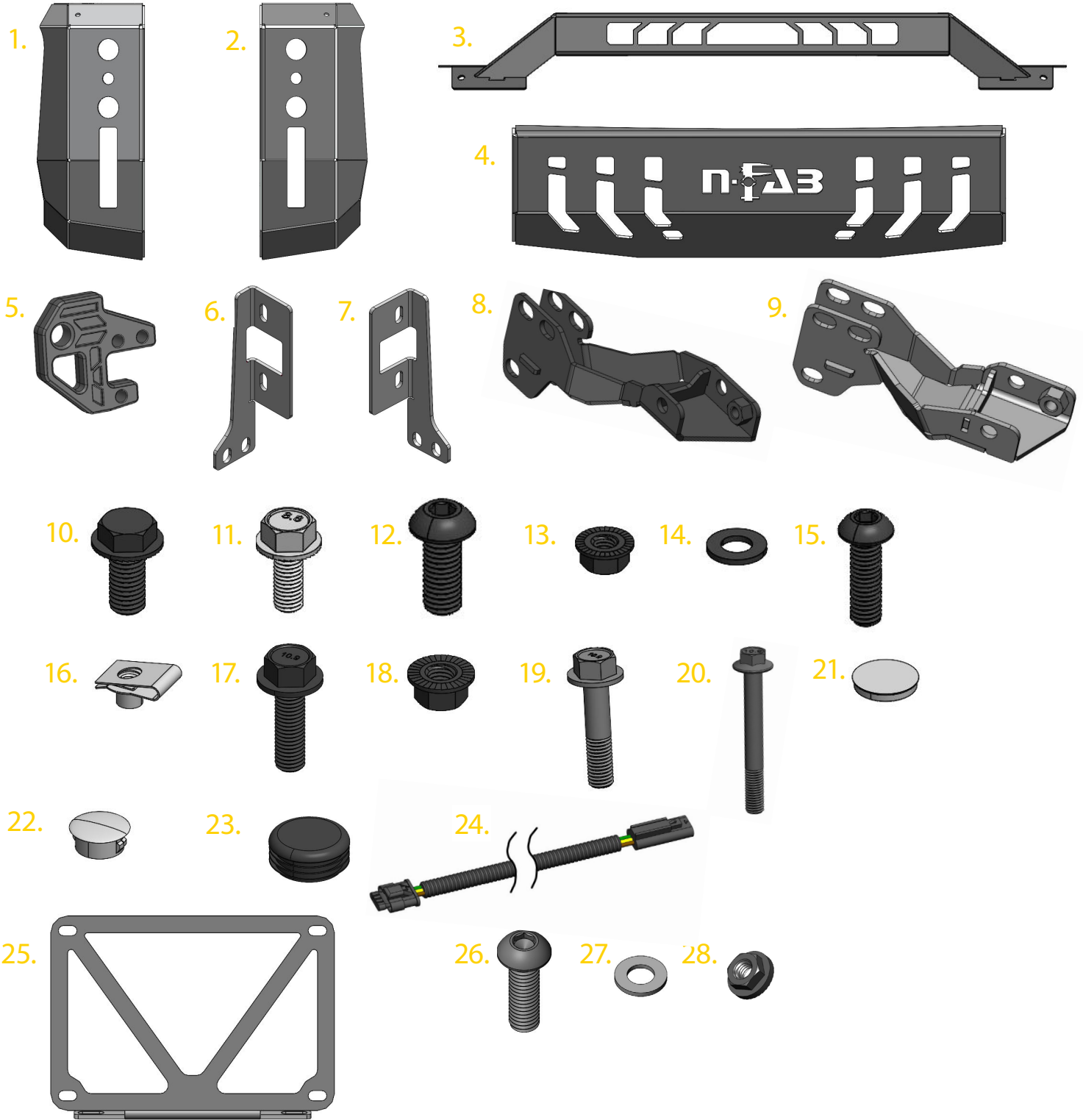


Components and Hardware: HWKT-13589X



Components and Hardware:

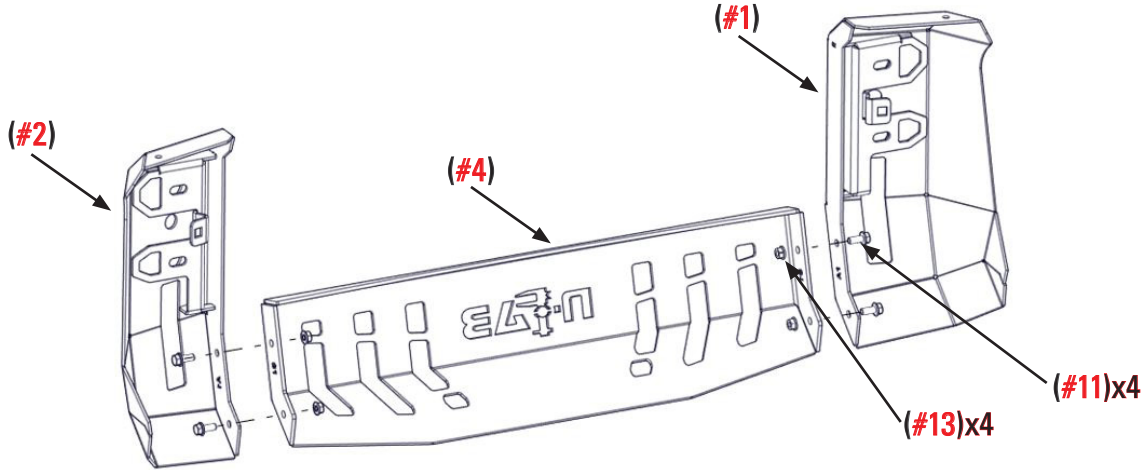
1. Passenger side up-right.....	(1)
2. Driver side up-right.....	(1)
3. Light hoop.....	(1)
4. Skid plate.....	(1)
5. Towhook.....	(2)
6. Driver Vertical mounting plate.....	(1)
7. Passenger Vertical mounting plate.....	(1)
8. Driver side frame bracket.....	(1)
9. Passenger side frame bracket.....	(1)
10. M12-1.75x25mm flanged hex bolt.....	(4)
11. M8-1.25x20mm flanged hex bolt.....	(4)
12. M8-1.25x20mm button head bolt.....	(4)
13. M8-1.25 serrated flange hex nut.....	(8)
14. M8 flat washer.....	(4)
15. M6-1.0x35mm button head bolt.....	(2)
16. M6 x 1.0mm barrel clip.....	(2)
17. M12-1.75x40mm flanged hex bolt.....	(2)
18. M12-1.75 serrated hex nut.....	(12)
19. M12-1.75X55mm flanged hex bolt.....	(6)
20. M12-1.75x105mm flanged hex bolt.....	(2)
21. Adhesive-back pads.....	(2)
22. .75" locking panel plug.....	(2)
23. Plug-1.75" tube plug.....	(4)
24. Plug & Play sensor wire extension.....	(2)
25. License plate relocation bracket.....	(1)
26. M6-1x20mm button head bolt.....	(6)
27. M6 narrow washer.....	(6)
28. M6 Flange nut.....	(6)

Tools for Installation:

- Socket wrench
- 13mm socket
- 18mm socket
- 16mm socket
- 5.0 hex socket
- 13mm wrench
- 18mm wrench

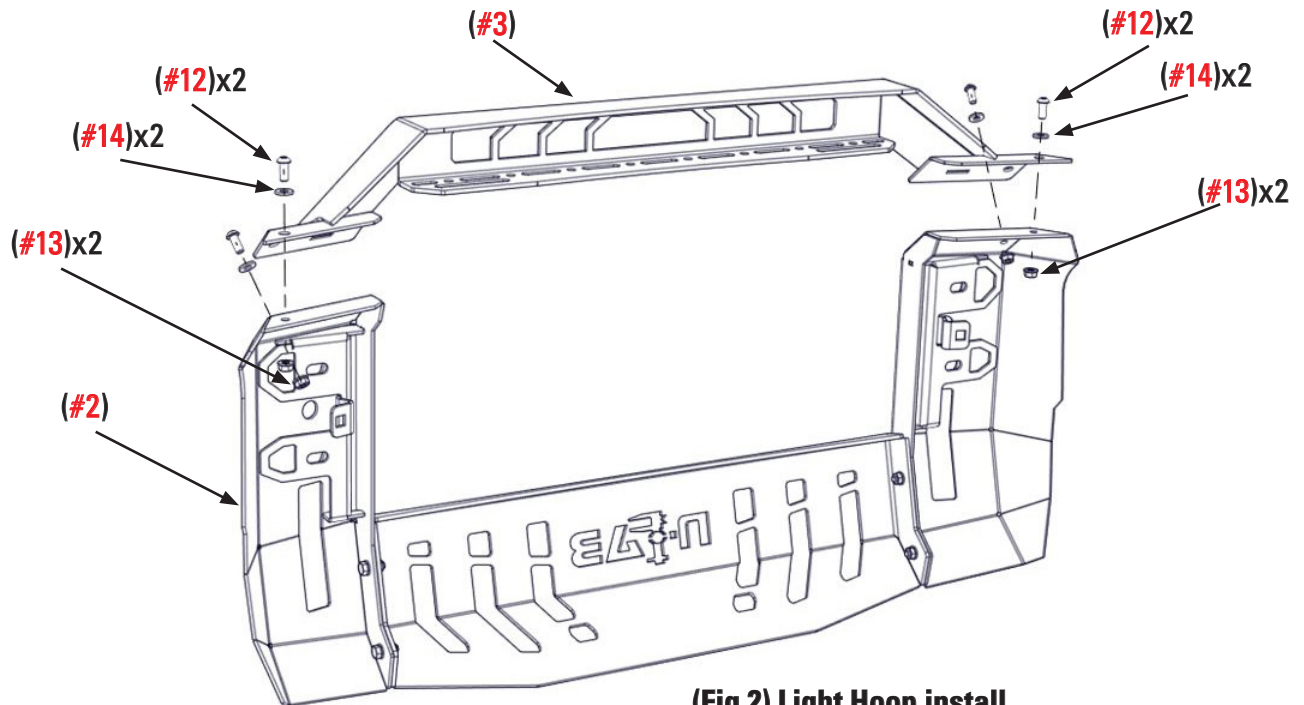
INSTALL

Step 1. Assemble (#2) driver side and (#1) passenger side upright to (#4) skid plate using (#11)x4 M8-1.25x20mm flanged hex bolt, (#13)x4 M8-1.25 serrated hex nut and loosely tighten. **(Fig. 1)**



(Fig 1) Skid plate install

Step 2. Assemble (#3) light hoop to (#2) and (#1) uprights using (#12)x4 M8x20mm button head bolt, (#14)x4 M8 washer and (#13)x4 M8-1.25 serrated flanged hex nut. **(Fig 2)**



(Fig 2) Light Hoop install

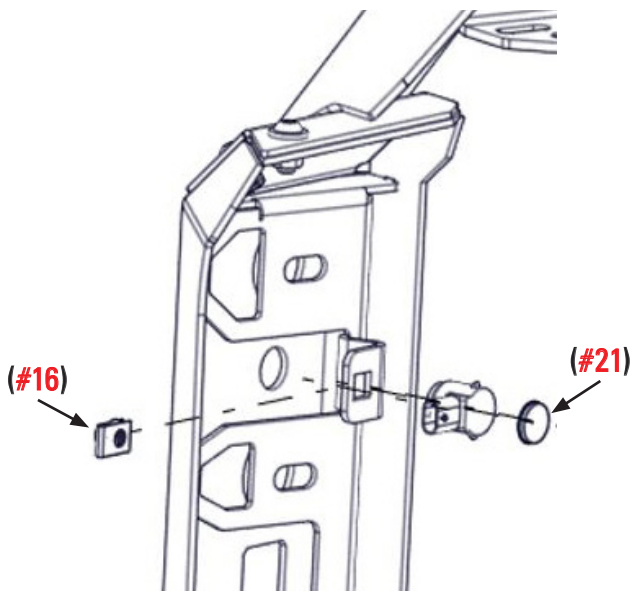
INSTALL

Step 3. If your vehicle is equipped with parking sensors, you have the option to relocate them to the Bull Bar uprights. First, disconnect the electrical connector from the x2 sensors that are nearest to the center of the bumper. Then disconnect from the main harness and set aside. Remove the sensors from plastic retainers and set aside. Plastic retainers will remain in bumper.

Step 4. Install (#16)x2 M6x1.0mm barrel clips into (#1) passenger side and (#2) driver side up rights. (Fig 3)

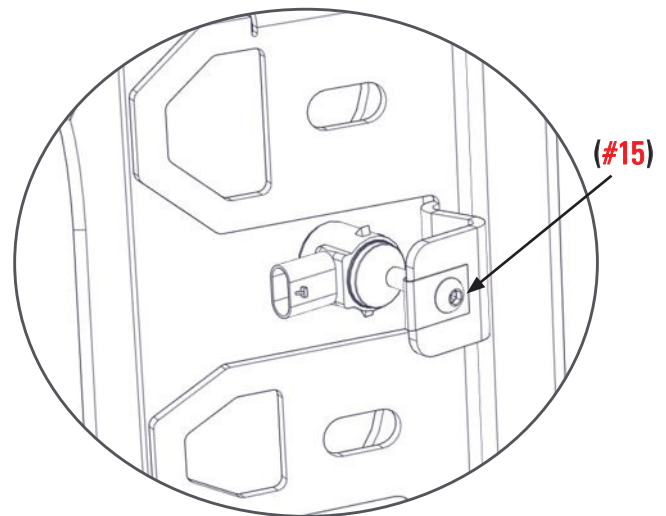
Step 5. Install (#21)x2 rubber adhesive backing pads to back face of sensor. (Fig 3-A)

Step 6. Place sensors into round opening in back side of up-rights and secure using (#15)x2 M6x35mm button head bolt to hold in place. (Fig 4)



(Fig 3) #16 barrel clip install

(Fig 3-A) #21 Adhesive backing pad install

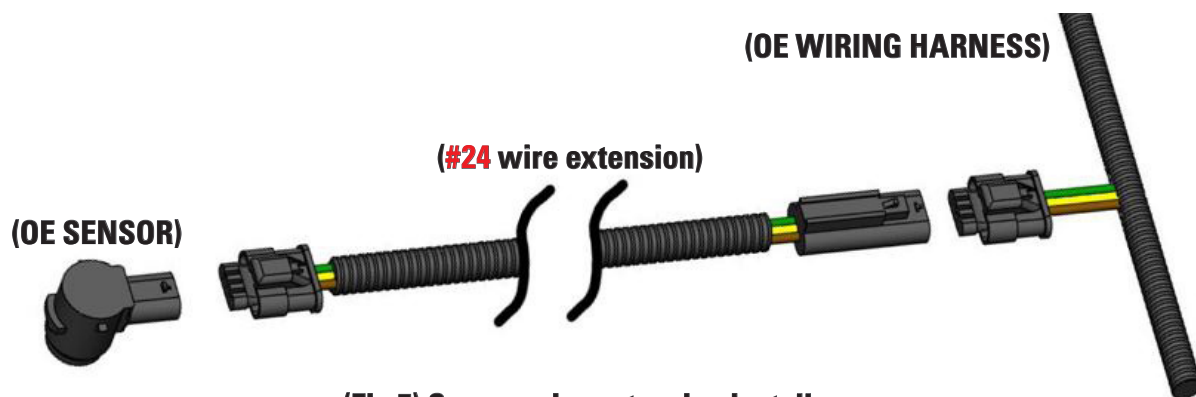


(Fig 4) Sensor install with #15 retaining bolt

! To ensure no damage to sensor, **DO NOT OVER TIGHTEN!**

Step 7. If parking sensors were relocated in steps 3-6, proceed to step 8, if not, skip to step 9.

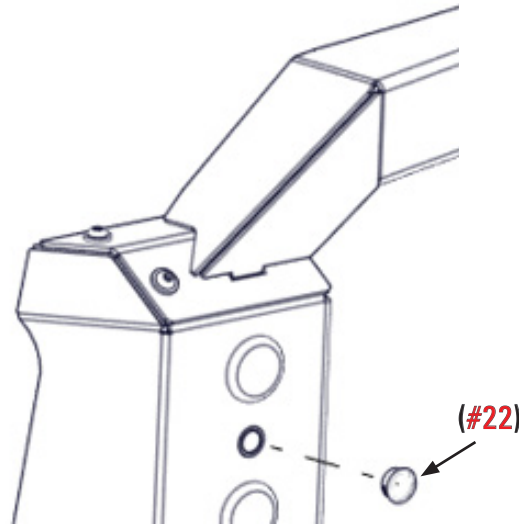
Step 8. Rout the (#24)x2 harness extension from the back side of bumper, through the driver and passenger tow hook openings and up through both uprights. Connect extension x2 to both sensors and to main harness. (Fig 5)



(Fig 5) Sensor wire extension install

Step 9. Place (#22)x2 plug caps into the plastic sensor retainers in bumper. If not relocating sensors, place into Bull Bar fascia.

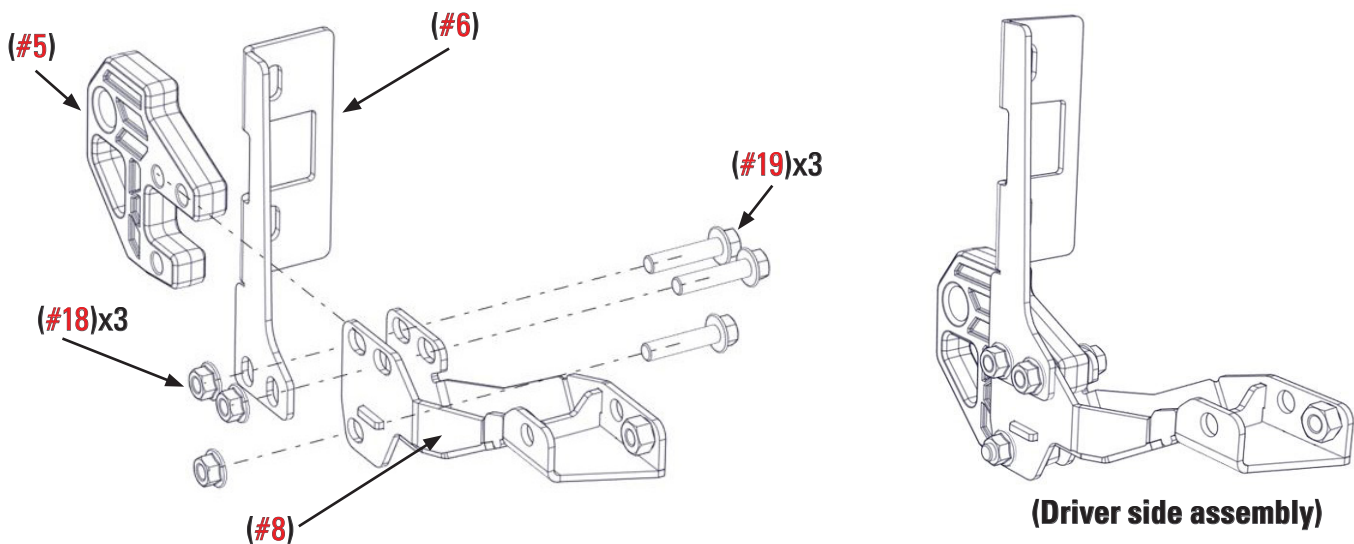
(Fig 6)



(Fig 6) Sensor cap plug install

Step 10. Remove factory tow hooks if equipped. Begin by removing rear most tow hook bolt using a socket wrench. Next, remove long front tow hook bolt and nut using a socket and wrench. Note; you may need to loosen a bolt on the bumper support if blocking access. Slide tow hook out through the bumper and foam block out the back.

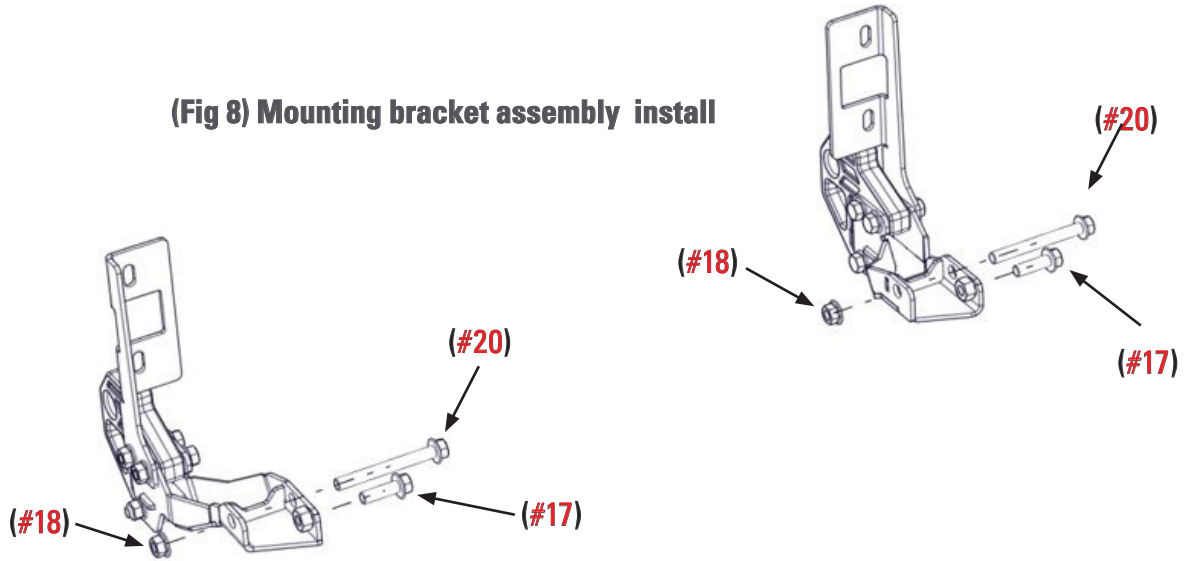
Step 11. Attach (#5) tow hook, (#6) vertical mounting bracket, and (#8) frame bracket to make a driver side and passenger side assembly. Tighten all hardware to (50-60 ft/lbs) of torque. (Fig7)



(Fig7) Tow hook and mounting bracket assembly

Step 12. Slide driver and passenger side bracket assemblies through the bumper and onto the frame.
Step 13. Install hardware reverse of removal, but do not fully tighten at this time. You may need to adjust slightly for final install. (Fig 8)

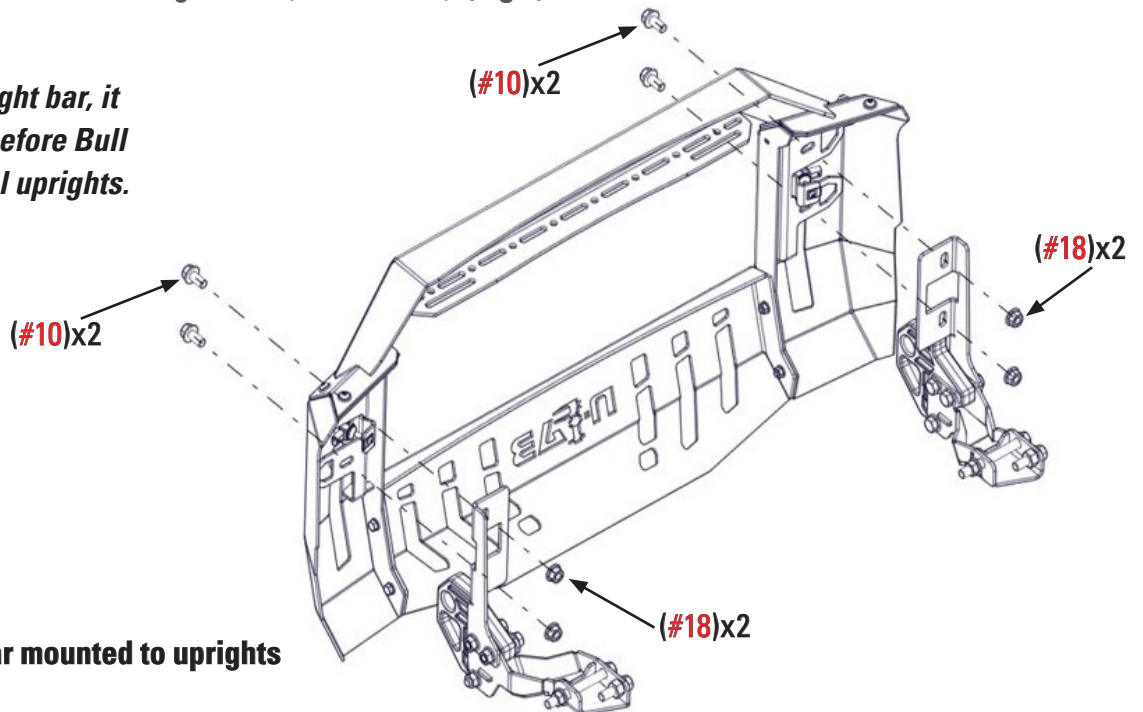
(Fig 8) Mounting bracket assembly install



Step 14. It is recommended to apply painters tape to tow hooks and also to bumper, where Bull Bar may come into contact. This will eliminate any damage while aligning Bull Bar.

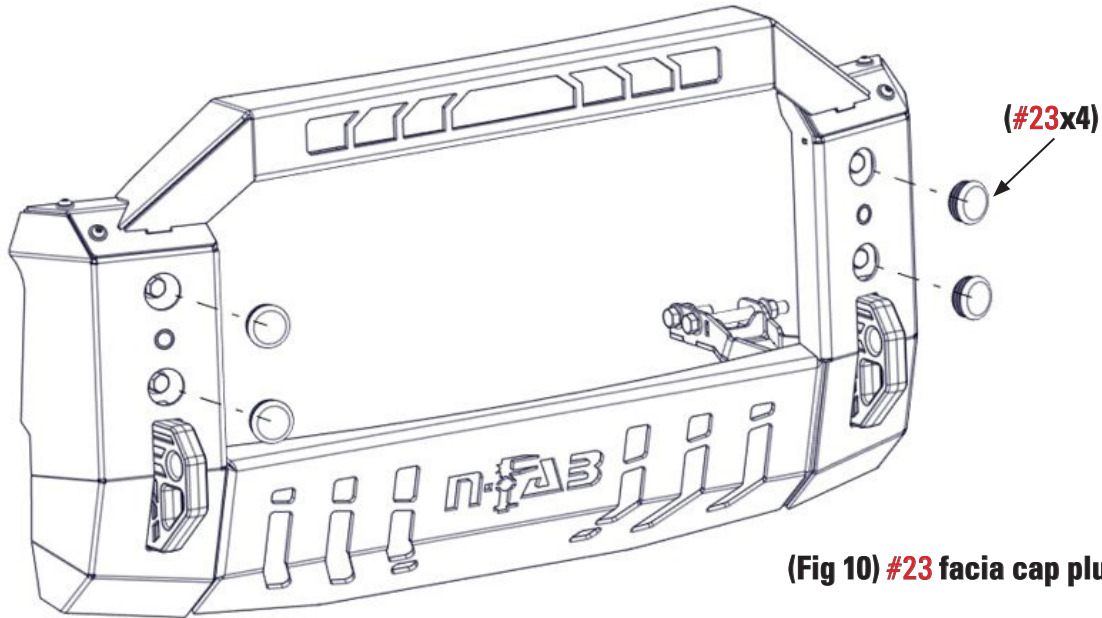
Step 15. Use the (#10)x4 M12x25mm hex bolts and (#18)x4 M12 hex nuts and carefully attach Bull Bar to the vertical uprights so tow hooks protrude through the rectangular cut outs. Make adjustments needed to the frame mounts to ensure assembly is centered on vehicle. Tighten to (55-60 ft/lbs). (Fig 9)

Note: If you have lights/light bar, it is recommend to install before Bull Bar is attached to vertical uprights.



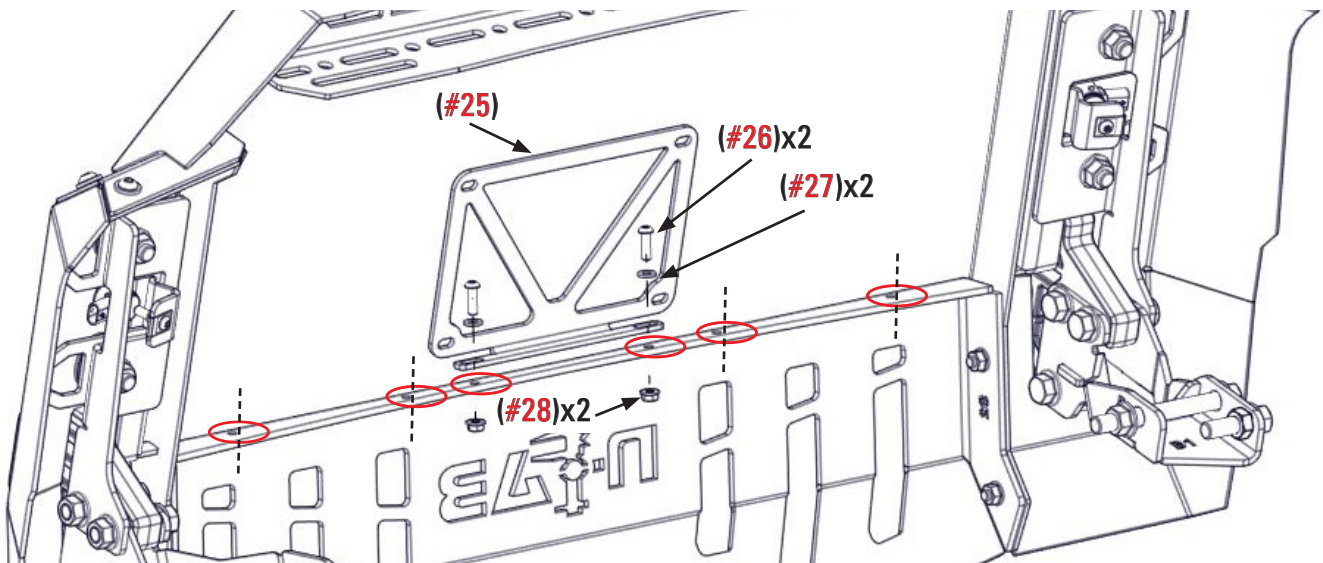
(Fig 9) Bull Bar mounted to uprights

Step 16. Insert (#23)x4 tube plugs in Bull Bar fascia to cover hardware. (Fig 10)



(Fig 10) #23 fascia cap plug install

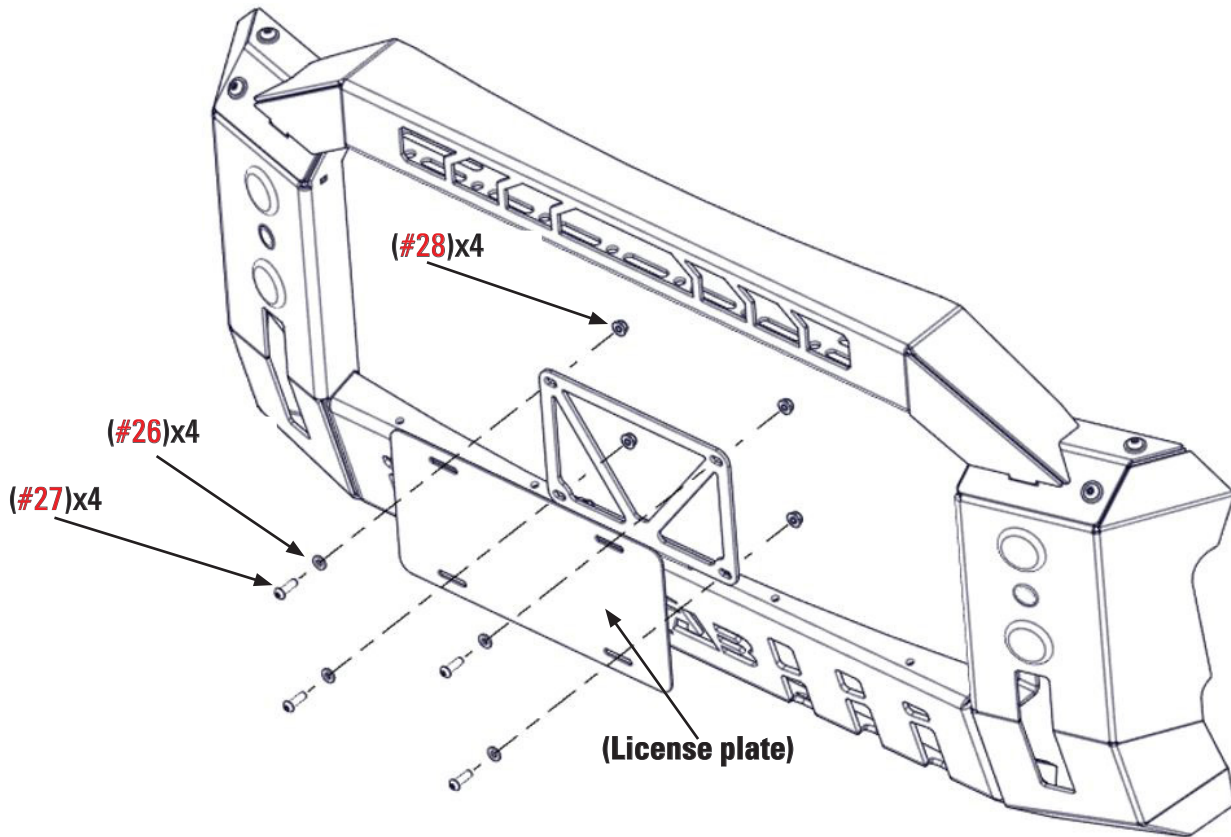
Step 17. Install the (#25) license plate relocation bracket using the supplied (#26)x2 M6-1x20mm button head bolt, (#27)x2 M6 flat washer, and (#28)x2 flanged hex nut to one of the three mounting location on skid plate. Fully tighten hardware. (Fig 11)



(Fig 11) License plate bracket install

Step 18. Attach license plate using the supplied (#26)x4 M6-1x20mm button head bolt, (#27)x4 M6 narrow washer, and (#28)x4 M6 flanged hex nut and fully tighten. **(Fig 12)**

Step 19. To complete the install, use a drive way or parking lot to ensure the sensors are working properly.



(Fig 12) License plate install