



advanced FLOW engineering

Instruction Manual P/N: 79-21005L

Scorpion Grille with FFC

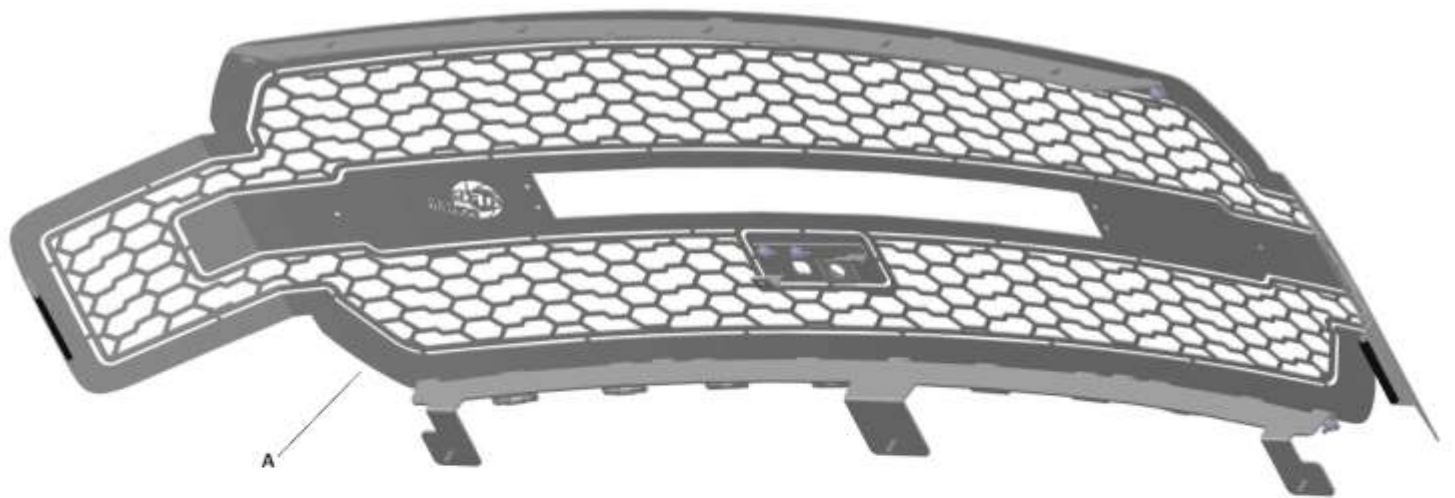
Make: **Ford** Model: **F-150** Year: **2018-2020**

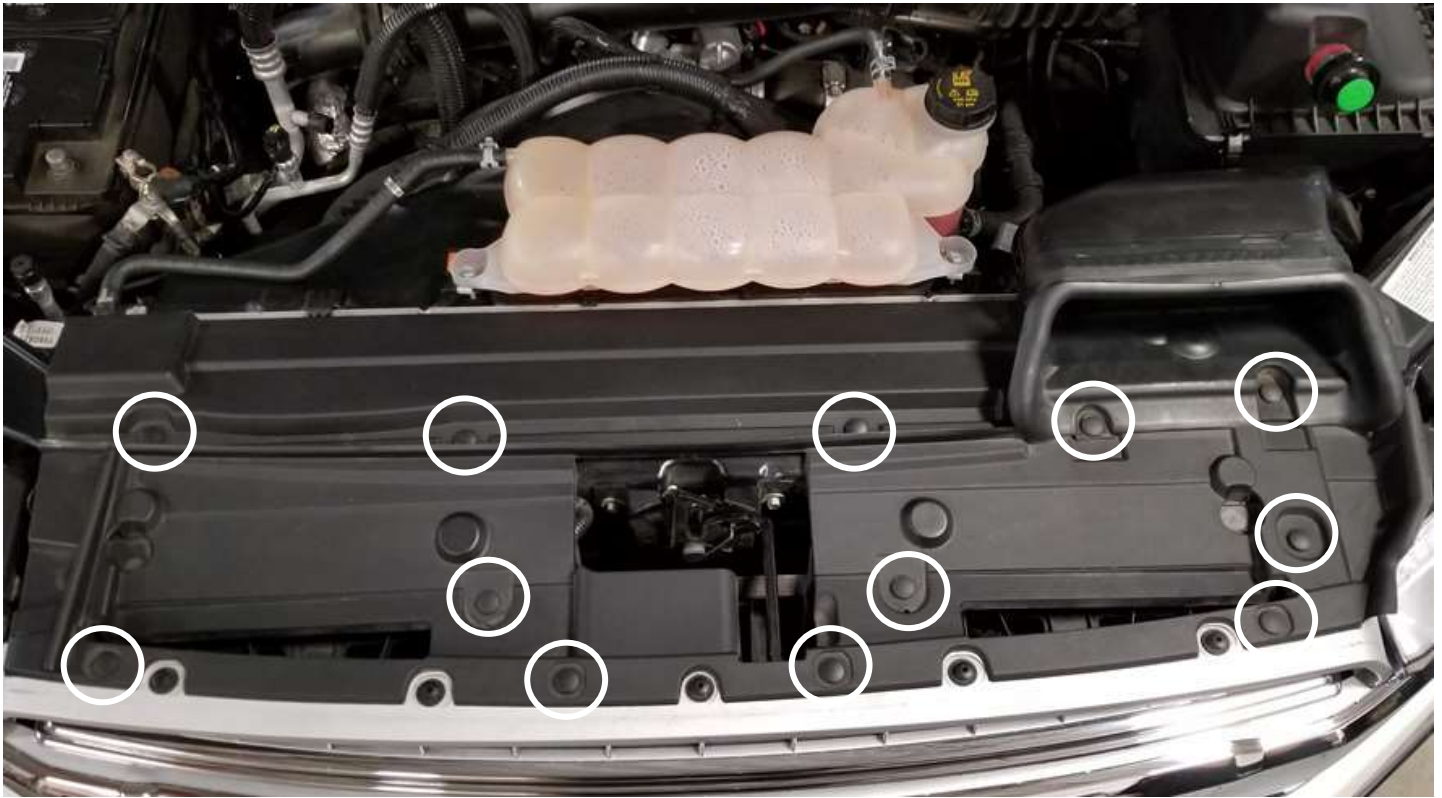


- Please read the entire instruction before proceeding.
- Ensure all components listed are present.
- Ensure you have all necessary tools before proceeding.
- Disconnect the negative battery terminal before proceeding.
- If you are missing any of the components, call customer support 951 493 7100

Label	Qty.	Description
A	1	aFe Scorpion Grille
B	5	Bolt, M6 x 1.0mm x 25mm Hex
C	7	Washer, Flat #10
D	5	Clip nut, M6
E	2	Screw, #10-32 x 5/8" Button Head
F	5	Lock nut, #10-32 Nylon
G	2	Lock nut, 1/4"-20 Nylon
H	2	Washer, 1/4" Flat
I	3	Washer, 3/16" x 1 SS Fender (black)
J	1	aFe Logo Back Plate
K	6	Screw, #10-32 x 1/2" Button Head (black)
L	6	Nut, #10-32 Flange SS
M	1	Clamp, Cable 5/16" (black)
N	2	Bracket, LED #1
O	1	Power Harness
P	15	Ties, Cable
Q	1	20" Single Row LED

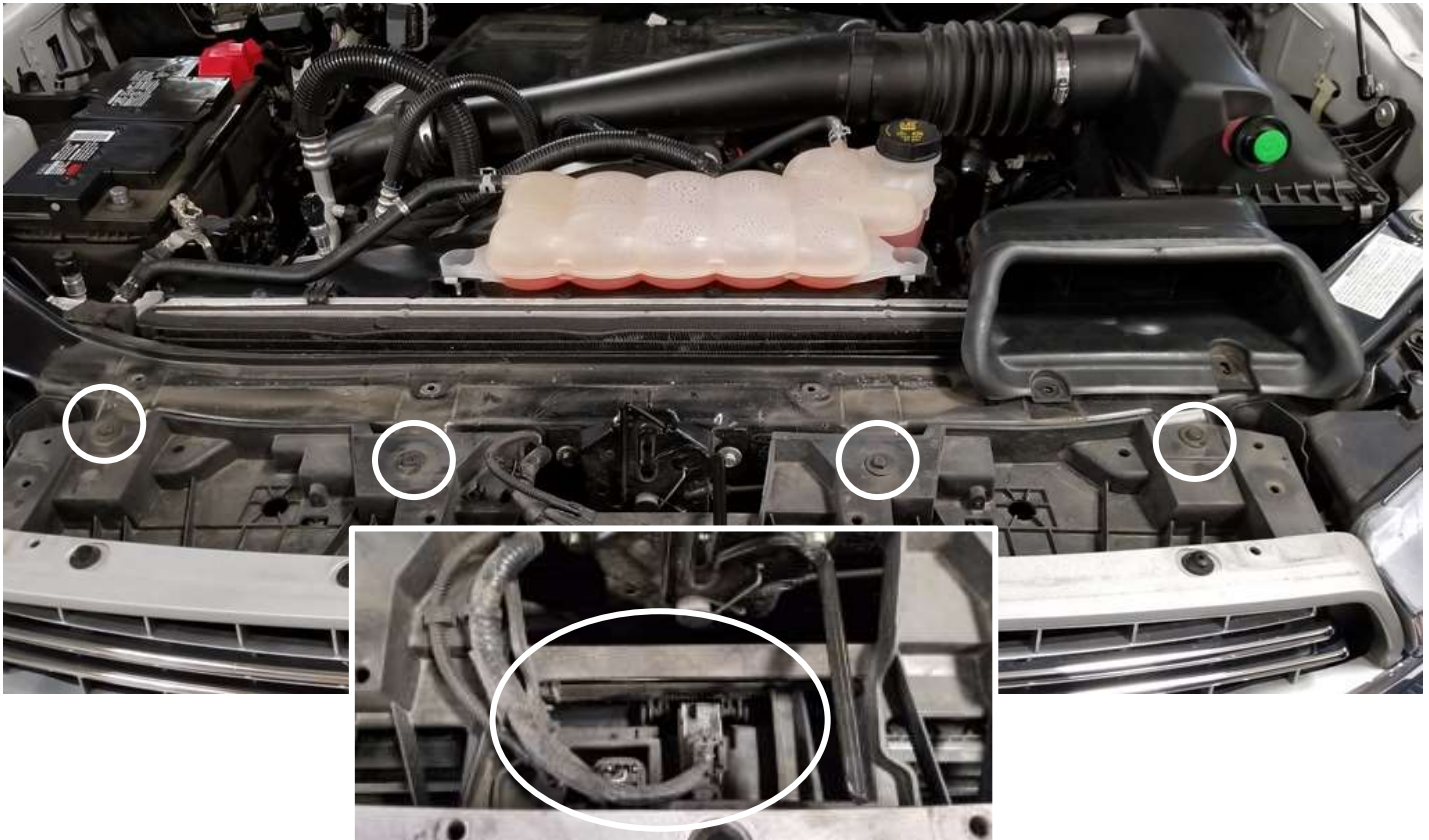
- Applications models vary. We recommend verifying fitment before beginning installation process.
- Images featured in the instruction documents may not always exactly match your grille.





Note: Before you begin, use "Painters Tape" to apply a protective guard around the work areas (fender and bumper valance). This will help protect the paint and finish of your vehicle.

1. Disconnect the negative battery terminal.
2. Locate (12) plastic clips on top of plastic shroud. Carefully pry the pins out to remove and then set aside. Save all parts for reinstallation.
3. Remove the plastic shroud. Set it aside for reinstallation.



4. Remove the four (4) bolts that attach the factory grille assembly to the core support. Save for reinstallation.
5. Located near the hood latch, disconnect the two (2) electrical connectors and the Forward-Facing Camera (FFC) washer hose connection.



6. If equipped, disconnect the wheel arch moldings. Pull on the wheel arch moldings carefully until it comes off the two bottom tabs. Be careful not to break them.
7. Starting on the passenger side, pull on the plastic bumper cap fascia till it disconnects from the fender. After the passenger side is disconnected, move to the driver's side and disconnect it from the fender on that side. When both sides are disconnected, pull on the plastic bumper cap fascia until it disconnects from the grille and carefully remove it.



8. Remove the one (1) bolt located on each side of the grille. Save for reinstallation.

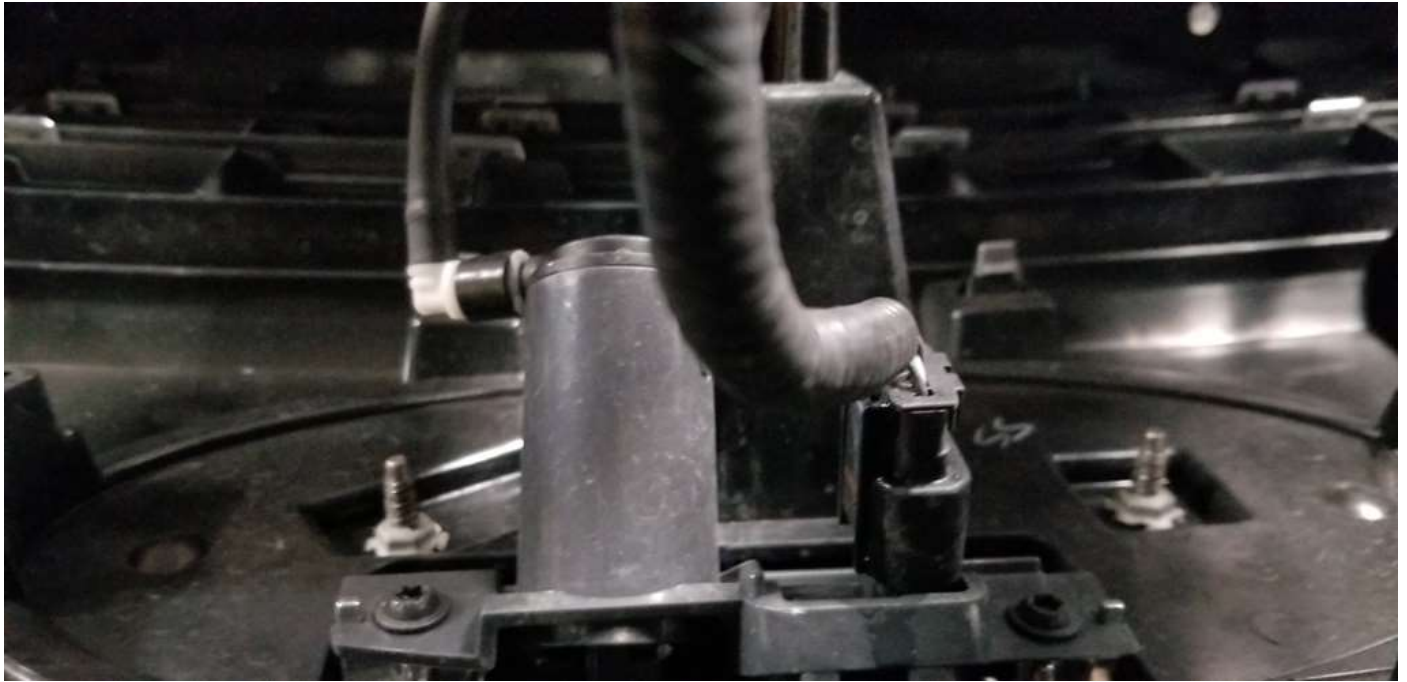


Note: To prevent scratching painted parts use protective covering between the grille and a flat surface.

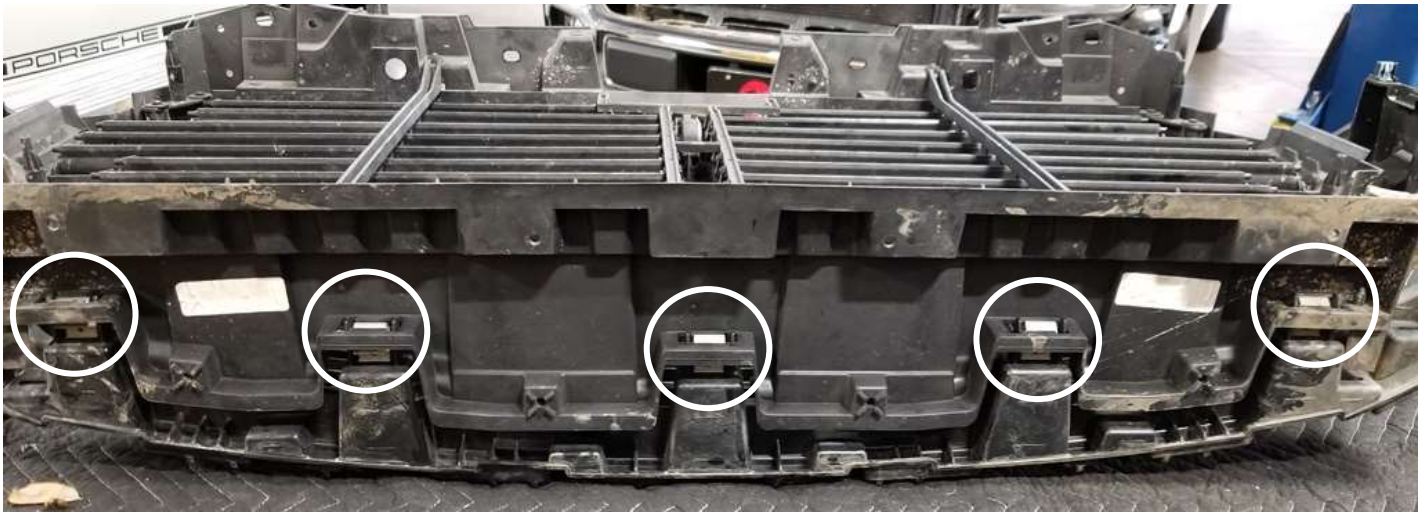
9. Disconnect the clips (located near the headlights) behind the grille by pulling gently.
10. Remove the grille and active shutter assembly from the truck.



11. Remove the eight (8) push pins and remove the plastic lower shroud.



12. Disconnect the electrical connector from the FFC and the FFC washer water hose.



13. Disconnect the five (5) clips connecting the active shutter grille to the factory grille.

14. Remove the active grille shutters from the factory grill and set it to the side. Save for reinstallation.



Note: Please read the next instruction carefully prior to performing the step.

15. Pull the FFC washer nozzle out of the factory grille. It is spring loaded and will be a little difficult to pull out. You will need to find a way to keep the washer nozzle out so that you can take the trim piece off. With the washer nozzle out, carefully remove the trim piece from the end of the washer nozzle. Save for reinstallation.



16. Remove the FFC and the FFC washer assembly from the factory grille.

17. Set the factory grille aside.



Note: To prevent scratching the aFe Scorpion Grille while performing assembly, use a protective covering between the grille and a flat surface.

18. Remove the supplied aFe Scorpion grille from the box and place it on a flat surface for assembly.
19. Remove the FFC mounting bracket from the aFe Scorpion grille. Save the hardware for reinstallation.



20. Install the FFC assembly to the FFC mounting bracket with the two (2) supplied #10-32 x 5/8" button head screws, two (2) supplied #10 flat washers, and two (2) supplied #10-32 nylon lock nuts.

Note: The washer nozzle trim piece will sit flat on the bracket when it is oriented correctly.

21. Install the FFC washer trim piece (removed in Step 15) back onto the washer nozzle.



22. Reinstall the FFC mounting bracket onto the aFe Scorpion grille using the hardware removed in Step 19. Before tightening, make sure to center the camera and the washer.



23. Remove and discard the two (2) nuts from the supplied 20" single row LED light.



Note: Please read the instruction below prior to installation.

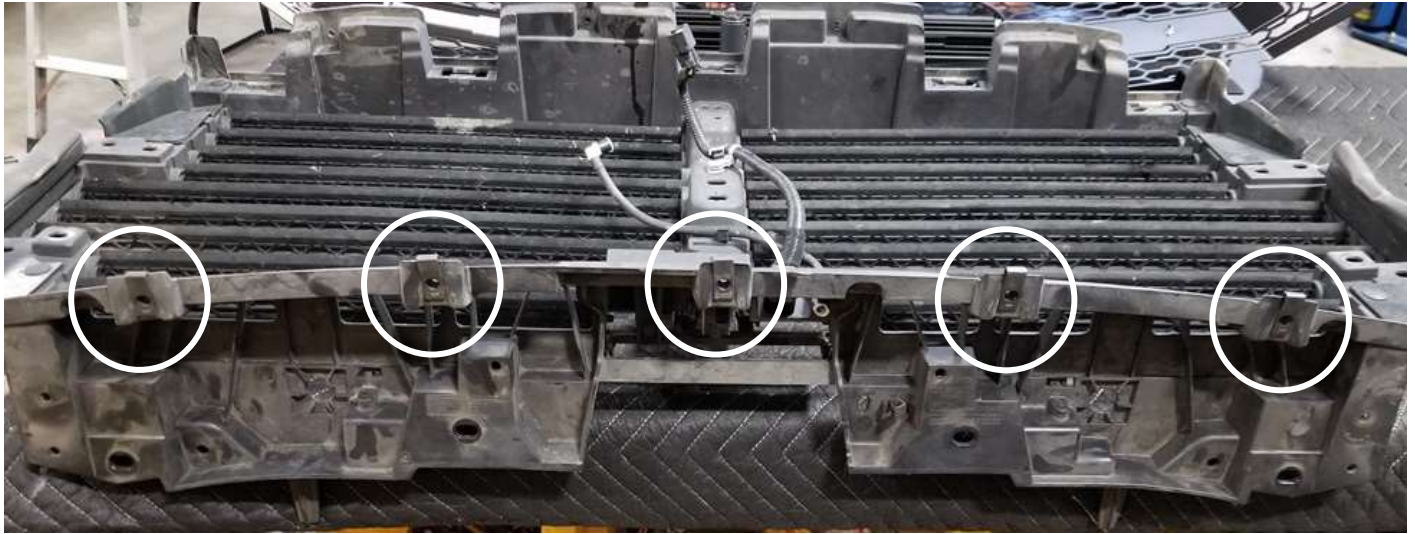
24. Locate the drilled hole furthest to the driver's side. Install one (1) supplied #10-32 x 1/2" button head screw (black) thru the front of the aFe Scorpion grille. Turn the aFe Scorpion grille over and install the aFe logo back plate onto the #10-32 x 1/2" button head screw (black). Install one (1) supplied #10-32 SS flange nut onto the #10-32 x 1/2" button head screw (black). Snug the #10-32 flange nut up but do not tighten.
25. Install the supplied 20" single row LED light through the front of the aFe Scorpion grille. While holding the 20" single row LED light, install two (2) supplied #1 LED bar brackets (bracket feet point away from each other) from the back of the aFe Scorpion grille and onto the studs on the 20" single row LED light. Install the two (2) supplied 1/4" washers (black) and two (2) supplied 1/4"-20 nylon lock nuts (black) onto the light. Do not tighten. From the front, install four (4) #10-32 x 1/2" button head screws (black) through the aFe Scorpion grille. Turn the aFe Scorpion grille around and make sure that the driver's side #10-32 x 1/2" button head screws (black) pass thru the aFe logo back plate and thru the #1 LED bracket. The passenger side runs thru the #1 LED bracket only. Install four (4) #10-32 SS flange nut onto the #10-32 x 1/2" button head screws (black). Tighten the #1 LED brackets first. Then tighten the 20" single row LED light while centering it.



Note: Please read the instruction below prior to installation.

26. Install one (1) supplied cable clamp 5/16" (black) around the wiring for the 20" single row LED light.

27. Locate the drilled hole furthest to the passenger side. Install one (1) #10-32 x 1/2" button head screw (black) through the aFe Scorpion grille. Turn the aFe Scorpion grille around and place the cable clamp installed in Step 26 onto the #10-32 x 1/2" button head screw (black). Install one (1) #10-32 SS flange nut onto the #10-32 x 1/2" button head screw (black) and tighten.



28. Place the aFe Scorpion grille to the side and place the active shutter grille assembly onto the work surface.

29. Install the five (5) M6 clip nuts to the top of the active shutter grille.

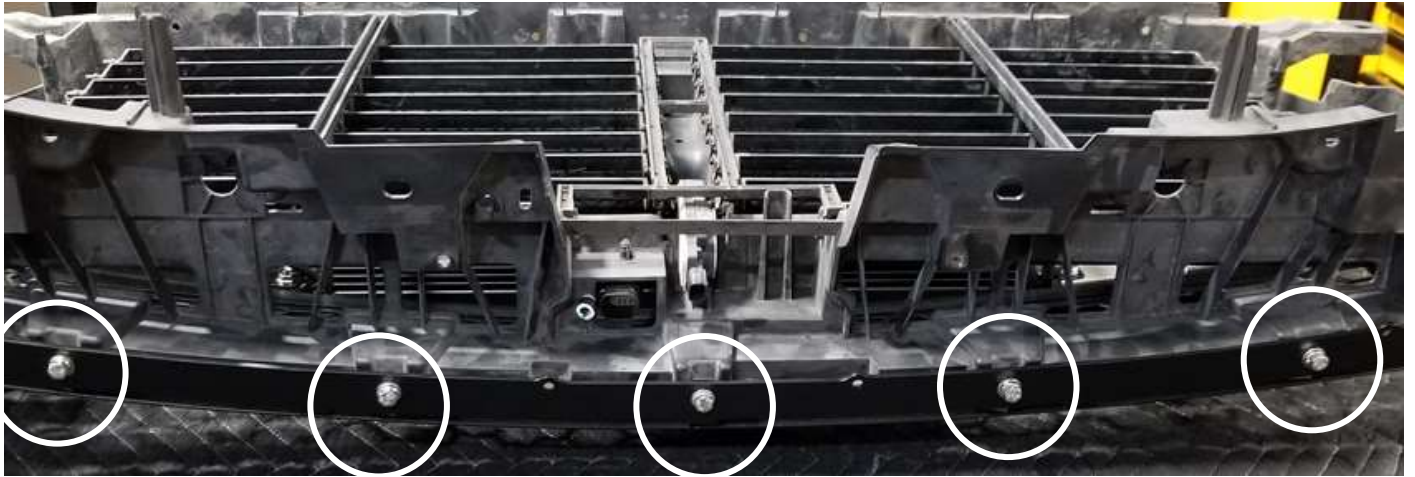


30. Place the aFe Scorpion grille back on the workspace.

31. Attach the wiring connector and the water line to the FFC assembly.



32. Attach the active shutter grille to the aFe Scorpion grille. At the bottom of the aFe Scorpion grille assembly, install three (3) supplied 3/16" x 1" SS fender washers (black) and three (3) #10-32 nylon lock nuts. Do not tighten.



33. At the top of the aFe Scorpion grille assembly, install five (5) supplied M6 x 1.0mm x 25mm hex bolts and five (5) #10 flat washers.

34. Tighten the hardware in Step 32 and the hardware in Step 33.



35. Reinstall the eight (8) push pins that attach the plastic lower shroud.



36. Before installing the aFe Scorpion grille, install the supplied power harness. The Red wire goes on the positive battery terminal (+) and the black wire goes on the negative battery terminal (-). You will need to mount the switch inside the cab or to an available prewired switch. Use the (15) supplied 8" cable ties to secure the wiring loom to the vehicle.



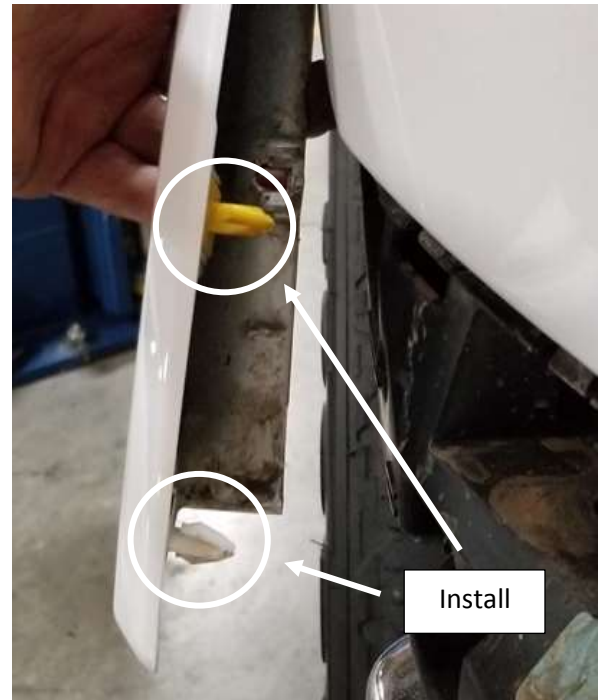
Note: There are factory ford stickers on the headlights that will be seen through the grille if not removed. If you want to remove them, now is the time.

37. Install the aFe Scorpion grille assembly onto the vehicle.

38. Reinstall the factory hardware removed in Step 8. Tighten to factory specifications.



39. Center the grille assembly and install the four (4) factory screws removed in Step 4. Tighten to factory specifications.



40. Remove the two clips that attach the plastic bumper cap fascia to the wheel arch molding (if applicable).

41. Install the two clips remove in Step 40 into the wheel arch moldings (if applicable).

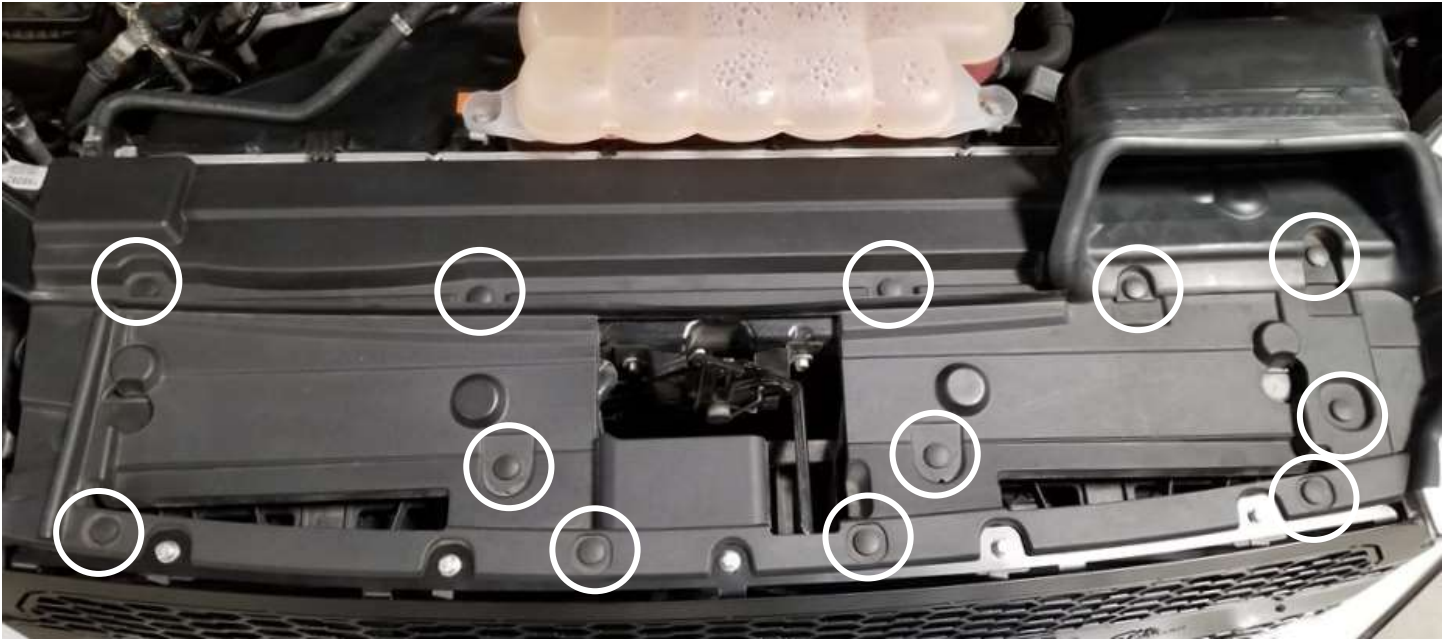


42. Reinstall the plastic bumper cap fascia. Push the plastic bumper cap fascia back in until the clips to secure it in place. Push the sides in as well until they are clipped in securely.

43. Install the wheel arch moldings to the plastic bumper cap fascia. Make sure to push in the sides to secure it in place.



44. Reconnect the wiring connectors and the FFC washer hose connection.



45. Install the plastic shroud and the (12) plastic clips removed in Step 2.

46. Reconnect the negative battery terminal.



47. Remove all the painter's tape if any was applied.

48. Installation is now complete.

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PLEASE CONSULT YOUR LOCAL AUTOMOTIVE ELECTRICAL PROFESSIONAL FOR INSTALLATION SERVICES AND ADVICE. aFe Power IS ONLY EQUIPPED TO PROVIDE BASIC TECHNICAL ASSISTANCE DUE TO THE DIVERSITY OF VEHICLES, VEHICLE OPTIONS & MODIFICATIONS AND LIGHTING.

CONFIGURATION OPTIONS AVAILABLE. aFe Power products cannot be held liable due to improper component installation and / or faulty wiring.

GENERAL GUIDELINES:

LED Lights & LED Light Bars operate at relatively high currents and should only be installed by qualified personnel with experience in switched / relayed high draw DC Circuits.

- Light Bars are designed for use only with standard 12v DC power systems
- Light Bars are for OFF-ROAD USE ONLY. Check your local laws & regulations regarding vehicle mounted lights.
- Some Light Bars are equipped with waterproof connectors while others are simply pig-tailed
- Red Wires = POSITIVE | Black Wires = NEGATIVE
- ALWAYS install your lights on a fused circuit. Basic fusing guidelines: maximum 5A for every 10" of LED Light Bar.

GENERAL USE, INSTALL AND ADJUSTMENT TIPS

NOTE 1: aFe Scorpion Grilles (with LED Light Bars installed), and LED Light Bars themselves are for OFF-ROAD USE ONLY.

NOTE 2: To adjust the angle of your light bars simply loosen the mounting hardware on either side of each Light Bar, rotate the Light Bar to adjust the angle, then tighten the hardware once the desired angle is achieved (please be careful not to over-tighten the mounting hardware or scratch the protective powder-coat finish). It is best to adjust the angle with the vehicle on level ground with the lights facing a wall, garage door or other solid barrier at approximately 25-30 feet.

NOTE 3: Please consult a qualified automotive electrical professional for light bar wiring installation.



GRILLE CARE INFORMATION

aFe Power Scorpion Grilles are the finest in the industry but do require normal care. Wash regularly as you would when caring for your vehicles. Never use dish soap.

GLOSS BLACK FINISH

aFe Power Scorpion Grilles with gloss black powder coated finish may be washed regularly as you would when caring for your vehicles finish using soap and water. aFe Power Scorpion Grilles should be waxed at the same time that you wax the vehicle. As a rule, anything you use to clean your vehicles painted surfaces can be used to clean and maintain your aFe Power Scorpion Grille. A gloss powder coated finish can be cared for in the same fashion that you would care for your vehicle's factory paint job. Never leave wet water spots as that may leave a blemish.

MATTE BLACK FINISH

Paint warranty applies to defects in material and / or workmanship, it does not cover the matte finish surface appearance. To enjoy the matte appearance for many years to come, please follow these owner care and maintenance tips. Get a no-shine matte car wash soap that uses no fillers, no silicone, and won't strip your matte paint of its layer of protection. Do not use wax, detail spray, armor all®, or any products made for normal paint. Use only products specifically developed for matte finish paint. Do not use products that are even mildly abrasive, such as polishes, glazes, or rubbing compounds. do not use mechanical cleaners or polishers. Do not use terrycloth, cloth, or paper towels. Do not rub the finish vigorously, this will burnish the paint finish, causing a permanent shiny spot. Shiny spots cannot be removed.

Do not use commercial car wash facilities or their shine enhancement products. Most car wash brushes, large mechanized "towels," and shine enhancement products can damage matte paint. Remove foreign substances such as insect remains, tar, and road debris using a soft applicator and a mild solvent; saturate and soak area before cleaning—rub lightly.

Hand-wash with a soft wash mitt and mild cleaning product safe for matte paint. Use microfiber cleaning cloths with alcohol-based window cleaner for basic surface clean-up.

aFe Scorpion Grilles product warranty:

aFe Power warrants its grille products to be free from defects in material and workmanship for the lifetime of the grille. aFe Power products warrants the finish of its grille products for a 3-year period beginning at the time of sale to the end user. These warranties are limited warranties and do not cover abuse, modification or improper installation nor do they cover finish failure caused by caustic cleaning agents, road salts or other chemicals. aFe Power reserves the right to repair or replace a defective product at its sole discretion. Any aFe Power product must be returned to aFe Power for warranty consideration and must be returned at the customer's expense. In the event that the product is deemed to be defective, the repaired or replaced item will be returned via a surface shipping method to the customer at aFe Power's expense. No provision is made for any labor, rental car or other costs incurred by the failure of its products.



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