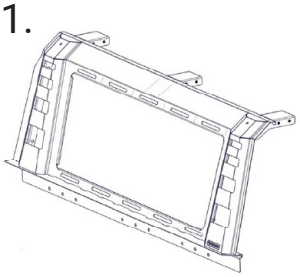
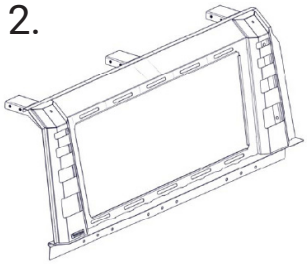
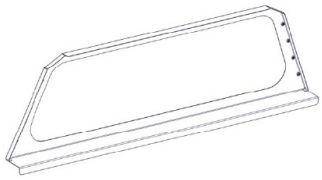
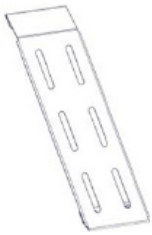
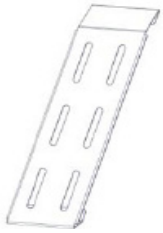
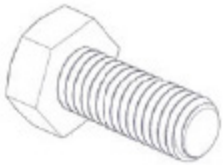
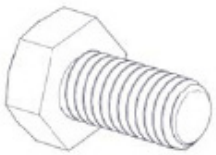
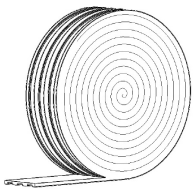
REALTRUCK

Ascend Rack
Ford F-150

Part # RT298503

Ascend Rack Components and Hardware:

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3. 
4. 
5. 
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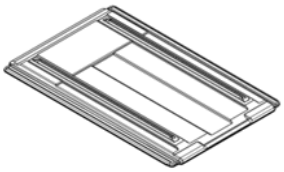
Components and Hardware:

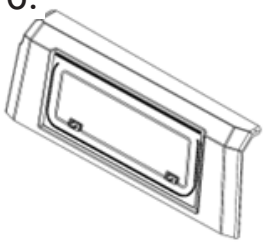
1. Side Panel, Driver Side ..... (1)
2. Side Panel, Passenger Side ..... (1)
3. Cab Panel ..... (1)
4. Crossmember ..... (1)
5. Crossmember, Rear ..... (1)
6. Top Support Member ..... (2)
7. Side Accessory Bracket, Driver Side ..... (2)
8. Side Accessory Bracket, Passenger Side ..... (2)
9. Bed Wall Mount Bracket ..... (6)
10. M8 X 1.25 X 20mm Bolt ..... (56)
11. M8 Washers ..... (64)
12. M8 X 1.25 X 16mm Bolt ..... (8)
13. Rubber Seal ..... (Roll)
14. RT298503-3 - 3rd Brake Light and Wiring Kit ..... (1)

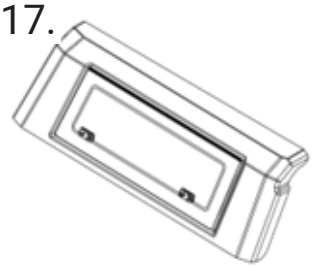
Tools for Installation:

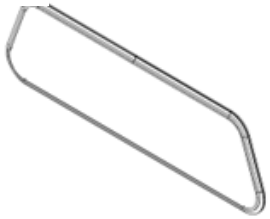
- Torque Wrench
- Pliers
- 13mm Wrench
- Scissors or Cutting Tool
- Mild Soap
- Glass Cleaner
- Isopropyl Alcohol
- Cleaning Rags

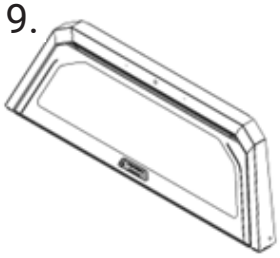
Ascend Cap FGC-4500 Components and Hardware:

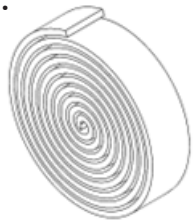
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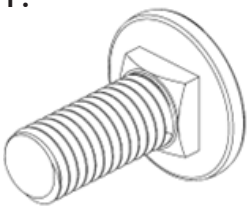
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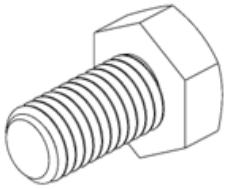
17. 

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27.

28. 

Components and Hardware:

15. Roof Panel ..... (1)
16. Side Panel, Driver Side ..... (1)
17. Side Panel, Passenger Side ..... (1)
18. Front Window ..... (1)
19. Rear Closeout ..... (1)
20. Butyl Seal ..... (Roll)
21. M8 x 1.25 x 20mm Carriage Bolt ..... (2)
22. M8 x 1.25 x 16mm Bolt ..... (2)
23. M8 Washers ..... (12)
24. M8 x 1.25 Nylock Nuts ..... (12)
25. Ribbed Seal ..... (Roll)
26. Rubber Seal ..... (Roll)
27. Rear Closeout Bracket ..... (2)
28. 5/8” Self Piercing Screw ..... (21)

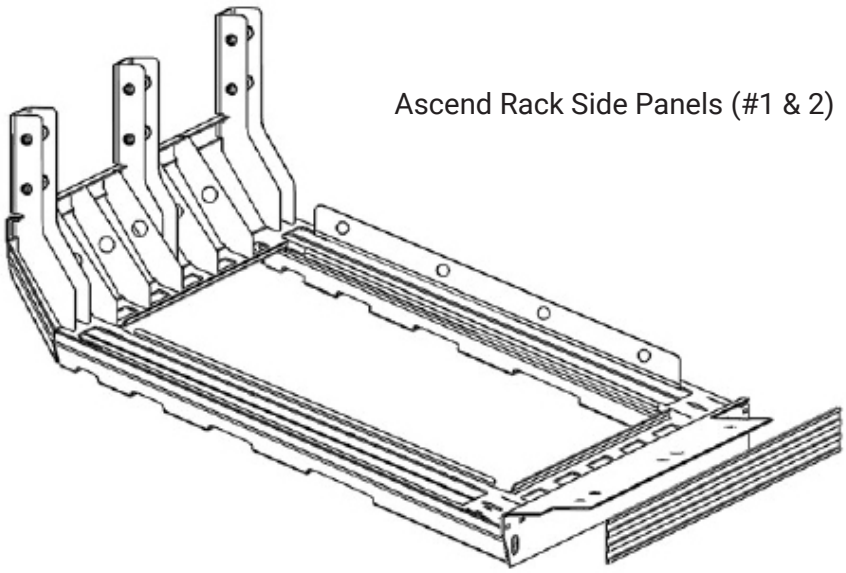
Tools for Installation:

- 13mm Wrench
- 13mm Socket
- Mild Soap/Isopropyl Alcohol
- Cleaning Rags
- Scissors/Cutting Tool
- Drill/Impact
- 1/4” Socket
- 7mm Socket
- Socket Extension
- Phillips Head Screw Driver
- Wire Fishing Rod/Object to Route Wire

Ascend Rack

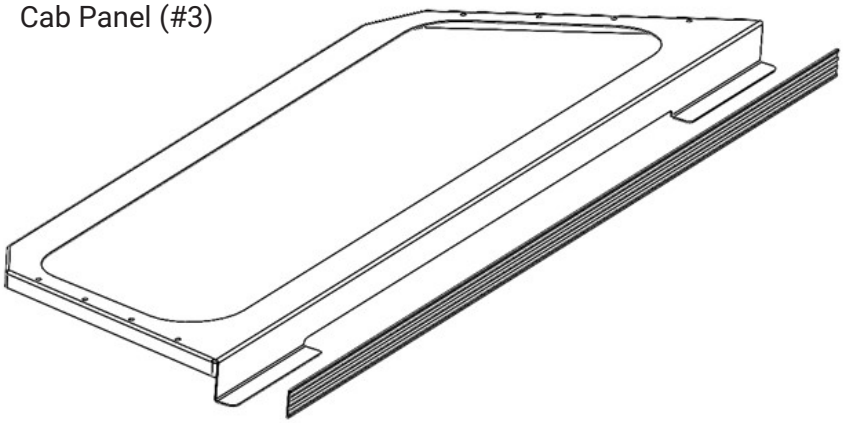
Prior to assembly - Rubber Seal

Measure the length of the bottom flange on both Side Panels (#1 & 2) and the Cab Panel (#3). Unroll the included Rubber Seal (#13) then cut to the length measured for each panel. Remove the adhesive film then firmly press the Rubber Seal (#13) onto each bottom flange.



Ascend Rack Side Panels (#1 & 2)

Cab Panel (#3)



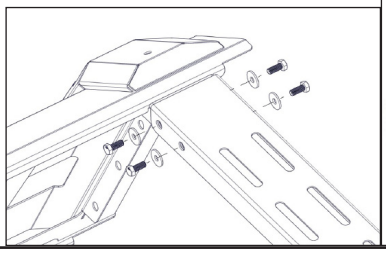
Ascend Rack

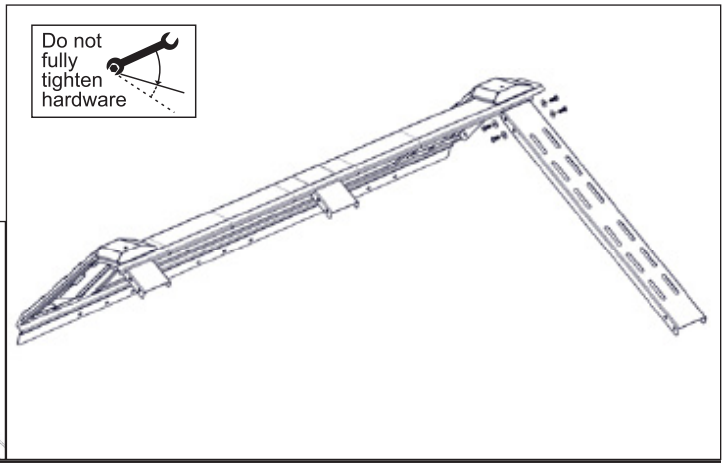


This installation recommends two people for lifting and assembly

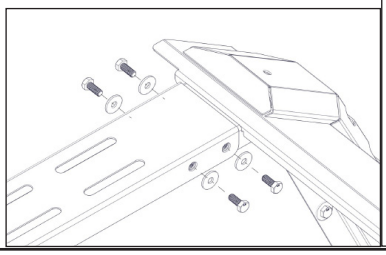
Assembling Ascend Rack

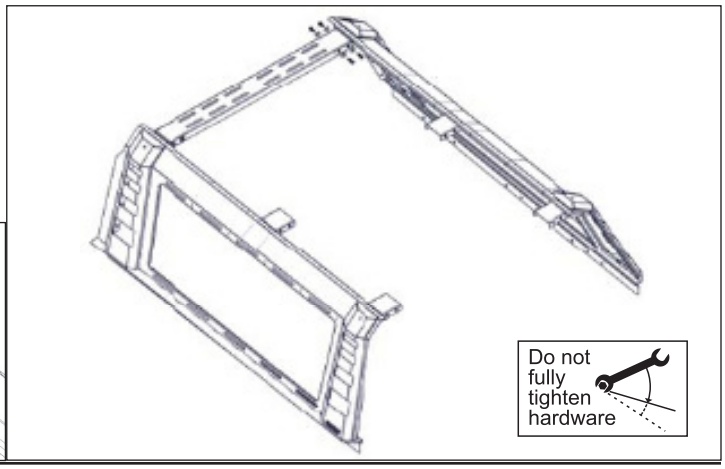
1. Starting in the front/cab, install Crossmember, Cab End (#4) to Side Panel, Driver Side (#1) with 2 M8 x 1.25 x 20mm Bolts (#10) and 2 M8 Washers (#11). Loosely fasten.





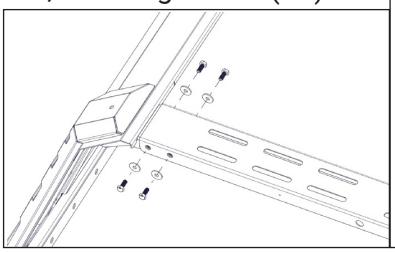
2. Install Side Panel, Passenger Side (#2) to Crossmember, Cab End from Step 1 with 2 M8 x 1.25 x 20mm Bolts (#10) and 2 M8 Washers (#11). Loosely Fasten.

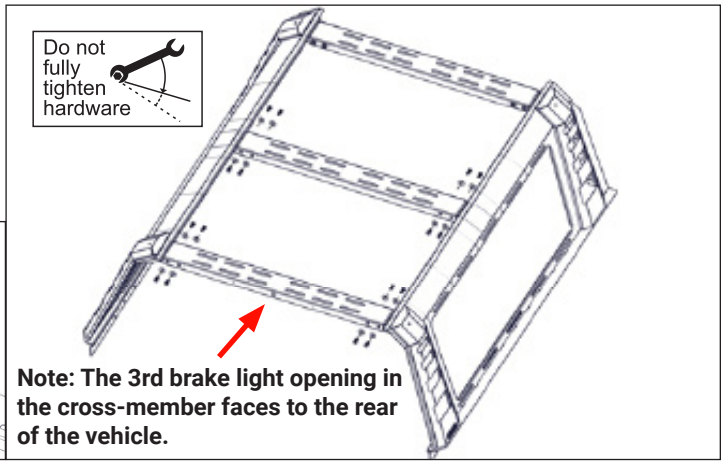




3. Working your way toward the rear/tailgate, install Crossmember, Middle (#4) to Side Panel, Driver Side (#1) from Step 1 and Side Panel, Passenger Side (#2) with 2 M8 x 1.25 x 20mm Bolts (#10) and 2 M8 Washers (#11). Loosely fasten.

Install Crossmember, Tail End (#5) to Side Panel, Driver Side (#1) from Step 1 and Side Panel, Passenger Side (#2) from Step 2 with
2 M8 x 1.25 x 20mm Bolts (#10) and 2 M8 Washers (#11) on each side. Loosely fasten.

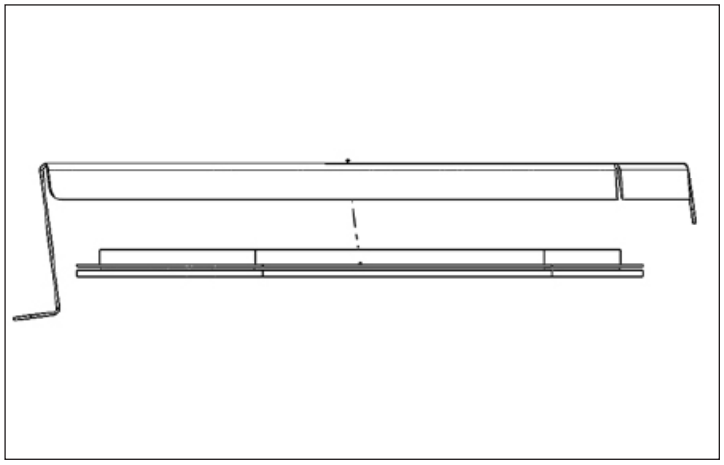




Note: The 3rd brake light opening in the cross-member faces to the rear of the vehicle.

Ascend Cap FGC-4500

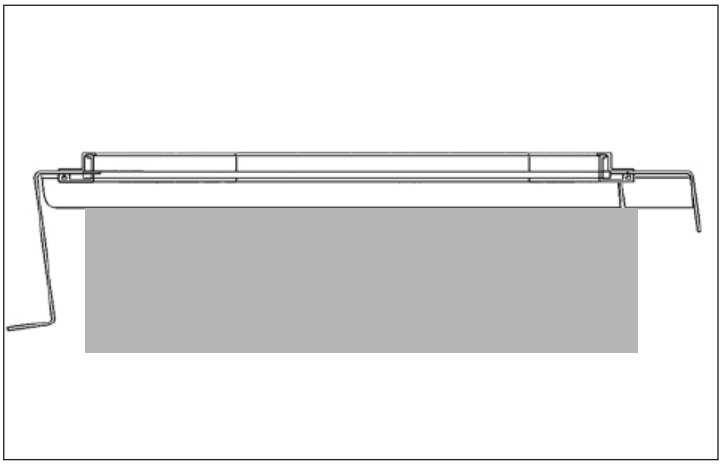
If installing the Ascend Cap, proceed with the instructions on this page then continue to Step 4. If you are not installing the Ascend Cap, skip to Step 4.



Make an elevated, protected surface for the Front Window (#18) to lay face down. The Front Window separates into two pieces. The main frame and a clamp ring. Separate the two pieces.

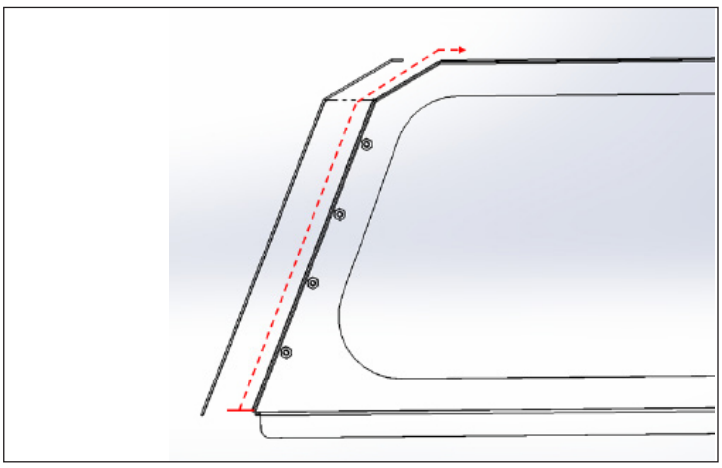
The Cab Panel (#3) is then placed on top of the Front Window (#18).

The clamp ring is then placed on the backside of the Cab Panel (#3) over top of the window frame and installed with 5/8” Piercing Screws (#28).



Be sure to center the window in the window opening prior to starting the screws. Use a 1/4” socket with a drill/impact to install a screw in each bottom corner of the window. Continue installing the screws around the perimeter until complete.

Unroll the included Butyl Seal (#20) and gently roll into a thin rope. Press the Butyl Seal (#20) onto each side flange of Cab Panel (#3) as shown.



Continue to Step #4 of the Ascend Rack installation steps.

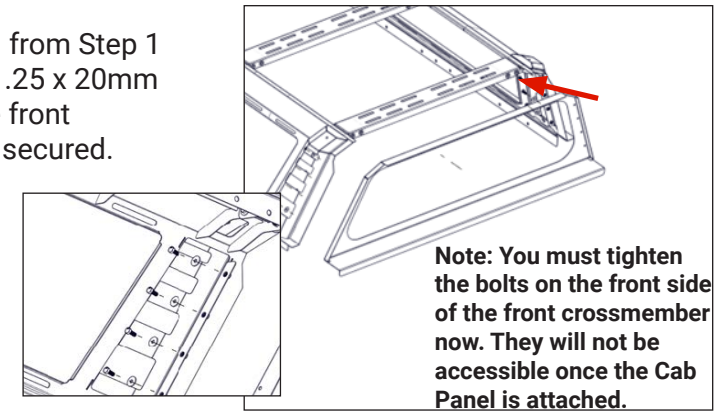
Any excess Butyl Seal shall be trimmed after the Cab Panel is installed.

Note: Silicone caulk can be applied in lieu of butyl tape after the front panel is installed to cover the metal joints.

Ascend Rack

4. Install Cab Panel (#3) to front of Side Panel, Driver Side (#1) from Step 1 and Side Panel, Passenger Side (#2) from Step 2 with 4 M8 x 1.25 x 20mm Bolts (#10) and 4 M8 Washers (#11) on each side. Tighten the front crossmember bolts and leave the rest of the hardware loosely secured.

Start with the top bolt holes first to help hold the panel in position and bring in the side panels to align the rest of the holes.

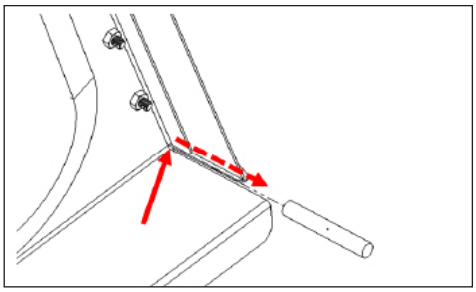


Note: You must tighten the bolts on the front side of the front crossmember now. They will not be accessible once the Cab Panel is attached.

Ascend Cap Only: Ensure the Butyl Seal (#20) is properly compressed.

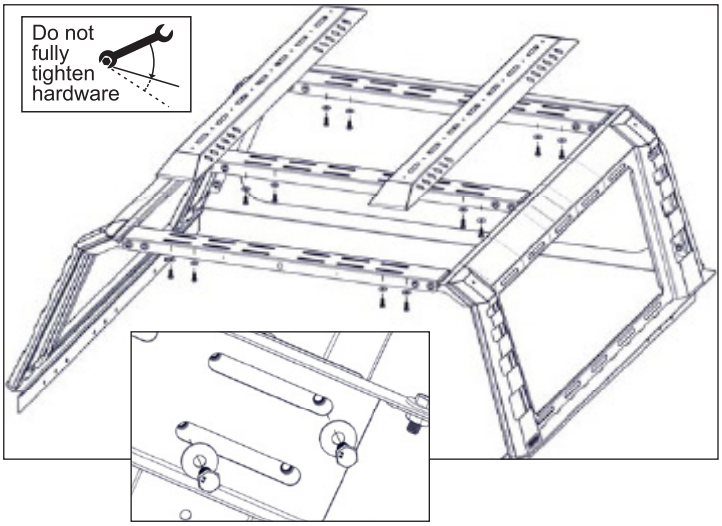
After installing the Cab Panel (#3), roll a 0.25” diameter piece of the Butyl Seal (#20) about 3” long. Start at the inside corner and firmly press into the gap
between the Cab Panel (#3) and the Side Panels (#1 & 2).

Repeat for the opposite corner.



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5. Install the 2 Top Support Members (#6) to the top of the rack using 4 M8 x 1.25 x 20mm Bolts (#10) and 4 M8 Washers (#11) on each support member. Loosely fasten.

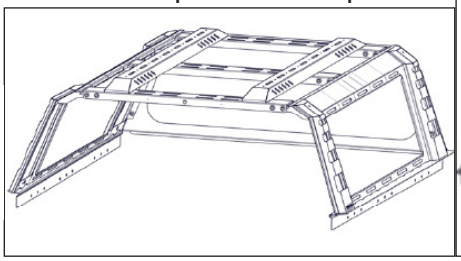


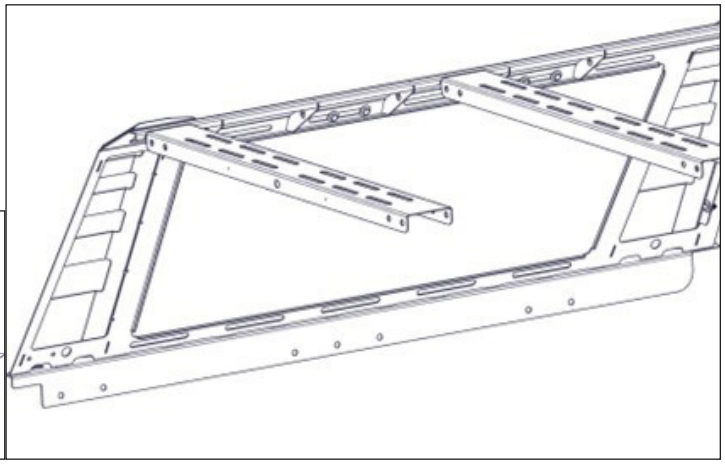
Preparing the Truck

Clean the truck and rear window of the cab and the truck’s bed rails to remove all dirt and grime. To help protect the truck’s bed finish, lay a piece of carpet or carboard down during installation. It is also recommended that you tape off areas of the truck that could be impacted by the rack during installaion.

Installing the Ascend Rack on the Truck Bed

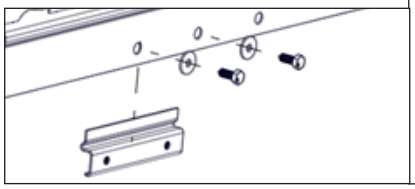
6. Once the main shell is put together, it is recommended that you and another person lift the whole shell onto the truck bed. Make sure the flange at the bottom of the Cab Panel (#3) is over the front of the bulkhead behind the cab and the flange at the bottom of the Side Panel, Driver Side (#1) and Side Panel, Passenger Side (#2) are inside the plastic rail caps on each side.
Do not tighten anything down yet.

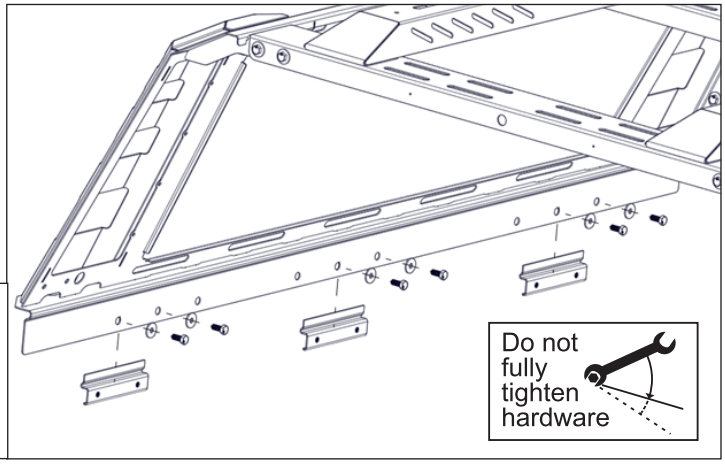




Ascend Rack/Ascend Cap FGC-4500

7. Once the main shell is on top of the truck bed you can install the 3 Bed Wall Mounting Brackets (#9) to the bottom of the flange on Side Panel, Driver Side (#1) and Side Panel, Passenger Side (#2) using 6 M8 x 1.25 x 20mm Bolts (#10) and 6 M8 Washers (#11). Make sure the mounting brackets are behind the flange and the holes are lined up with the holes in the side panels. Loosely fasten.



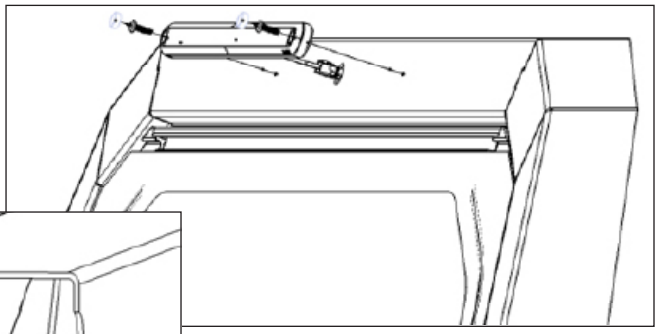


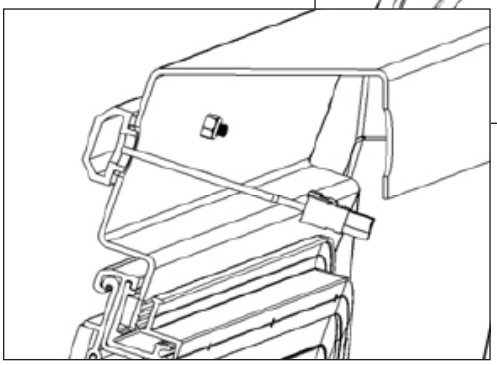
If not installing the Ascend Cap, proceed to Step 8.

Ascend Cap FGC-4500 Third Brake Light Installation

If Third Brake Light has not been installed on the Ascend Rack, it will be installed on the Rear Closeout (#19).

The Third Brake Light wire pigtail should be pushed through the main center hole of the Rear Closeout (#19) and firmly secured with the provided 2 M4 x 0.7 screws and nuts.



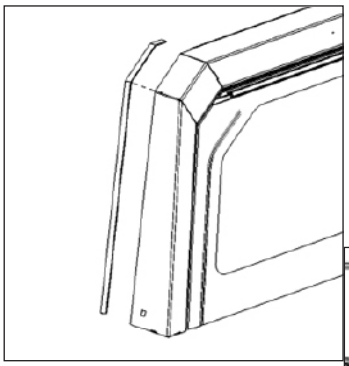


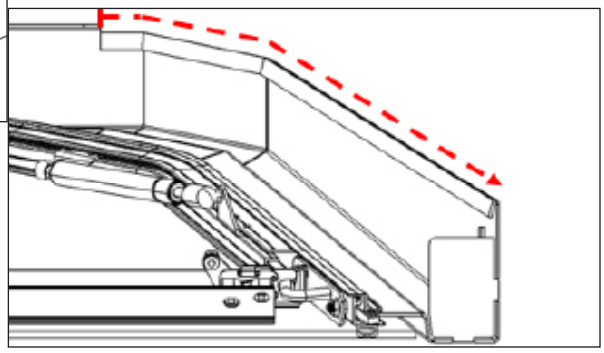
Ascend Cap FGC-4500 Rear Closeout Inner Seal Installation

Unroll the Ribbed Seal (#25) and start to apply at the upper corners of the Rear Closeout (#19) working your way to the bottom edge.

Cut off the excess when at the bottom edge.

Repeat on other side of the Rear Closeout (#19).



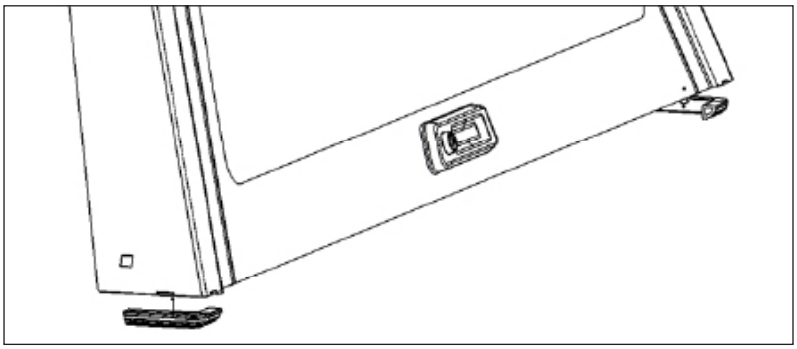


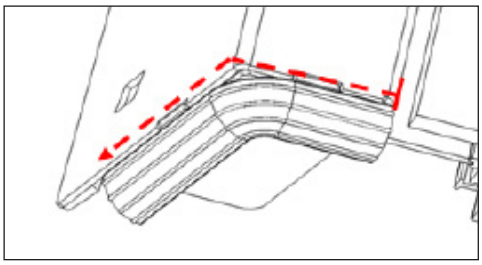
Ascend Cap FGC-4500

Ascend Cap FGC-4500 Rear Closeout Bottom Seal Installation

Unroll Rubber Seal (#26). Start at the inside edge closest to the glass and firmly press then route around the outer edge. Cut at the end of the flat plate.

Repeat on the other side.

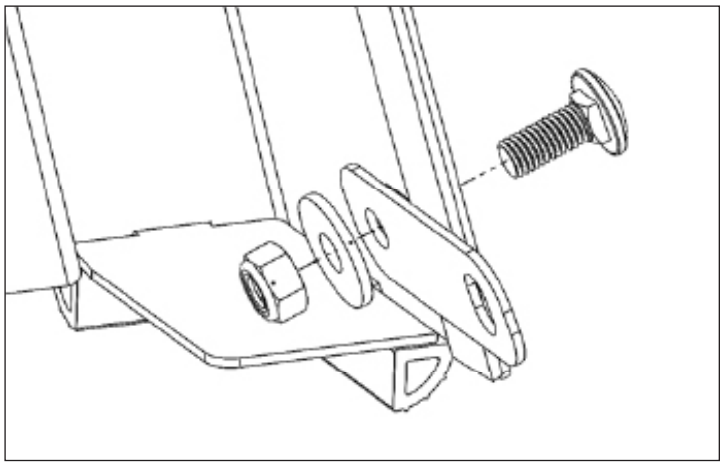




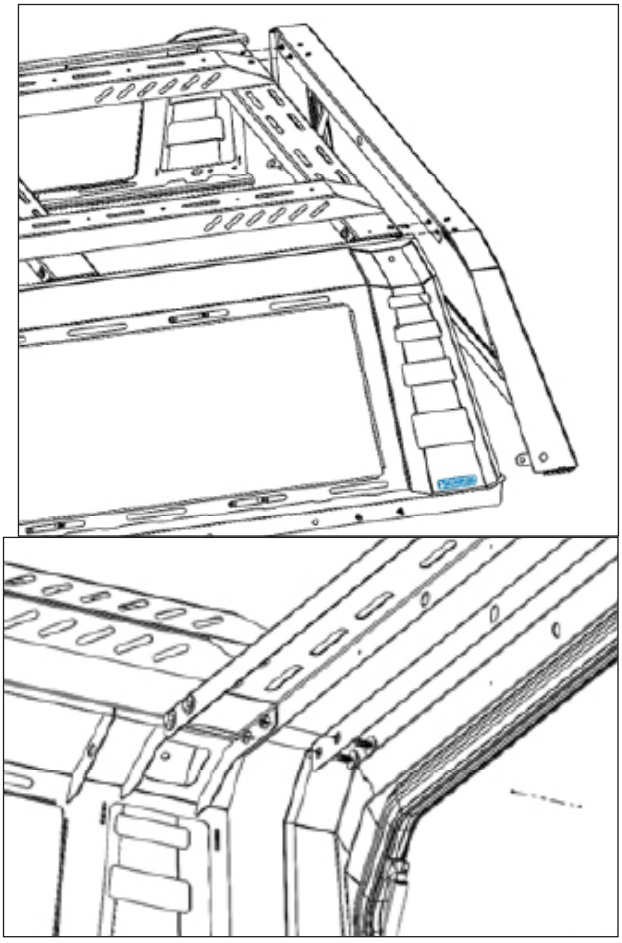
Ascend Cap FGC-4500 Rear Bracket Installation

Place 1 M8 Carriage Bolt (#21) in the square cutout and place 1 M8 Washer (#23) followed by the Rear Closeout Bracket (#27) on the inside of the Rear Closeout (#19). Loosely thread on a M8 Nylock Nut (#24).

Repeat on the other side.



Ascend Cap FGC-4500



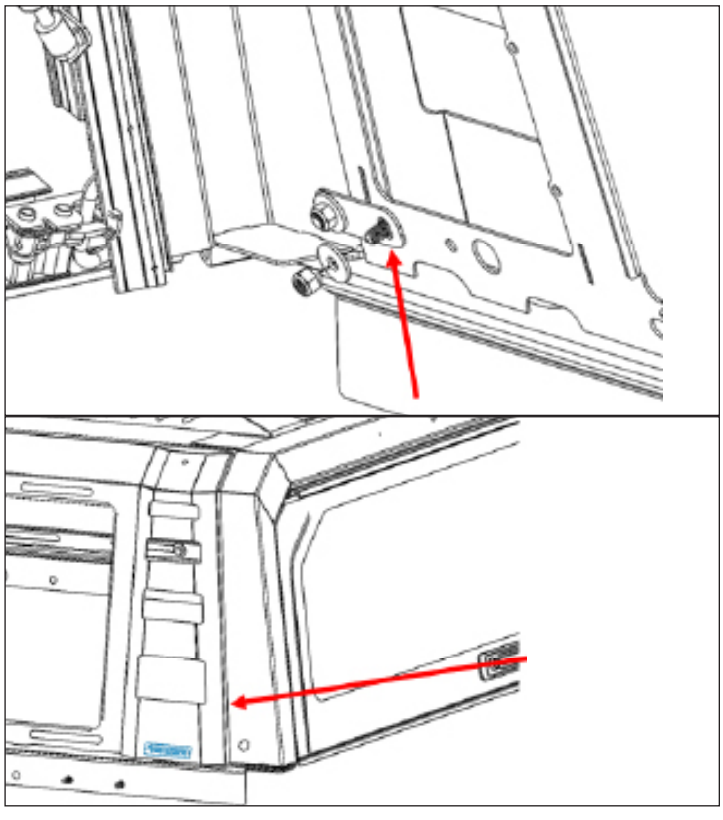
Ascend Cap FGC-4500 Rear Closeout Installation

Open the rear window and place the Rear Closeout (#19) onto the Ascend Rack, lining up the 2 mounting holes on each outside corner. **Note:** The rack frame may need to be adjusted to get the mounting holes aligned since the rack has not been fully tightened yet. Start with one side at a time.

Reinstall the 4 M8 x 1.25 x 20mm bolts.

Tip: Install a bolt from the inside of the cross member on each side to help keep the rack and rear closeout aligned.

If installing this by yourself, it is recommended to use clamps to help hold the rear closeout in place.

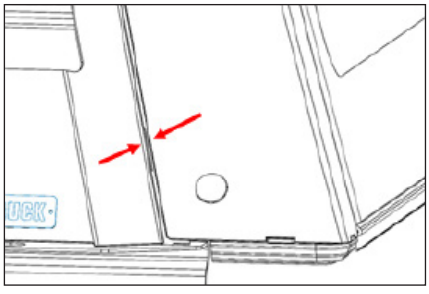


Align the Rear Closeout Bracket (#27) slot with the first hole on the Side Panel.

If there is a weldnut here, use 1 M8 Washer (#23) and 1 M8 x 1.25 x 16mm Bolt (#22) to loosely fasten.

If there is not a weldnut, use 1 M8 Washer (#23), 1 M8 x 1.25 x 16mm Bolt (#22), and 1 M8 Nylock Nut (#24) to loosely fasten.

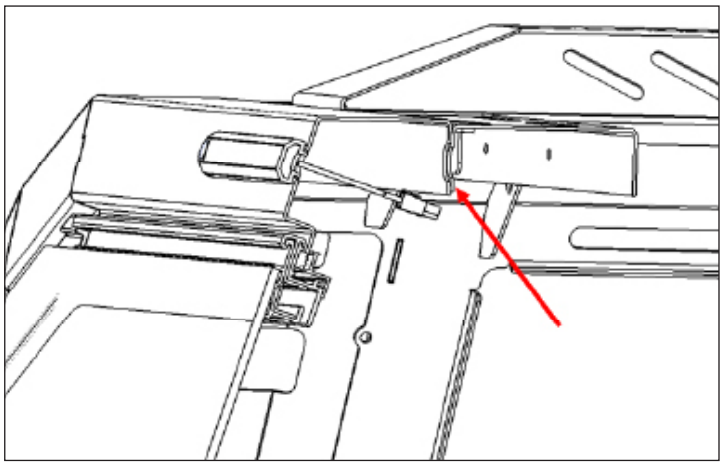
Position the Rear Closeout (#19) so there is a consistent gap to the Ascend Rack Side Panels and snug up the Rear Bracket fasteners.



Ascend Rack/Ascend Cap FGC-4500

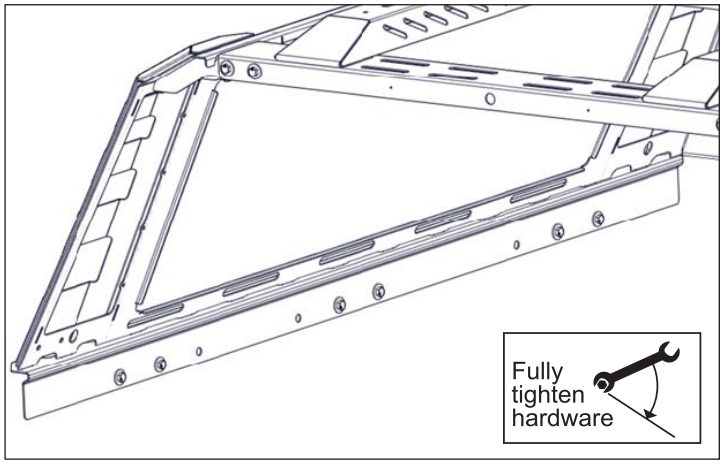
Ascend Cap FGC-4500 Third Brake Light Connection

The connector will be fed back through the same openings of the rear cross member and connected to the jumper harness.



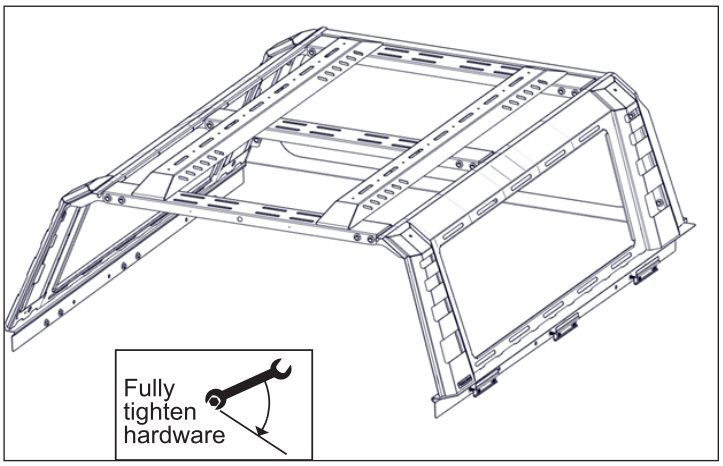
Final Adjustments

8. Make sure the rack frame is square on the truck bed and that your have all the components where they belong before tightening down all the bolts. Fully tighten hardware at this time.



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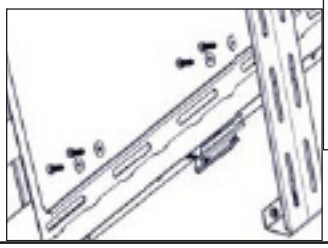
9. Fully tighten all hardware on main rack. Recommended torque is 14 ft lbs.

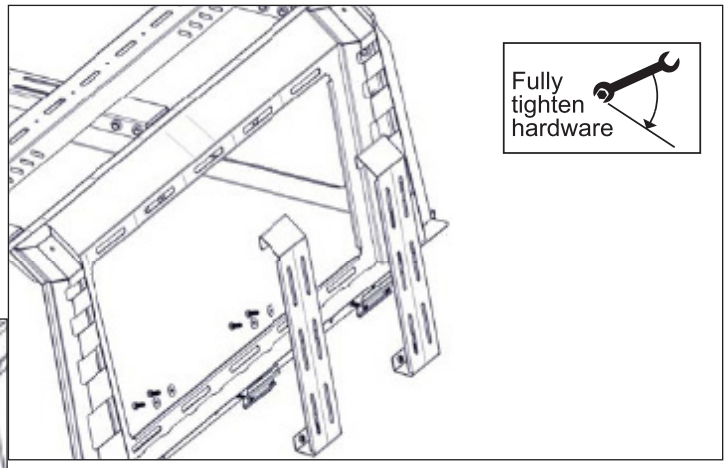


Ascend Rack

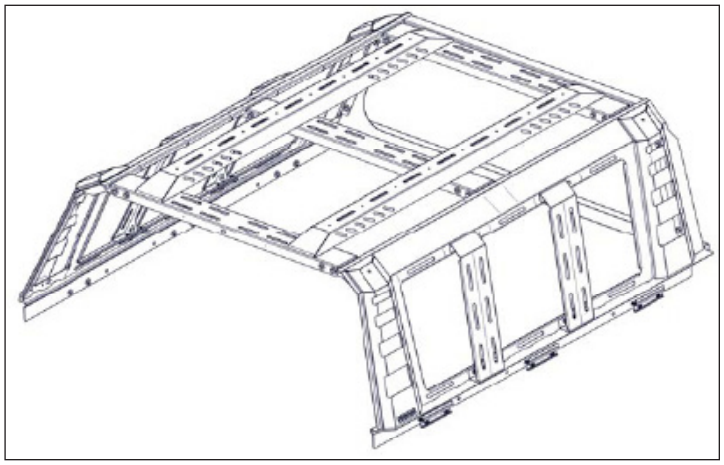
Installing Side Accessory Brackets

10. Install the 2 Side Accessory Bracket, Driver Side (#7) and 2 Side Accessory Bracket, Passenger Side (#8) to the Side Panels (#1 & 2) using 2 M8 x 1.25 x 16mm Bolts (#12) and 2 M8 Washers (#11) at the top. Use 2 M8 x 1.25 x 20mm Bolts (#10) and 2 M8 Washers (#11) at the bottom of each Side Accessory Bracket, Driver (#7) and Passenger Sides (#8). Fully tighten hardware.
Recommended torque is 14 ft lbs.





11. Install Complete.

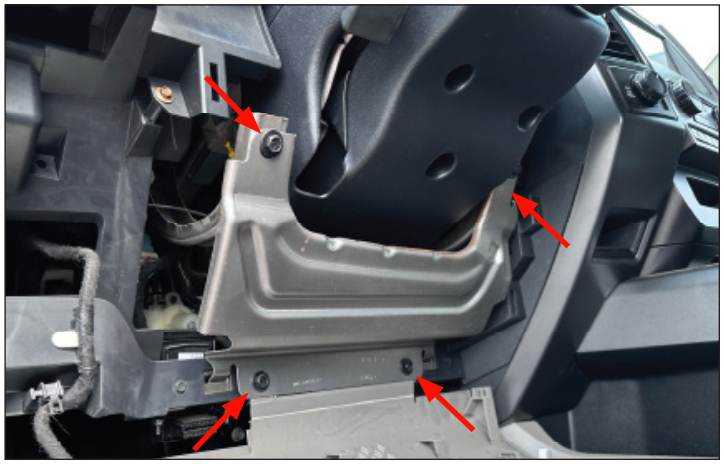


2015-2020 - 3rd Brake Light Wire Harness Installation

12. Carefully pull down on the trim below the steering column. The plastic trim piece will rotate down as the clips disengage in the dash.

Once the plastic trim is removed, locate the 4 10mm bolts on the metal plate. Remove the bolts and the metal plate.



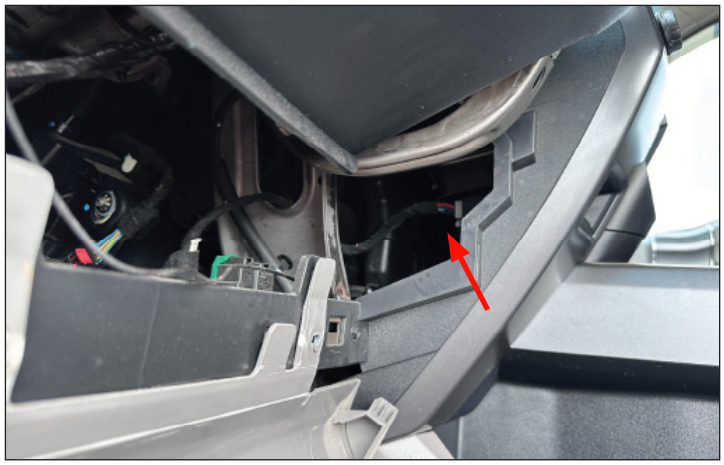


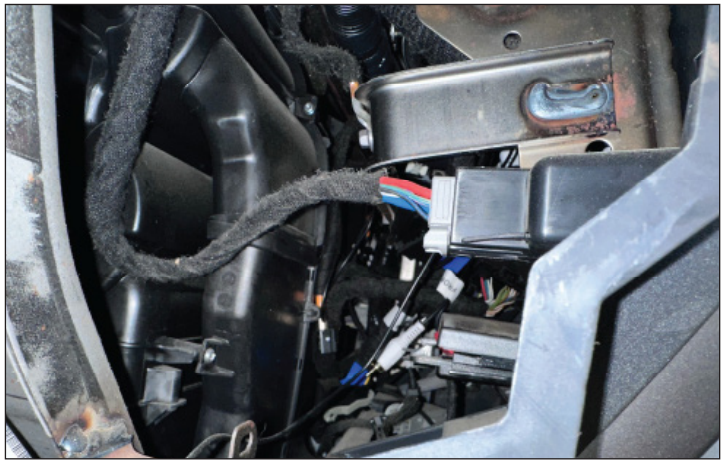
Ascend Rack

13. If the truck is equipped with a trailer brake from the factory, you will need to reach behind the center section of the dash and find the back of the trailer brake controller. Remove the plug from the rear the controller. If it does not have a trailer brake controller, find the plug for the uninstalled trailer brake in the cavity behind the dash.

The plug removed from the trailer brake plugs into the corresponding plug on the provided T-harness.

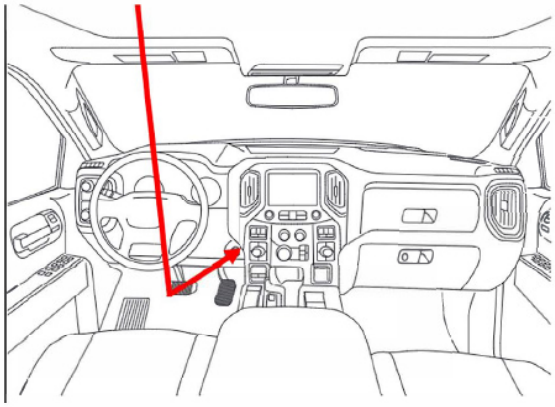
The other large plug on the T-harness plugs into the trailer brake controller, in the same orientation as the original plug.







Trailer Brake Controller
Behind Dash Here



14. From underneath the cab, feed the extension harness through the rubber grommet under the driver's side carpet.

Run the extension cable up the left kick panel and over the open plug on the T-harness.

Replace all panels and components following steps 12-13 in reverse.

Ascend Rack

2020+ 3rd Brake Light Wire Harness Installation

15. Begin intall under the driver's side of the dashboard.

Locate the gray connector near the firewall passthrough grommet.

Remove the gray connector and plug into the corresponding plug on the procided T-harness.

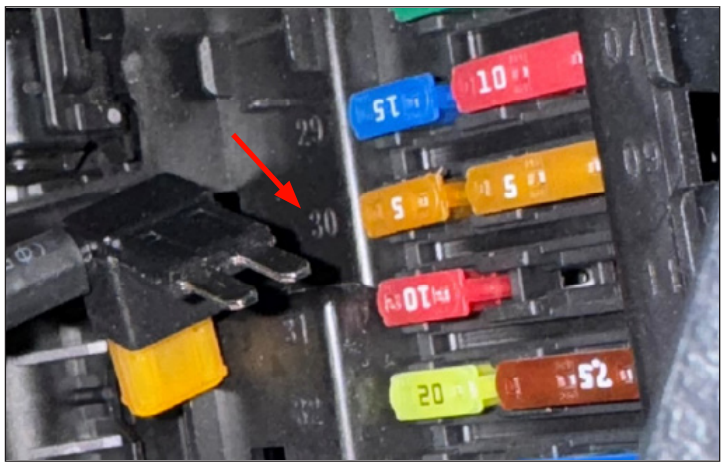
Plug the T-harness back into the vehicle socket under the dash harness.



16. Using an 8mm Socket, remove the side trim panel on the center console. The bolt is located under the dash, to the right of the accelerator pedal.

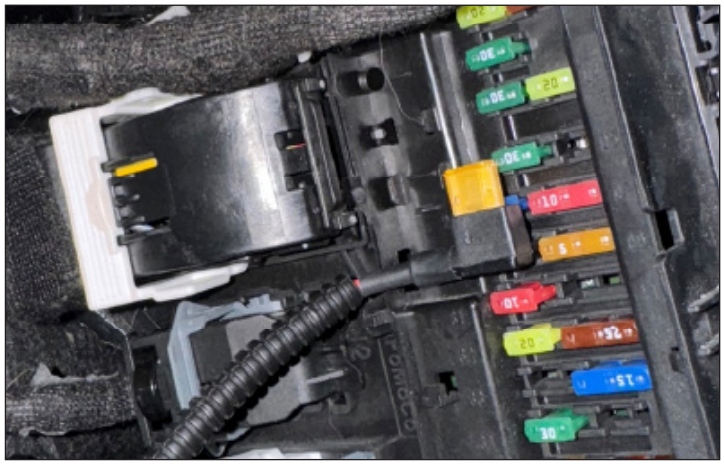


17. On the passenger kick panel, remove the fuse block cover. Using the fuse plug on the provided extenion harness, remove the 5 amp fuse in slot 30. Plug this fuse into the provided fuse plug harness if fuse is not preinstalled.



Ascend Rack

18. Plug the fuse plug harness back into slot 30 in the fuse block.



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19. Route the extension harness across the front of the cab floor, through the opened center column, and to the provided T-harness.



Plug the provided fuse extension harness into the provided T-harness. This requires putting the raw pin on the extension harness into the open slot in the 3-pin connector on the T-harness.

Optional CHMSL Extension Harness Routing

From the bottom of the truck cab, locate the rubber grommet into the cabin. Using a hobby knife, slice a hole into the grommet and feed the CHMSL extension harness into the passenger cabin.

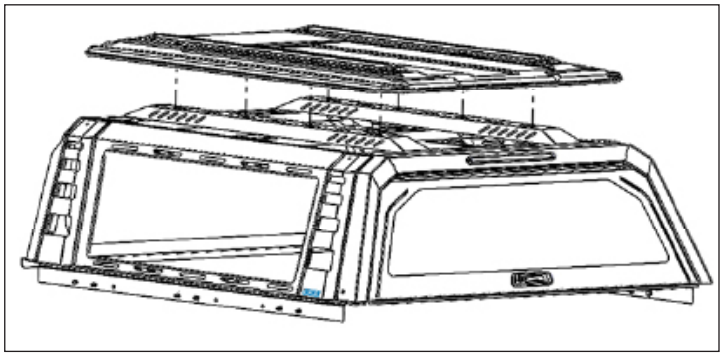
Route the CHMSL extension harness up to the provided T-harness and connect the white 3-pin connectors.

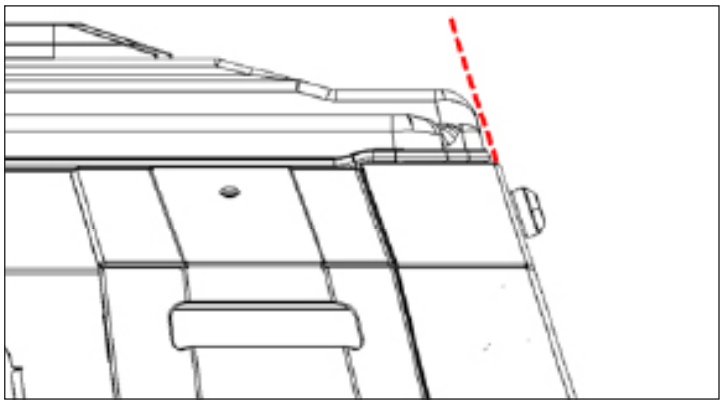


Following steps 17-18 in reverse order, replace all interior panels.

Ascend Cap FGC-4500

Ascend Cap FGC-4500 Roof Installation





Remove the pre-installed 8 M8 Washers and Nylock Nuts.

It is recommended that you and another person lift the Roof Panel (#15) onto the top of the rack.

Carefully align the 8 M8 x 1.25 x 25mm bolts into the slots in the Top Support Members.

Use the previously removed 8 M8 washers and M8 Nylock Nuts to loosely fasten the roof.

Adjust the Roof Panel (#15) so that the rear edge is flush with the edge of the Rear Closeout (#19). Make sure the edge seals are not folded over prior to tightening.

Loosely tighten all Nylock Nuts.

Ascend Cap FGC-4500 Side Panel Installation

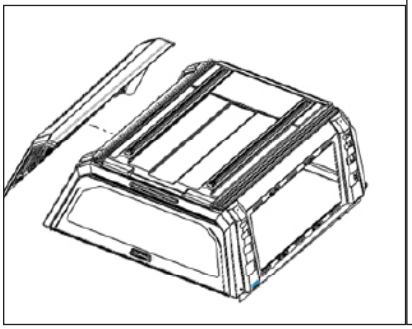
Slightly unthread 4 M8 Nylock Nuts at the four clamps and make sure the clamps are located in a sideways locked position.

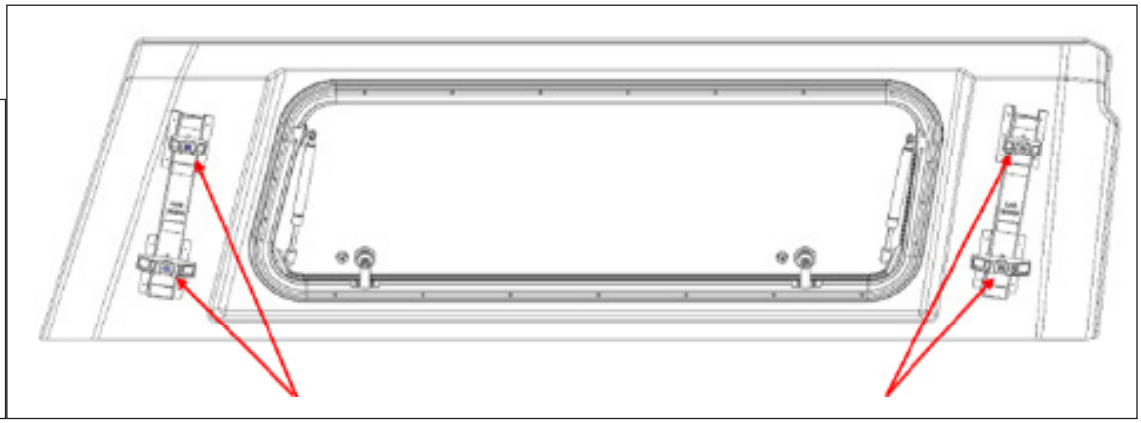
Set the bottom edge of the Side Panel, Driver Side (#16) on the truck bed cap and rock the top towards the Roof Panel (#15).

Adjust the position of Side Panel (#16) so that it is flush with the front of the Roof Panel (#15).

Rotate the clamps back to the vertical position and secure to 10 ft-lbs.

Repeat on the passenger side.

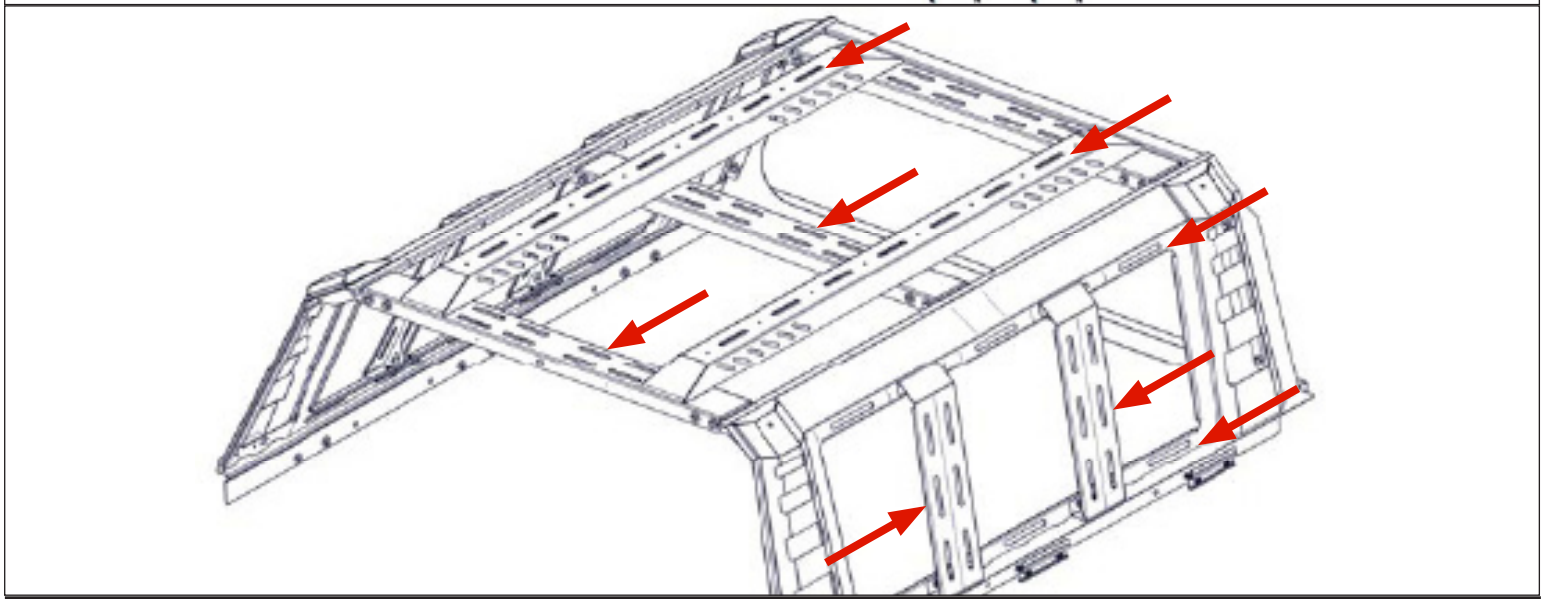




Ascend Rack

NOTE: The Ascend Rack is designed for the customer to bolt on accessories only, it was not designed for any type of ratcheting style tie-down straps (example shown below right). Straps with “cam” style buckles is recommended (example shown below left) as long as they are not used in conjunction with any type of force multiplier. The 2nd image shows where the “cam” style straps should be secured to the Ascend Rack. If ratcheting style straps are required, the installer should utilize the vehicles’ designated tie down loops.





Safety Guidelines

• The rear mounted stop lamp needs to be reinstalled if switching between the Ascend Rack and the panel system.

• Make sure to periodically check that bolts are tight.

• Ensure that all accessories are securely mounted.

• Do not exceed maximum load rating stated by your vehicle manufacturer or Dynamic (Vehicle moving) - 500 lbs, Static (Vehicle parked) - 1000 lbs.

• Do not exceed maximum load rating of tent manufacturer, if applicable.

Warranty Information

See warranty information on RealTruck.com.