

NHBG-F03 & NHBG-F04

NIGHT HAWK BEHIND GRILLE LIGHTS




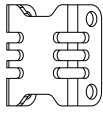




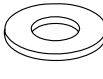





Behind Grille Light System with 13" Light Bars. To suit Ford Ranger V6/4-cylinder & Ford Everest V6 engines only, 05/2022 onwards.



FITTING INSTRUCTIONS

Approximate Fitting Time: 3 Hrs

INCLUDES:

 2 x Bushranger 13" LED Light Bar	 1 x BGL Far Right	 1 x BGL Far Left	 1 x BGL Centre Bracket	 4 x M8x20mm Hex Bolt
 2 x M8x16mm Hex Bolt	 2 x M6 Spring Washers (1.6 mm thick)	 4 x M8 Spring Washers (2.0 mm thick)	 4 x M6x12mm (OD) Flat Washer (1.6mm thick)	 8 x M8x16mm (OD) Flat Washer (1.6mm thick)
 4 x M6x20mm Socket Head Cap Screw	 2 x M8 Nyloc Nut	 2 x M6 Nyloc Nut	 1 x NHW300DT Wiring Loom	

NOTE: NHBG-F03 kit to suit Level 1 & Level 3 headlights, is supplied with required headlight adaptor NHWA02H4.

TOOLS REQUIRED:

- #2 Phillips head screwdriver
- Trim removal tools
- Sockets + Wrench (8, 10, 13mm)
- Hex key (4 & 5mm)
- Torx key (T30)
- Stubby ratchet spanner (13mm)
- Ring spanner (13mm)
- Stubby open-end spanner (10mm)
- Side Cutters

NOTES:

- For the purpose of these fitting instructions, the left-hand side (LHS) and right-hand side (RHS) of the vehicle are from the view of being in the driver's seat looking forward.
- Please take the time to read the instructions thoroughly before proceeding with the fitment of this Night Hawk Behind Grille Light kit.
- Ensure all components, as listed above, are received prior to commencing the fitment. Please retain all hardware until fit-up is complete.
- All wiring should be completed by a qualified auto electrician. Bushranger bears no responsibility for any failure caused by the incorrect fitment of the driving light kit.
- Ensure these fitting instructions are passed onto the vehicle owner and/or operator.

WARNING

- Do not use this product for any other vehicle make or model, other than those specified for this application.
- Do not modify the driving lights, brackets and wiring contained within this kit.
- All installations of driving lights and lightbars to the front of a vehicle result in an obstruction to the airflow passing through the radiator. Consider your driving needs/habits prior to installation.

BEFORE INSTALLATION

Please read these instructions carefully before installation, paying special attention to all 'Notes'. Failure to do so may result in damage of parts and/or injury.

CAUTION:

A torque specification of 10Nm for M6 and 17Nm for M8 fasteners is applicable, unless otherwise stated. Connections between brackets and lights will need to refer to the Night Hawk Manual supplied in the package with the lights.

FITMENT PROCEDURE:

1. Grille Removal

- a. Unscrew the number plate. Remove the number plate mount from the bumper bar by pulling forward releasing the two clips near the bottom of the number plate mount.



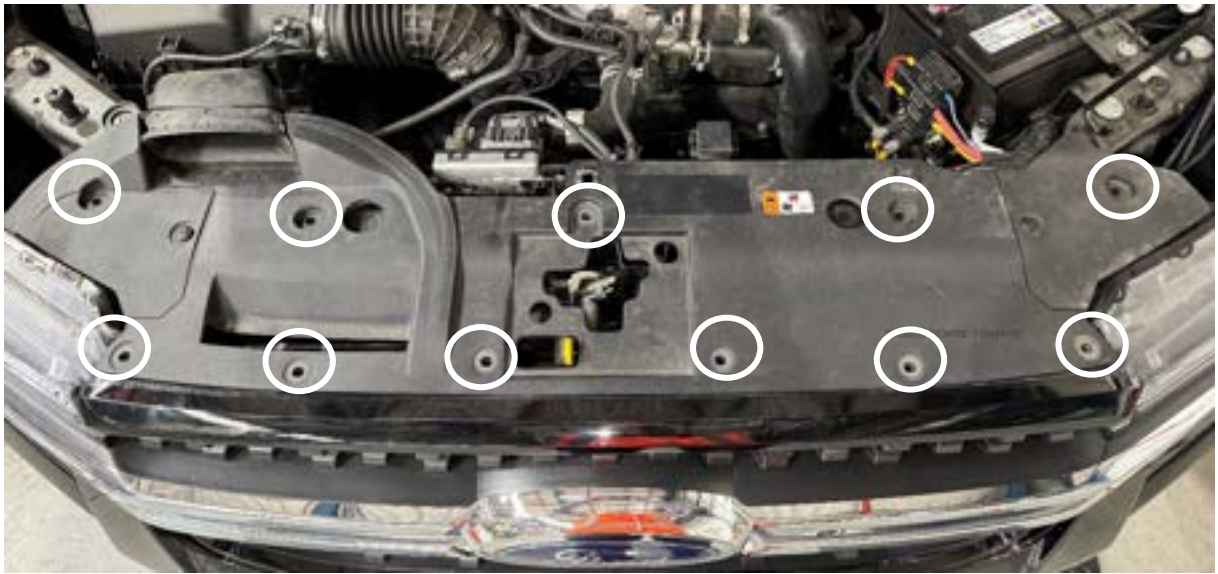
- b. Raise the vehicle bonnet.



- c. Remove the bolt securing the air inlet duct to the radiator support panel using a T30 Torx socket or key.



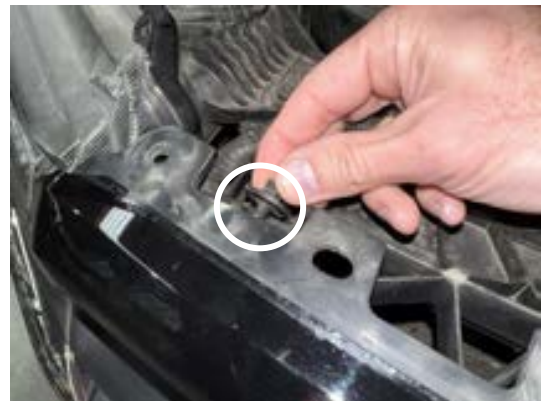
- d. Remove the eleven (11) scriveners from the radiator cowl and remove the cowl from the engine bay. Requires Phillips head screwdriver and trim removal tool.



- e. Remove the two (2) bolts securing the top of the grille assembly.

NOTE: Located on the backside, on left and right side.

(Already removed in this image)



- f. Using the locations shown, releasing the grille extensions from the headlights by pulling sharply forward.



- g. Carefully pull the grille assembly forward releasing the eight (8) plastic tabs from their clips along the bottom of the grille.

Set grille aside on a soft surface to avoid damage.



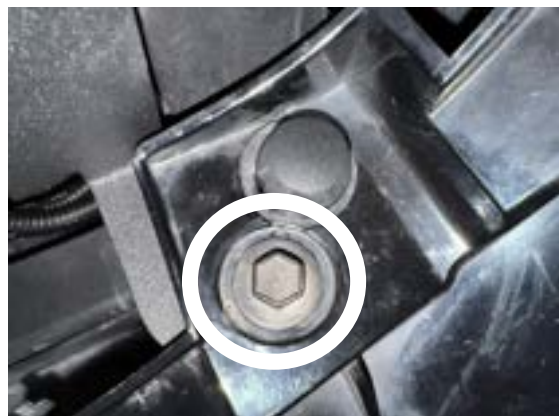
- h. Locate the cable tie securing the wiring loom adjacent to the LHS headlight and carefully cut it, ensuring that the wiring loom isn't damaged.



- i. Locate the support tab securing the wiring loom adjacent to the RHS headlight and carefully cut the clip to separate the loom from the support, ensuring the wiring loom isn't damaged.



- j. Using a socket wrench and 10mm socket, remove the two (2) M6x30 hex head bolts securing the top of the front bumper to the bumper support panel, one on each side.



- k. Using a trim removal tool, remove the two (2) push-in trim clips that also secure the top of the front bumper to the bumper support panel, one on each side.

Discard the trim clips.



- l. Remove the scrivet on each side of the radiator opening, as shown. Discard scrivet.



4. Light Bar Pre-Assembly

- a. Preassemble each light bar to the appropriate bracket using M8x16 hex head bolts, spring washers and flat washers as shown. Ensure each light bar is installed such that the wiring loom exits from the LHS of the light bar.

NOTE: The fasteners should be lightly tightened to aid in the assembly process and will be completely tightened at a later stage on final adjustment.

RIGHT SIDE ASSEMBLY:



LEFT SIDE ASSEMBLY:



- b. Install the centre bracket in the rear of the vehicle grille support channel at the location shown. Install the bottom two M8x20mm Hex bolts (M8x20mm bolt, M8 spring washer and M8 flat washer, with another M8 flat washer and nyloc nut on inside of the bracket).

NOTE: Match the proximity of the moulded spigot above the bracket.

(This image is the rear side of the vertical centre support behind the grille)



3. Light Bar Vehicle Fitment

- a. Starting the LHS light assembly, position the inside end of the light bar behind the vehicle grille support channel.



- b. The bottom tab of the far left cantilever bracket is to be positioned between the front bumper and bumper mounting support, before aligning the upper hole of the bracket with the mounting position as shown.



- c. Install an M8x20 hex head bolt, spring washer and flat washer through the upper mounting hole in the centre bracket and into the light bar mounting point, tightening lightly.



- d. Install a M6x20 socket head cap screw and flat washer in the upper mounting hole of the far left cantilever mounting bracket, securing it with an M6 lock nut.

NOTE: The lock nut can then be held with a stubby 10mm open-end spanner while tightening the M6 cap screw to the appropriate torque.



SIDE VIEW

- e. Reinstall the M6x30 hex head bolt securing the front bumper to the bumper support panel.

NOTE: This now passes through the bottom of the far left cantilever mounting bracket, securing it to the vehicle.



- f. Install the longer trim clip supplied in the kit, into the position shown.



- g. Repeat steps 3 (a-f) for the RHS light bar assembly.



4. Wiring Installation

- a. Refer to the wiring instructions & diagram supplied in the NHW300DT box.

Note: All further wiring installation details can be found in the NHW300DT wiring loom owner's manual.

- b. **For the MY22+ Ford Rangers & V6 Everests fitted with Level 1 or Level 3 headlights**, high beam adapter harness (NHWA02H41) is required.

NOTE: Refer to the High beam adapter harness fitting instructions for more details.

For **Level 2 headlights** this is not required, high beam pick-up is in the passenger footwell.



5. Testing Operation and Light Adjustment

NOTE: There are two points of adjustment on the light bar assemblies – Adjusting the projection angle up or down & adjusting the projection angle inwards or outwards.

- a. To adjust the projection, angle up or down, simply rotate the light bar on its mounting bolts to the desired angle and then fully tighten the mounting bolts at each end of the light bar.

- b. To adjust the projection angle inwards or outwards, the outer end of the light bar can be moved forward or backward in the mounting slot on the main bracket. Once the desired projection angle is achieved, fully tighten the mounting bolt at each end of the light bar.



- c. Once final adjustment is complete, tighten all fasteners to torque specification of 10Nm for M6 and 17Nm for M8 fasteners.
- d. Secure the light bar cables and wiring loom using the cable ties supplied in the kit. Ensure that all cables and looms are secured in such a way as to prevent damage and to not impede the normal vehicle functions.

Fitment Checklist

- Ensure that all fasteners are tensioned as specified in these instructions.
- Ensure that all wiring is clear of any sharp edges and other moving components to eliminate the possibility of abrasion damage during vehicle operation.
- Check the vehicle's original lighting and signalling systems are still functioning correctly after the installation of the driving light kit.

6. Grille Reassembly

- a. To reinstall the grille assembly onto the vehicle. Align the posts to the top mounting bolts with their location holes.



- b. Align the bottom clips and reattach the grille assembly by firmly pushing the headlight extension areas engaging the clips.



- c. Firmly push the lower edge of the grille assembly to engage the eight (8) clips.



- d. Reinstall the two (2) M6x24 bolts and tighten using an 8mm socket securing the grille assembly to the vehicle.



- e. Replace the radiator cowling and reinstall the eleven (11) screws.



- f. Reinstall the bolt securing the air inlet duct and tighten using a T30 Torx socket or key.



- g. Reinstall the number plate mount to the bumper bar by pushing to engage the clips near the lower part of the mount. Reinstall the number plate using the original screws.





www.bushranger.com.au