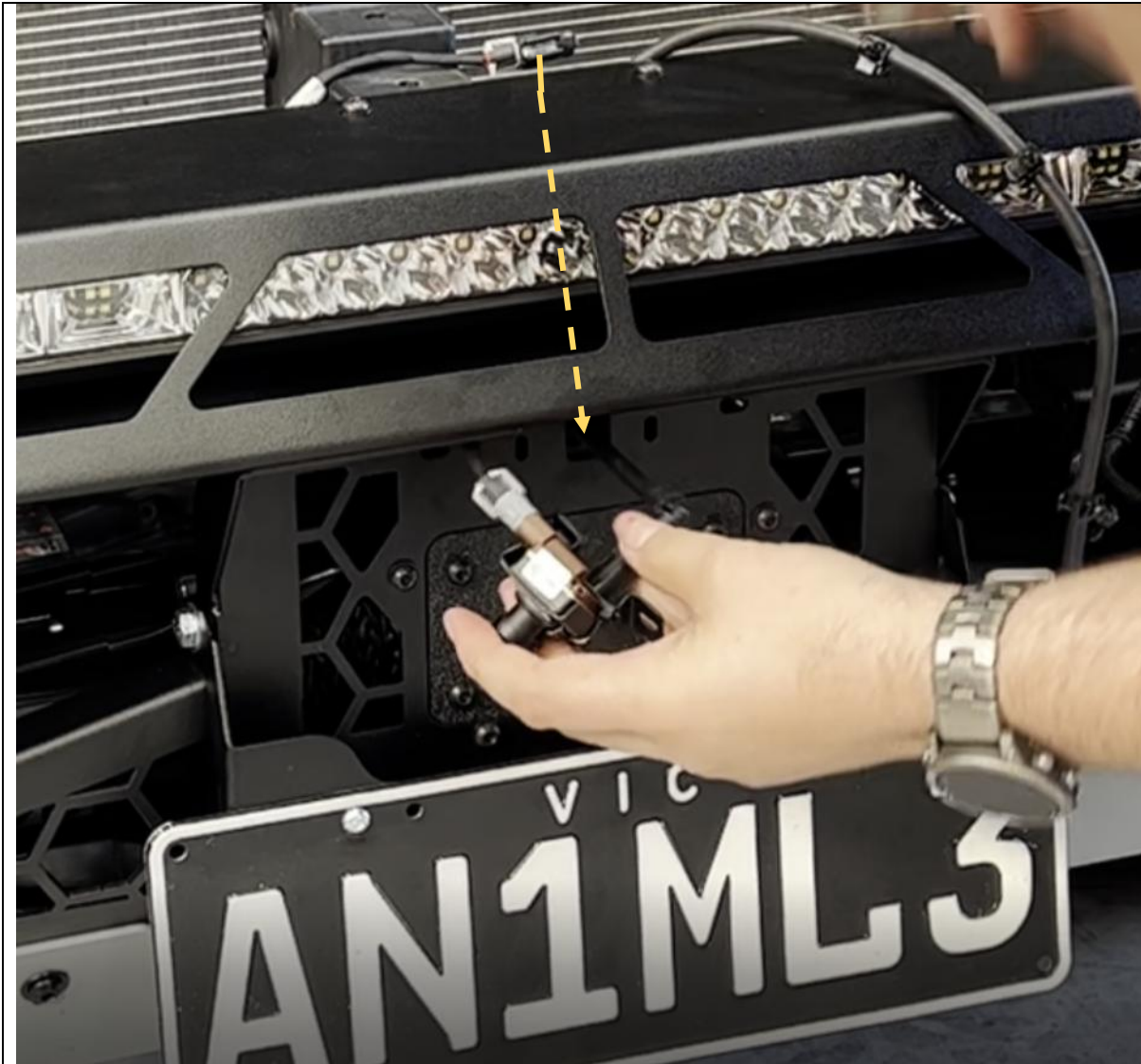
T20 Torx Bit

FASTENERS



15. Route the original factory camera harness from the top behind the bar, and out through the plug hole on the center mesh panel as shown in the image above.
16. Connect the harness to the camera module once routed.

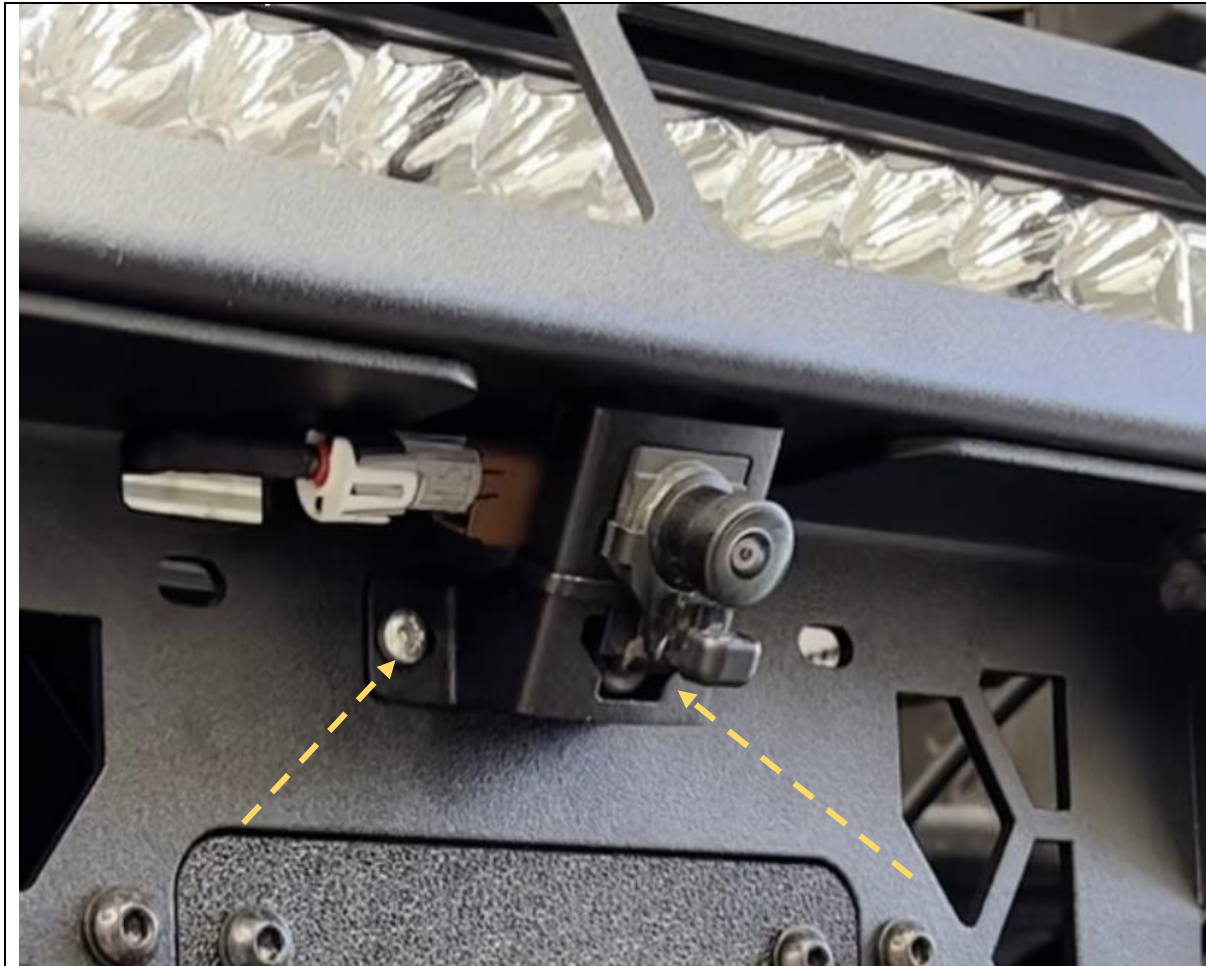
TOOLS REQUIRED**FASTENERS**



17. Route the original factory camera washer hose, behind the bar, and out through the center hole on the center mesh panel as shown in the image above.

18. Connect the washer hose to the to the washer nozzle once routed.

TOOLS REQUIRED**FASTENERS**



19. Secure the camera bracket to the mesh panel using supplied M4 screws, washers and flange nuts.

TOOLS REQUIRED

Phillips Head Screwdriver
7mm Spanner

FASTENERS

2xM4x12 Screw
2xM4 Flat Washer
2xM4 Flange Nut



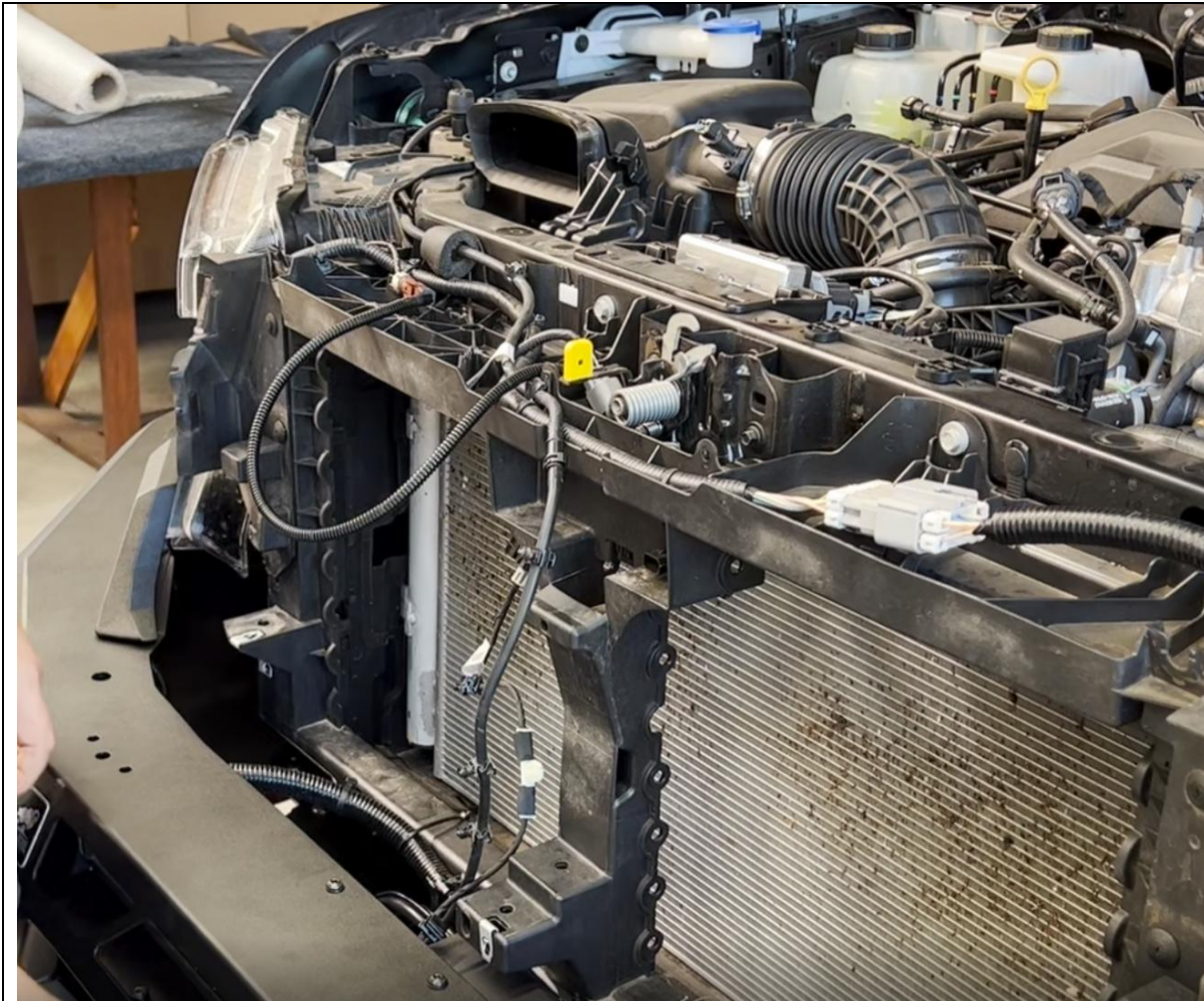
<p>20. With assistance from a straightedge tool, measure the angle of the camera module as mounted to the mesh panel using the digital level.</p> <p>Ensure measurement is taken with tool in same orientation as original measurement.</p> <p>21. Record measurement below</p> <p>Fitted Angle _____ Degrees</p> <p>The angle should be within a few degrees of the original measured angle. If the angle is way off, check the alignment of the bar on the vehicle and ensure it fitted correctly.</p> <p>Target angle is less than 1 degree difference from the original measured angle.</p>	<p>TOOLS REQUIRED</p> <p>Straight Edge Digital Level</p>
	<p>FASTENERS</p>



<p>22. If required flex the bracket by pushing or pulling firmly but carefully on the top of the bracket as shown to adjust the angle</p> <p>23. Re-measure and adjust as required to achieve installed angle of less than 1 degree difference from the original measured angle.</p>	<p>TOOLS REQUIRED</p> <p>Straight Edge Digital Level</p>
	<p>FASTENERS</p>



<p>24. Fit the cover panel over the camera bracket assembly, securing with M5 Screws from behind, into the threaded inserts in the cover panel.</p>	<p>TOOLS REQUIRED</p> <p>3MM Hex Key</p>
	<p>FASTENERS</p> <p>2x M5x15 BHCS 2x M5 Flat Washer</p>



25. Connect the extension harness supplied to the original factory wiring harness plugged into the camera.
26. Route the wiring through the plastic radiator support panel.
27. Next, connect the other end of the extension harness to the vehicle in original location on top of support panel.
28. Route the washer the plastic radiator support panel and re-connect to the vehicle in original location.
29. Tidy up and cable tie up any loose wiring.

TOOLS REQUIRED

Cable tie
Side Cutters

FASTENERS



30. Refit the grille to the vehicle, follow reverse steps of removal.	TOOLS REQUIRED 8mm Spanner
	FASTENERS Re-Use Factory



<p>31. With that you are done. Double check all wiring is plugged back in then start vehicle and verify camera function.</p> <p>Be aware the camera will have a slightly different field of view due to its relocated location.</p> <p>32. Note if “Reverse Brake Assist Not Available” error is shown camera alignment will need to be performed by a FORD dealership.</p>	TOOLS REQUIRED
	FASTENERS