



2004 Ford F-150 Replacement Billet Grille Honeycomb & Bar Style Center "Vertical"

PART# 43331(Brushed) - 43332(Polished) - 43333(Black) Upper
 PART# 43531(Brushed) - 43532(Polished) - 43533(Black) Lower Vertical
 PART# 42121(Brushed) - 42122(Polished) - 42123(Black) Lower Horizontal

After



Photo shown W/optional bumper grille Part#42122

NOTE: Please read all instructions first before proceeding with this installation.

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|----------|---|
| Hardware | 6 - 1/4-20 x 3/4" Blk SHCS |
| | 6 - 1/4-20 Loc Nuts |
| | 12 - U-Clips |
| | 12 - #8 x 1/2" Flat Phillips head screw |
| | 6 - 1/8 x 7/16 x 3/4 Plastic Washers |
| | 4 - "L" Brackets |
| | 4 - "Z" Brackets |
| | 2 - Flat Tabs |
| | 1 - Passenger hood Bracket "Slotted Y" |
| | 1 - Driver hood Bracket "Slotted Y" |
- 4 - Bumper Tabs



Start by removing the four 10mm bolts (two per side) that attach the grille frame to the hood.



Remove the 6 (10mm) nuts holding the factory grille along the front edge of the hood shown above in red.



Mask the front of the shell to protect the painted or chrome shell from damage during the installation.



Remove the two rubber stops on the brackets and **SAVE** them. They will be reinstalled.



Remove the factory support brackets.



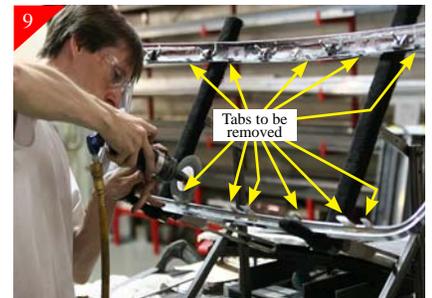
Now separate the outer shell from the honeycomb factory grille, but first you need to remove the fiber tape covering the clips.



Once the tape has been removed, You carefully pry out the tabs that attach the honeycomb grille to the outer shell. There are 14 tabs to be released.



With the tabs released, the grille shell can now be removed from the honeycomb grille. Here is a picture of the frame without the honeycomb grille.



Using a cut-off wheel or hack saw remove all of the lower and upper tabs from grille shell as shown above. You will not need to remove the tabs on the vertical drivers and passenger side of the stock shell.



With all the tabs removed sand all cut areas smooth using a sanding block or air sander.



With all of the tabs removed and sanded, lay grille shell face down on a protected work surface. Then insert the billet grille and center as shown above.



Place supplied U-clips on long end of the (4) lower brackets and attach to billet grille using the supplied #8 x 5/8" Phillips head screws.



Mark the center location of the hole in all (4) just placed brackets where it meet the stock shell as shown above.



Using a 3/16" drill bit drill all the just marked locations.



After drilling place supplied U-clips on all the lower brackets as shown above. Then attach brackets to stock shell by using the supplied #8 x 5/8" Phillips head screws as shown above (Fig. B). Screw by hand with a screwdriver so they will not strip the thread. If done correctly the heads will sit nice and flush. You may need to file any burrs off after tightening.



Now place the plastic washers on the studs located on the outer side of the grille. There are four total. Carriage Works suggests applying some silicone on the plastic washer so it stays in place during installation



Place the flat "slotted" brackets between the "slotted Y" hood brackets and hood and re-install the (4) factory hood bolts. **Finger tighten only.** The brackets have slotted holes for alignment adjustments later.



Next, attach the supplied "slotted Y" hood brackets with flat side of the bracket on the inside of the hood using the 1/4"-20 x 3/4 Hex screw, flat washer, and safety nut. **Again Finger Tighten Only.** Note: Passenger side bracket shown above with Red.



There are 6 studs on the shell. These 6 studs go through the hood. The "Z" brackets install on the 4 studs in the center of the shell. Now place the grille on the hood. Finger tighten nuts on the two outer studs to hold the grille in place. Now you are ready to install the 4 "Z" brackets to the Studs and finalize attachment of the grille to the hood. **Do not allow the hood to shut as possible damage could occur to painted bumper.**



Using a slight upward pressure on the bottom of the grille attach the four supplied "Z" brackets to the billet grille as shown using the factory nuts and the supplied 1/4"-20 bolts and nuts as shown. These brackets will be tight as they are used to hold the grille and shell in the correct final position. Tighten all "Z" bracket nuts and bolts. Make sure that the grille shell forms to the face of the hood.



Next, using the remaining 1/4"-20 nuts and bolts, attach the grille to the vertical bars of the hood brackets. Then tighten all remaining "Slotted Y" brackets, bolts, nuts, and hood bolts.



The rubber bumpers previously removed from the grille brackets must now be re-installed. Failure to reinstall may cause damage to the Vehicle.



Carefully lower the hood and check the alignment of the grille with the headlights. **Do not allow full weight of the hood or use force to close the hood as damage may occur to the bumper cover.**



Adjust the bottom of the grille for proper alignment using the headlight lens as a guide for spacing by loosening the (2) - (10mm) bolts on the hood and the (6) Bolts holding the grille to the "Slotted Y" hood brackets. Once adjusted properly tighten all bolts and nuts.

NOTE: The Profile shots are from the horizontal install but the same concept applies.



(Fig. A) Then adjust the rubber bump stops at the bottom of the grille so that the grille barely touches when hood is closed. **(Fig. B)** There should be 1/4" between top of bumper cover and bottom of screw head.



Next place the clear self adhesive protective bump stops as shown above. Place them on the bumper mask directly below the screws on the vertical rods. Again check for alignment. Installation is complete.

Photo shown W/optional bumper grille



Completed Installation

For installation of billet grilles that require cutting of the stock shell, proper tools, knowledge and skill are needed. Carriage Works is not responsible for care & accuracy of the installation, only for Fit & Finish of its products. Use a qualified installer or contact original vendor for references to complete all instructions.

NOTE: Please adjust horizontal blades if irregular. This is the result of shipping and handling outside of Carriage Works control. Also Carriage Works Inc. Performance Recommends applying a high quality automotive wax to maintain the original appearance.