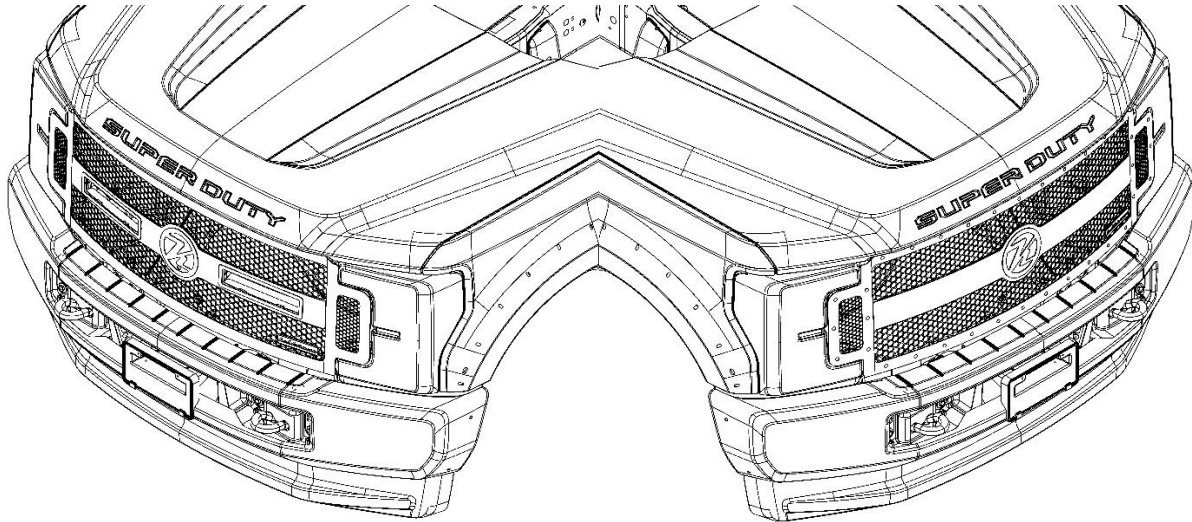




Bravo Grille Installation Manual

- 2017-2019 Ford Super Duty

Kelderman Bravo Series Grilles



Smooth Frame

Rivet Frame

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Kit Numbers

- This installation manual covers the following grilles.

Kit Number	Description
KLM-502021017-002010000	F250 – Bravo Smooth
KLM-502021017-002010020	F250 – Bravo Smooth – 10” Lights
KLM-502021017-002010100	F250 – Bravo Smooth – Camera
KLM-502021017-002010120	F250 – Bravo Smooth – Camera – 10” Lights
KLM-502021017-003010000	F250 – Bravo Rivet
KLM-502021017-003010020	F250 – Bravo Rivet – 10” Lights
KLM-502021017-003010100	F250 – Bravo Rivet - Camera
KLM-502021017-003010120	F250 – Bravo Rivet – Camera – 10” Lights
KLM-502022017-002010000	F350 – Bravo Smooth
KLM-502022017-002010020	F350 – Bravo Smooth – 10” Lights
KLM-502022017-002010100	F350 – Bravo Smooth – Camera
KLM-502022017-002010120	F350 – Bravo Smooth – Camera – 10” Lights
KLM-502022017-003010000	F350 – Bravo Rivet
KLM-502022017-003010020	F350 – Bravo Rivet – 10” Lights
KLM-502022017-003010100	F350 – Bravo Rivet - Camera
KLM-502022017-003010120	F350 – Bravo Rivet – Camera – 10” Lights
KLM-502023017-002010000	F450 – Bravo Smooth
KLM-502023017-002010020	F450 – Bravo Smooth – 10” Lights
KLM-502023017-002010100	F450 – Bravo Smooth – Camera
KLM-502023017-002010120	F450 – Bravo Smooth – Camera – 10” Lights
KLM-502023017-003010000	F450 – Bravo Rivet
KLM-502023017-003010020	F450 – Bravo Rivet – 10” Lights
KLM-502023017-003010100	F450 – Bravo Rivet - Camera
KLM-502023017-003010120	F450 – Bravo Rivet – Camera – 10” Lights

Introduction

- **Important**

It is important that the entire installation instructions be read thoroughly before proceeding with grille installation.

- **Product Installer Responsibilities**

Installer is responsible for installing this product in accordance with Kelderman Mfg. Inc. specifications and installation instructions.

Installer is responsible for providing proper installation of vehicle components and attachments as well as required or necessary clearance for suspension components, axles, wheels, tires, and other vehicle components to ensure a safe and sound installation and operation of this product.

Kelderman Mfg. Inc. cannot guarantee correct out of the box fitment across all light brands and sizes. The installer is responsible for test fitting all lights into the grille and making any required modifications before the grille is sent to paint. This grille has been designed to utilize the following Rigid Industries lights.

- Rigid Industries SR-Series 10 Inch

- **Product Owner Responsibilities**

Owner is solely responsible for pre-operation inspection, periodic inspections, maintenance, and use of the product as specified by Kelderman Mfg. Inc.

- **Definition of Terms**

- **Warning:** Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
- **Caution:** A potential hazardous situation may result in property damage.
- **Note:** Provide information or suggestions that help correctly perform a task.
- **Torque:** When italicized "*torque*" alerts the installer to tighten fasteners to a specified value.

Safety

- **Your Safety and the Safety of Others is Very Important.**
Read and understand all safety precautions and instructions before installing this product.

- **CAUTION: Trucks Equipped with Parking Sensors, Cameras, or Other Like Devices.**
Relocation of these devices will alter the field of view. It is the responsibility of the owner to understand how these changes affect the operation of these systems.

- **This Product is Intended for Off-Road Use**
All liability for installation and use rests with the owner.

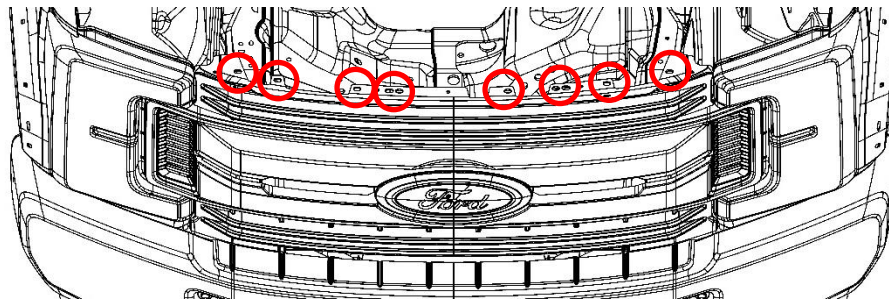
- **WARNING: Careless Installation Can Result in Serious Injury or Property Damage**
 - Wear eye protection.
 - Disconnect the battery before doing any work on the vehicle.
 - Work on flat level ground.
 - Ensure truck is properly supported by jack stands. Never work under a vehicle supported only by hydraulic jacks.
 - Take precautions when lifting product.
 - Never work directly under the product until it has been securely fastened to the vehicle.
 - Avoid sharp, hot, and moving components when routing electrical cables.
 - If drilling inspect both sides of the surface and remove/relocate any objects located in the way.
 - Ensure all bolts are properly tightened before driving.

Grille Removal

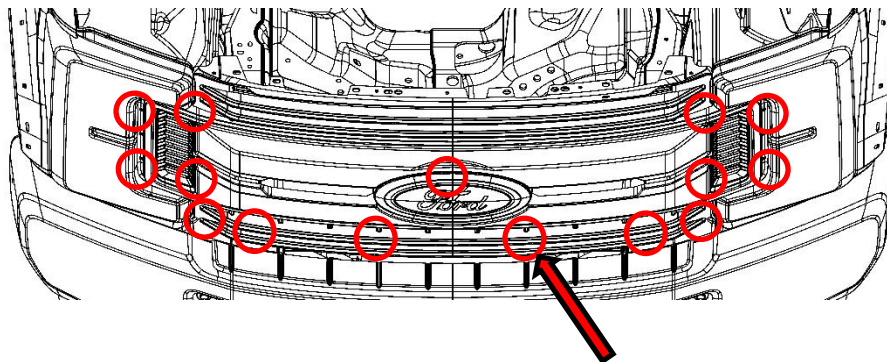
- 1:** To access the grille first remove the black plastic radiator cover panel. This will be reinstalled.



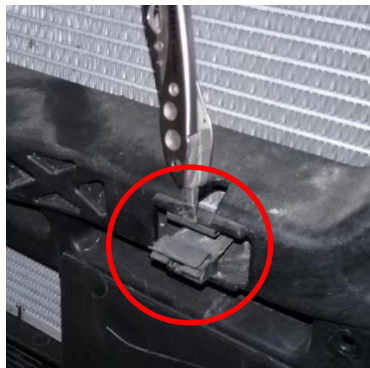
- 2:** Remove the eight screws across the top of the grille, these will be reinstalled. Disconnect the camera wiring and camera washer fluid tube if equipped.



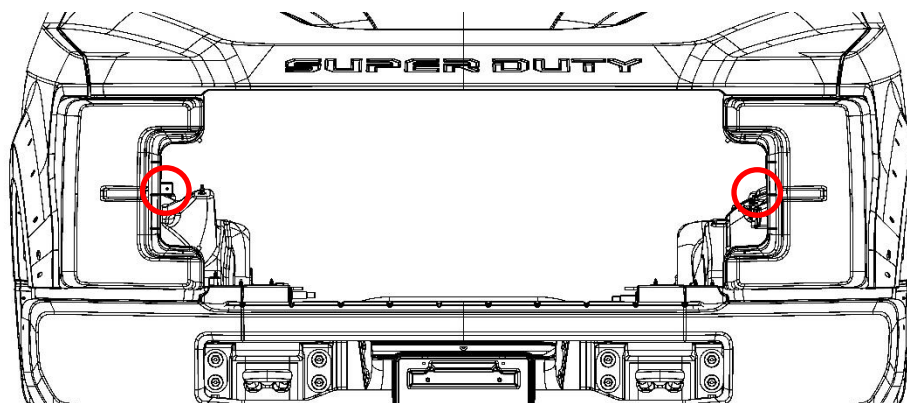
- 3:** The remainder of the grille is held in with clips carefully pull straight forward at each clip location to remove the grille from the truck.



- 4:** Use a long screw driver to reach the bottom four metal clips and press down on the tabs to release them.



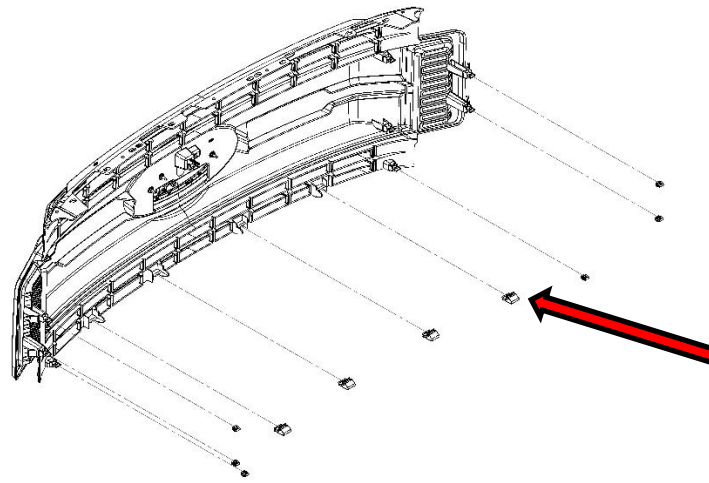
- 5:** Remove the two small screws located at the center of the headlight behind the grille. These will be reinstalled.



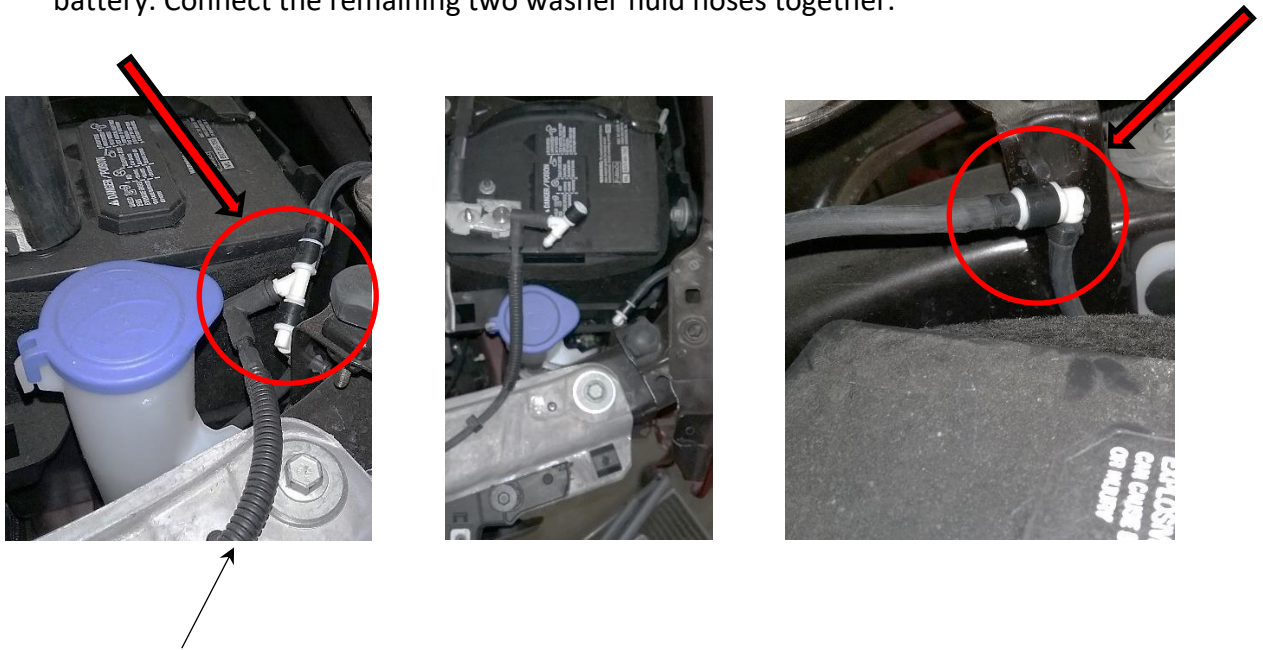
- 6:** Remove the two screws that hold the camera washer to the back side of the grille to access the camera. The camera will be reinstalled.



7: Remove the plastic and metal clips from the factory grille. These clips will be reinstalled.

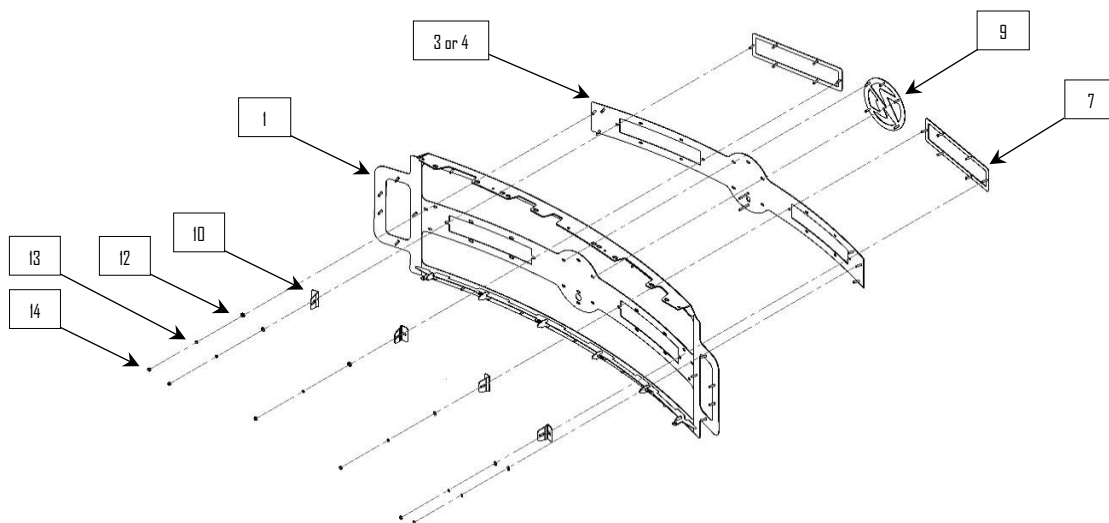


8: If equipped, disconnect the camera washer fluid tube and T fitting located next to the battery. Connect the remaining two washer fluid hoses together.

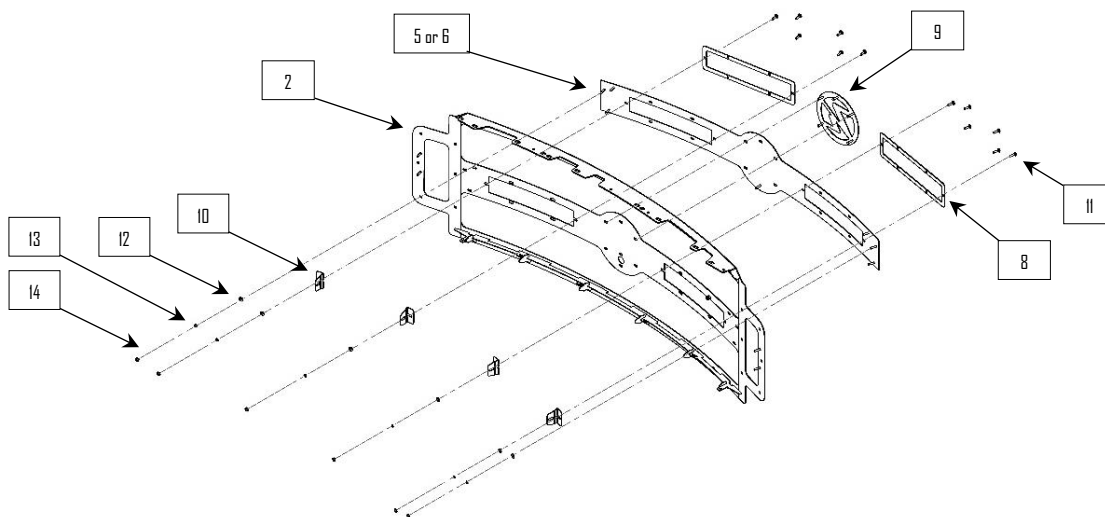


Grille Assembly

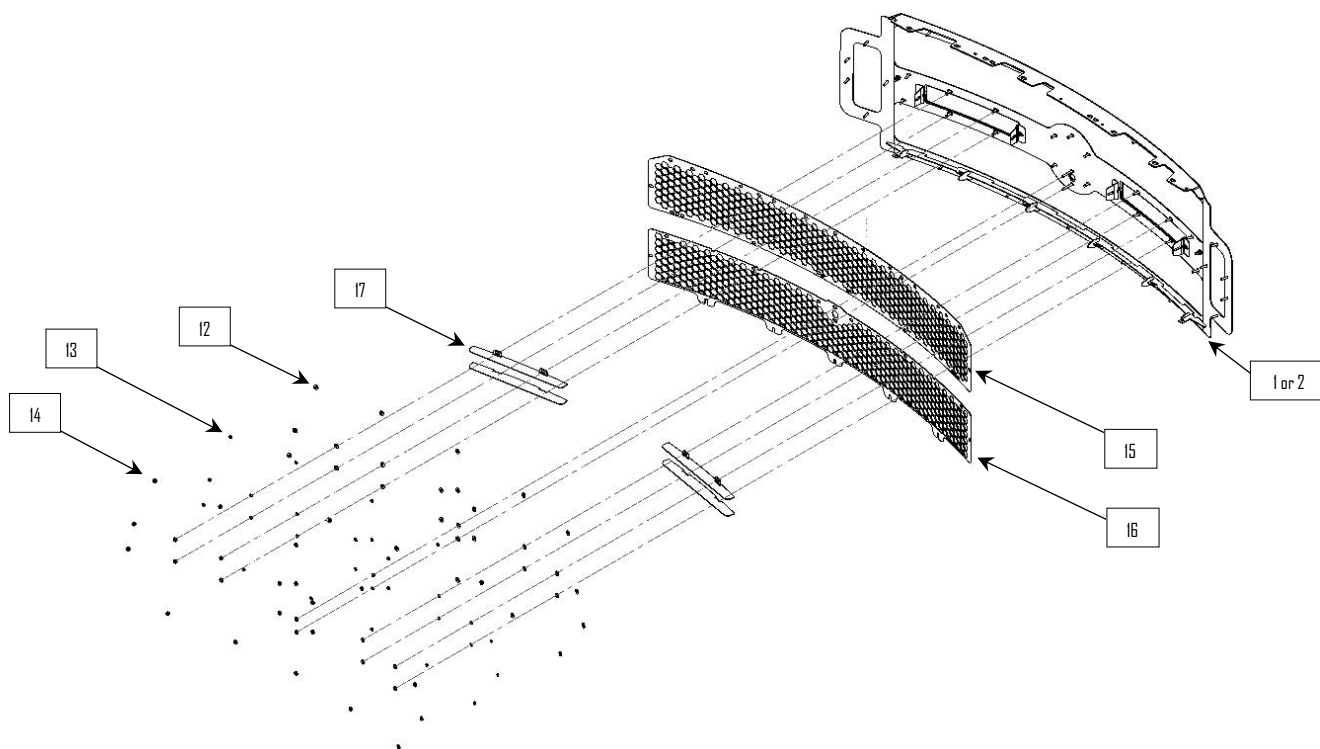
- **NOTE:** This section covers multiple grille options. Not all steps and parts depicted may pertain to your grille install.
- Smooth Frame Grille
 - Install the smooth light frames (7), the center logo badge (9), and the Bravo blade (3, 4, 5, or 6) on the grille frame (1) using #10 hardware (12, 13, & 14).



- Rivet Frame Grille
 - Install the rivet light frames (8), the center logo badge (9), and the Bravo blade (3, 4, 5, or 6) on the grille frame (2) using #10 stainless carriage bolts and hardware (11, 12, 13, & 14).



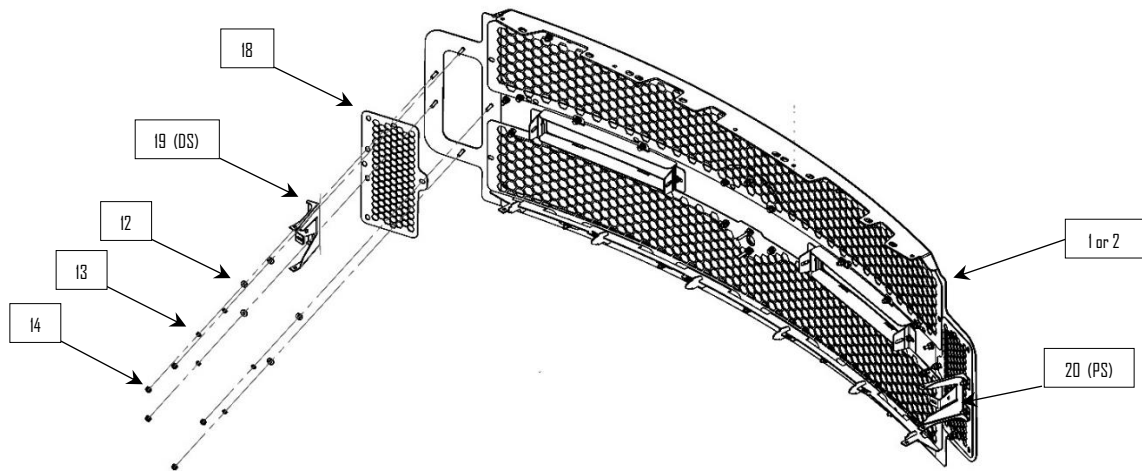
- Light Installation.
 - If optioned fasten light brackets (10) to the 10" SR Rigid light using the hardware supplied with the light before bolting the brackets to blade frame using #10 hardware (12, 13, & 14).
- Smooth Frame Grille
 - Install the upper and lower honeycomb mesh screens (15 & 16) into the smooth grille frame (1) using #10 hardware (12, 13, & 14).
- Rivet Frame Grille
 - Install the upper and lower honeycomb mesh screens (15 & 16) into the rivet grille frame (2) using #10 stainless carriage bolts and hardware (11, 12, 13, & 14).



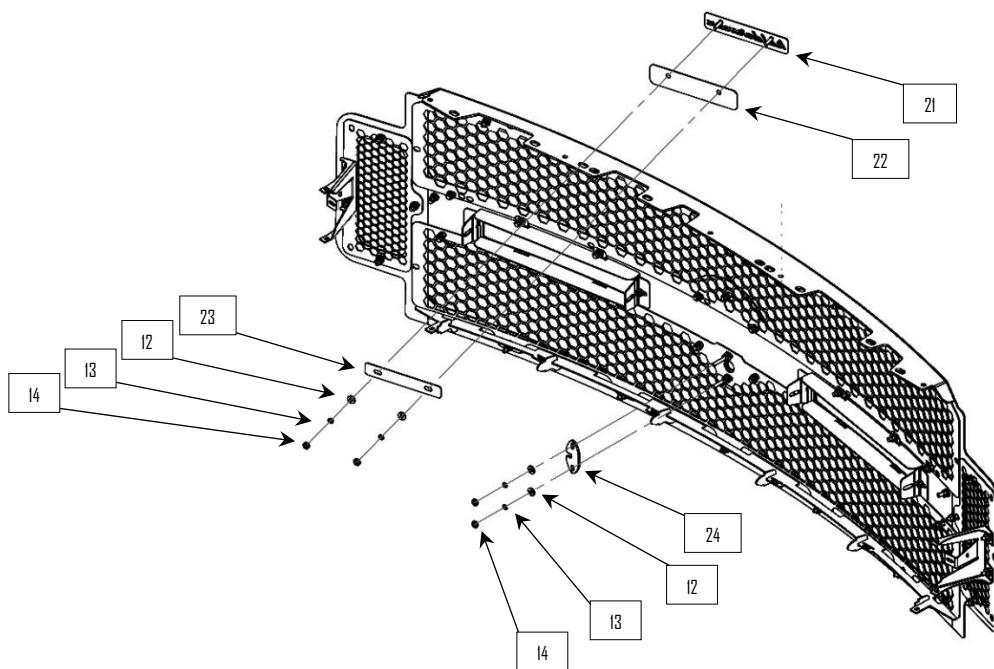
- Light Installation.
 - If optioned fasten the SR light buckets (17) to the grille frame (1 or 2) using #10 hardware (12, 13, & 14).

- Smooth Frame Grille
 - Install the side honeycomb mesh screens (18) and the grille edge brackets (19 DS & 20 PS) into the smooth grille frame (1) using #10 hardware (12, 13, & 14).

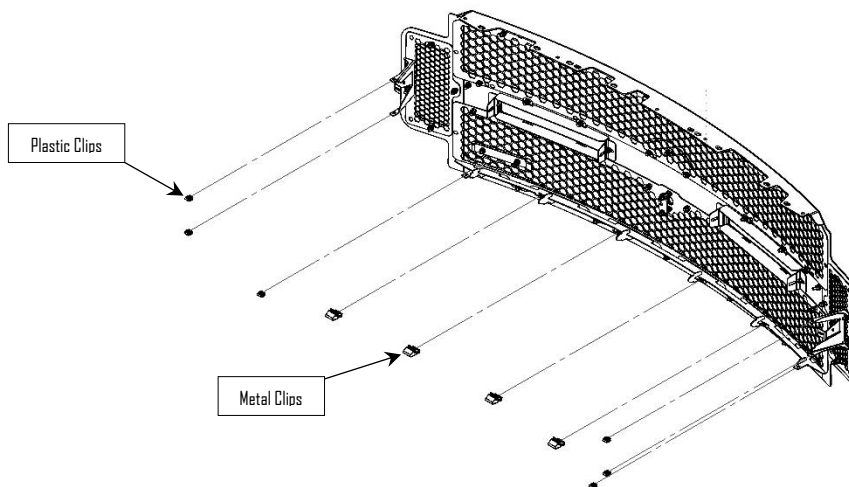
- Rivet Frame Grille
 - Install the side honeycomb mesh screens (18) and the grille edge brackets (19 DS & 20 PS) into the smooth grille frame (2) using #10 stainless carriage bolts and hardware (11, 12, 13, & 14).



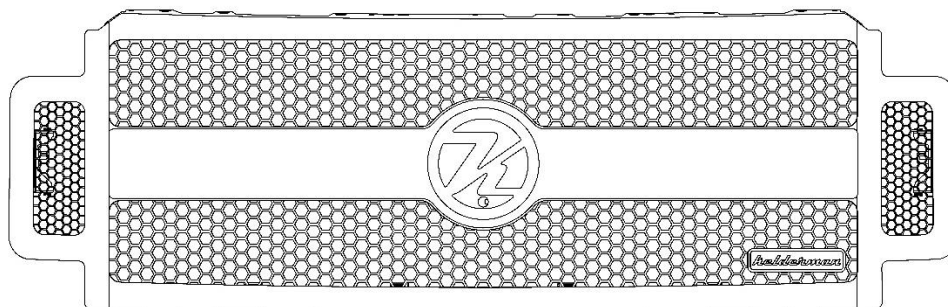
- Install the text badge (21), badge boarder plate (22), and badge backing plate (23) onto the lower honeycomb mesh (16) using #10 hardware (12, 13, & 14).



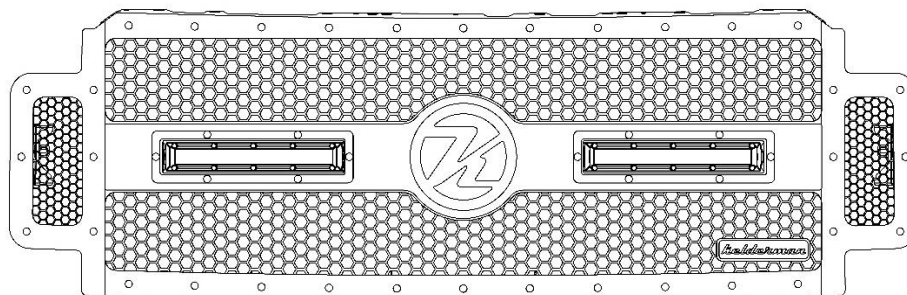
- Camera equipped trucks: Install camera into frame. Use camera positioner (24) and #10 hardware (12, 13, & 14) to hold the camera in place
- Reinstall the OEM clips removed in *step 7*. Six plastic clips and four metal clips will be reused.



- The grille is now ready to be installed.



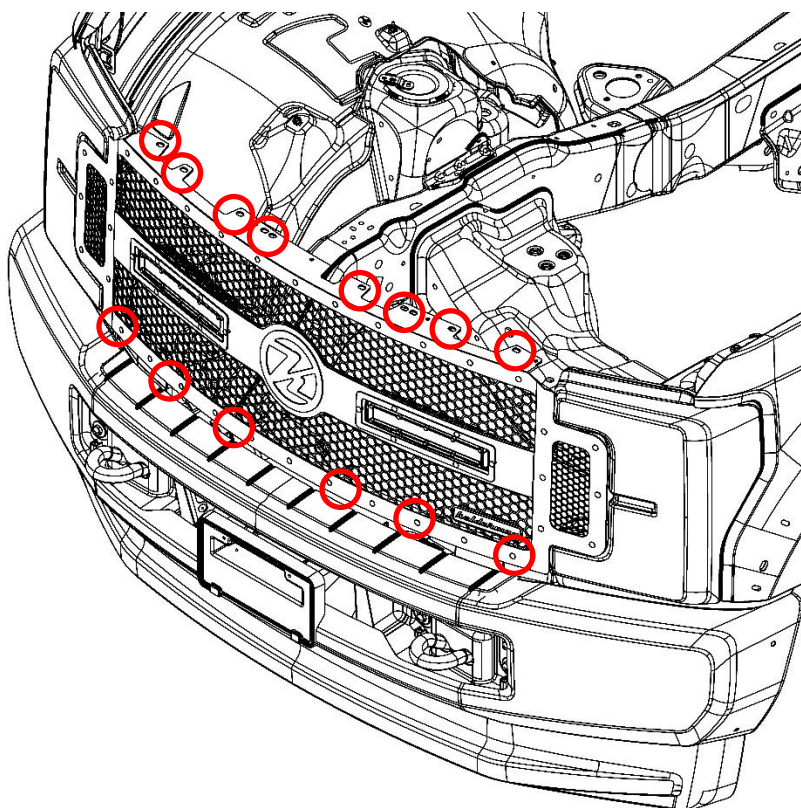
Bravo Smooth - Camera



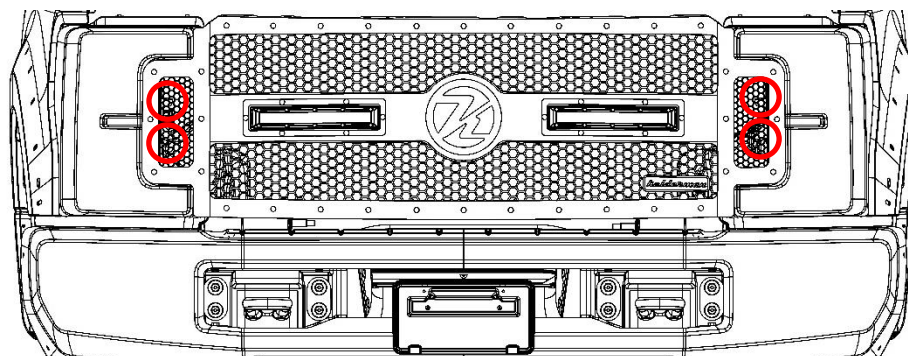
Bravo Rivet - 10" Light

Grille Installation

- 9:** Wire lights, if optional.
- 10:** Install the assembled grille frame (1 or 2), reuse the hardware removed in *step 2* to fasten the top of the grille to the truck.
- 11:** Snap the six bottom clips into the factory mounting location.

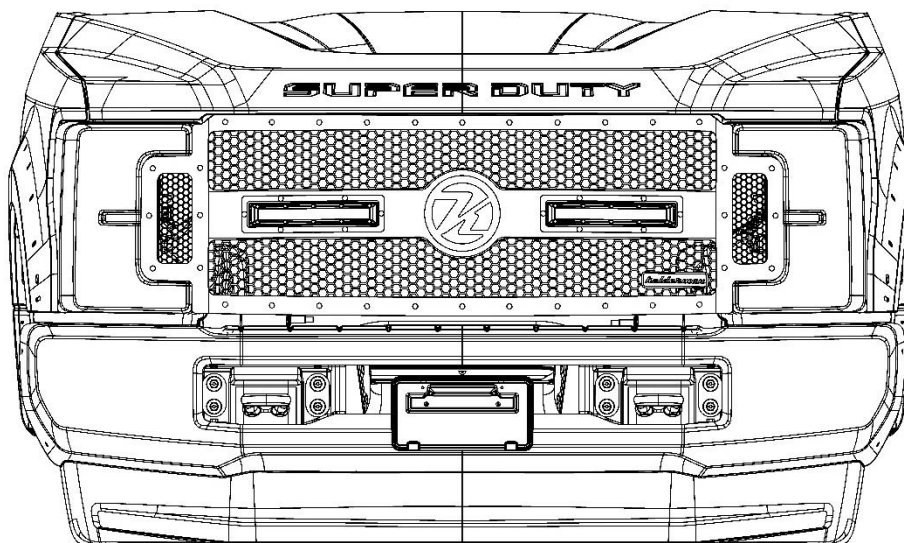
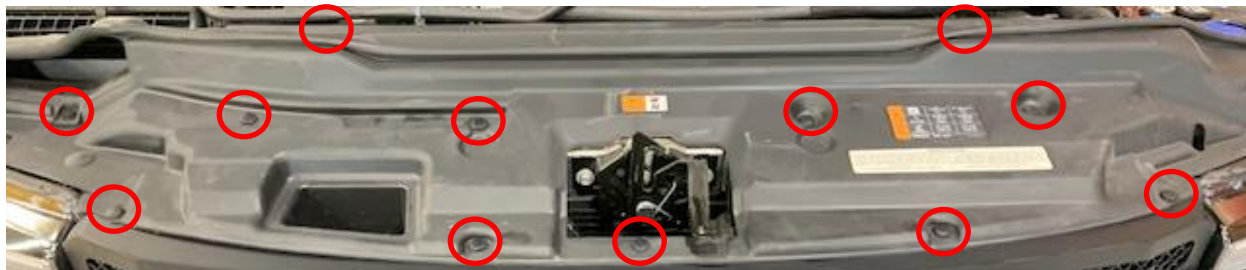


- 12:** Snap the grille side bracket clips into the factory location. Fasten the side brackets to the headlights with the hardware removed in *step 5*.



13: Connect the camera wiring. **NOTE:** Carefully shut the hood while checking the clearance between the hood and the grille, adjust the grille if required.

14: Use the OEM hardware removed in *step 1* to reinstall the black plastic radiator cover panel. **NOTE:** Carefully shut the hood while checking the clearance between the hood and the radiator cover panel, adjust the panel if required.



Parts Key

Item Number	Part Number	Description
1	33030	Weldment - Bravo Smooth Frame
2	33047	Weldment - Bravo Rivet Frame
3	33029	Weldment - Bravo Blade - 10" Lights - w/Camera
4	33045	Weldment - Bravo Blade - w/Camera
5	33041	Weldment - Bravo Blade - 10" Lights
6	33043	Weldment - Bravo Blade
7	33031	Weldment - SR Light Smooth Trim
8	33049	Plate - 14ga – SR Light Rivet Trim
9	33039	Weldment - Bravo "K" Badge
10	33051	Plate - 16ga - Bravo SR Light Bracket - w/Bends
11	13817	Carriage Bolt: #10-24 x 3/4"
12	14062	Flat Washer SAE: #10
13	14086	Split Lock Washer: #10
14	14070	Hex Nut: #10-24
15	10010292	Plate - 16ga - Honeycomb Upper Screen
16	10010301	Plate - 16ga - Honeycomb Lower Screen - Bravo
17	33052	Plate - 16ga - SR Light Bucket - w/Bends
18	10010291	Plate - 16ga - Honeycomb Mesh Side Screen
19	33022	Plate - 14ga - Grille Edge Bracket - DS - w/Bends
20	33021	Plate - 14ga - Grille Edge Bracket - PS - w/Bends
21	33053	Weldment - Kelderman Text Badge
22	33036	Plate - 18ga - Kelderman Badge Border
23	33037	Plate - 18ga - Kelderman Badge Backing Plate
24	33009	Plate - 11ga - Camera Positioner

Notes

Notes

Contact Information

- Kelderman Manufacturing appreciates your business. We strive to meet the needs of our customers by providing the highest quality products. If you have any questions concerning our products please call or email us at the following:

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