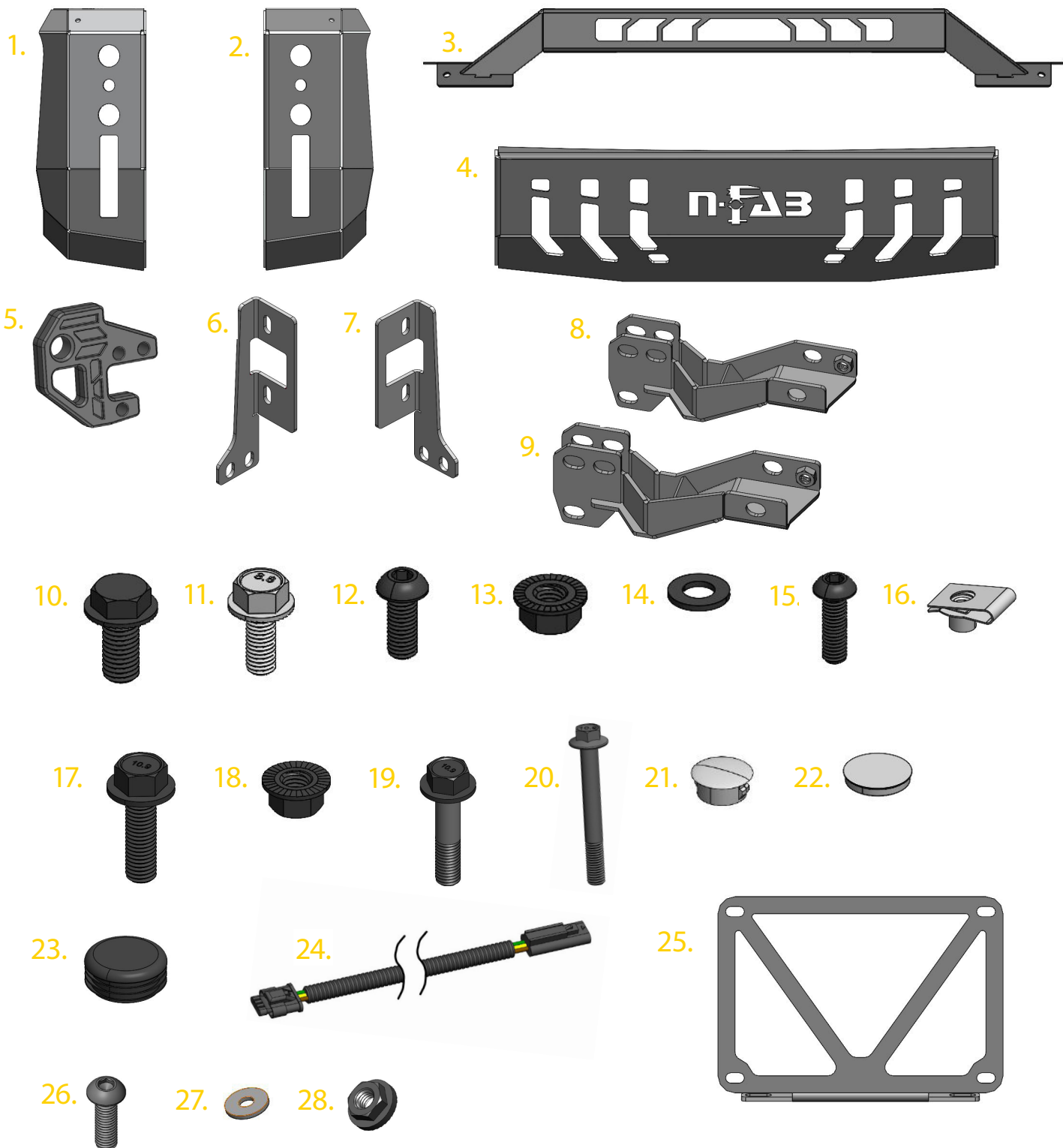


## Components and Hardware: HWKT-13589X



## Components and Hardware:

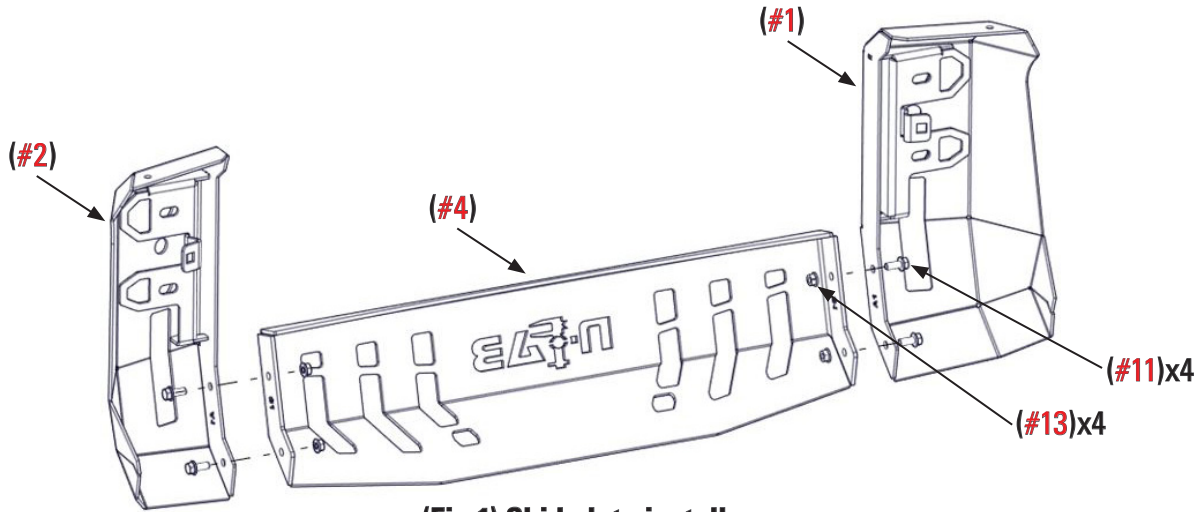
|                                            |      |
|--------------------------------------------|------|
| 1. Passenger side up-right.....            | (1)  |
| 2. Driver side up-right.....               | (1)  |
| 3. Light hoop.....                         | (1)  |
| 4. Skid plate.....                         | (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. M12-1.25x40mm flanged hex bolt.....    | (4)  |
| 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. Locking panel plug.....                | (2)  |
| 22. Adhesive backing pad.....              | (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 Flanged nut.....                    | (6)  |

## Tools for Installation:

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

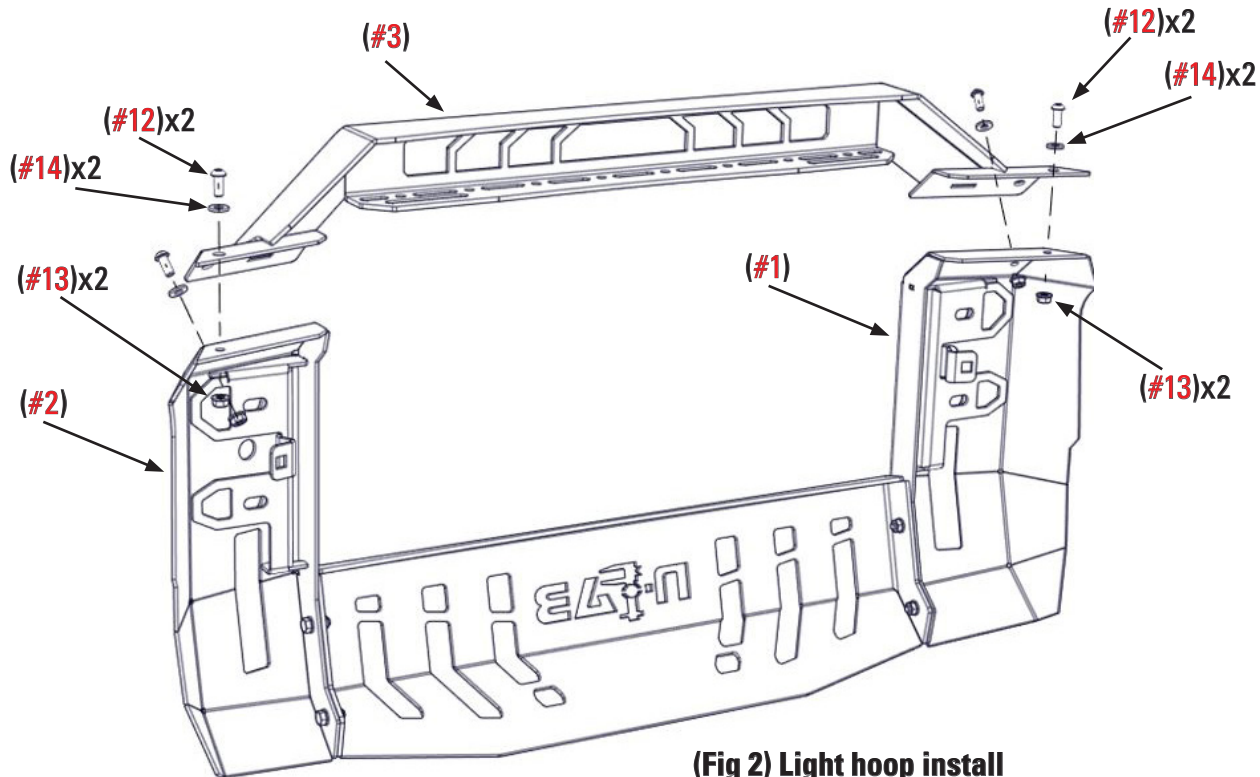
## INSTALL

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 flanged hex nut and loosely tighten. **(Fig 1)**



**(Fig 1) Skid plate install**

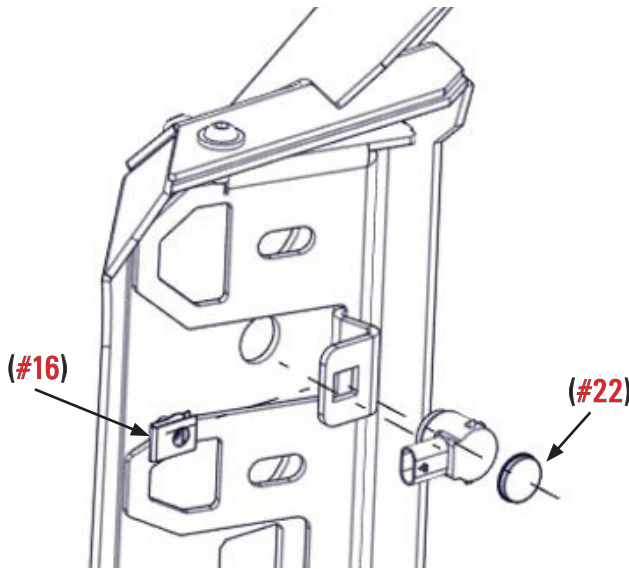
Step 2. Assemble (#3) light hoop to (#2) and (#1) uprights using (#12)x4 M8x20mm button head bolt, (#14)x4 M8 washer and (#13)x4 M8-1.25 serrated flanged hex nut. **(Fig 2)**



**(Fig 2) Light hoop install**

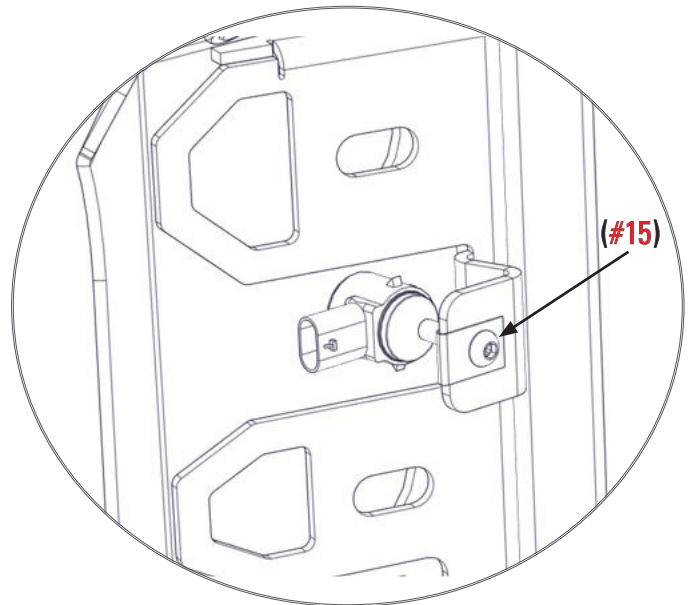
## INSTALL

- Step 3. If your vehicle is equipped with parking sensors, you have the option to relocate them to the Bull Bar uprights. First, remove sensors from bumper and then from the plastic retainer. Plastic retainer will not be reused.
- Step 4. Install (#16)x2 M6x1.0mm barrel clips into (#1) passenger side and (#2) driver side up rights. **(Fig 3)**
- Step 5. Install (#22)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**

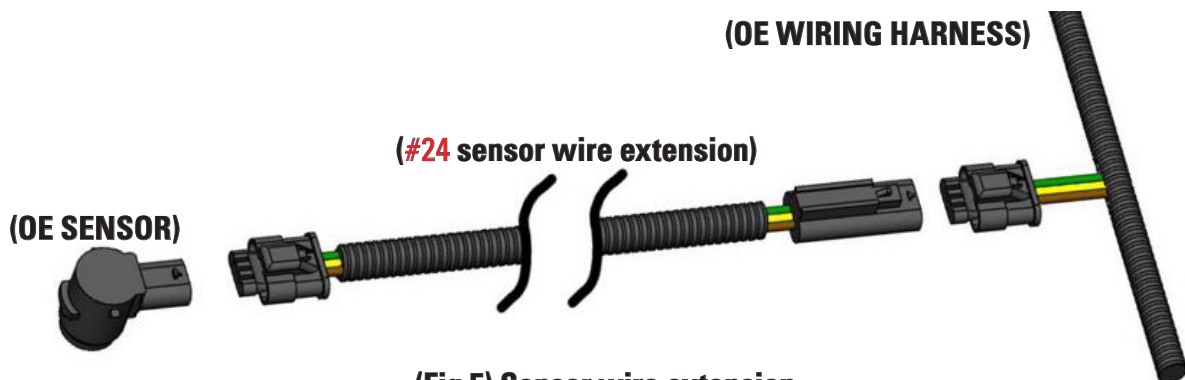
**(Fig 3-A) #22 Adhesive backing pad install**



**(Fig 4) Sensor install with #15 retaining bolt**

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

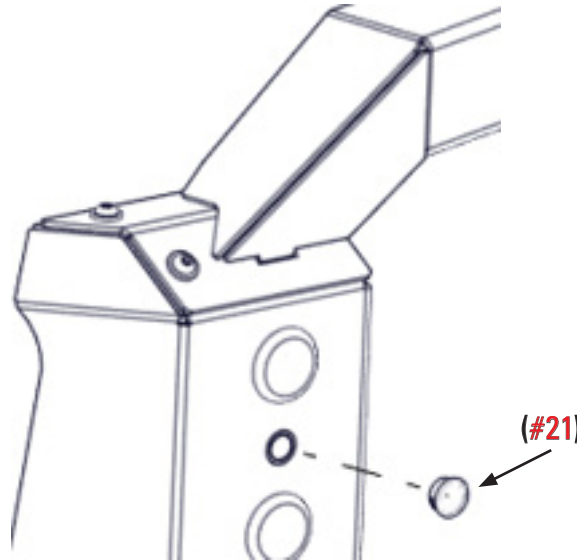
- Step 7. If parking sensors were relocated in step 4-6, proceed to step 8, if not, skip to step 9.
- Step 8. Route the (#24)x2 harness extension from the back side of bumper, through the driver and passenger side tow hook openings and up through both uprights. Connect extension x2 to both sensors and to main harness. **(Fig 5)**



**(Fig 5) Sensor wire extension**

## INSTALL

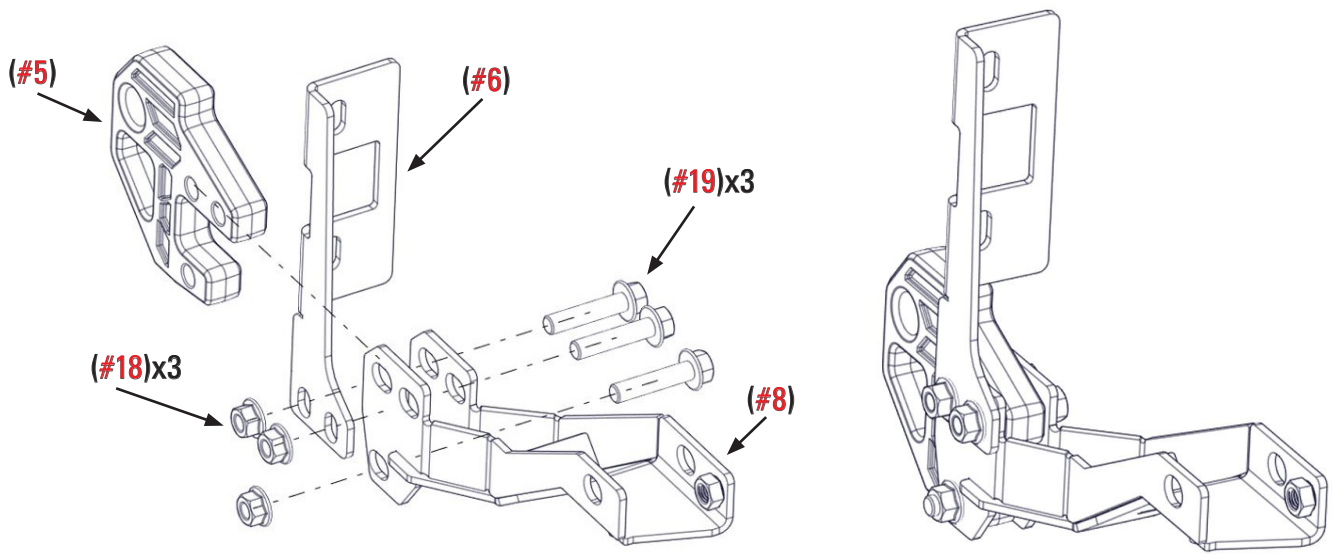
Step 9. Place (#21)x2 sensor plug cap in factory bumper holes. If not relocating sensors, place into Bull Bar fascia. **(Fig 6)**



**(Fig 6) Sensor cap plug install**

Step 10. Remove factory tow hooks if equipped. Begin by removing M12x2 factory bolts from driver and passenger side tow hooks; remove and discard.

Step 11. Attach (#5) tow hook, (#6) vertical mounting bracket, and (#8) driver side frame bracket with (#19)x6 M12x-55mm flanged hex bolt and (#18)x3 flanged hex nut to make an assembly. Use (#5), (#7), and (#9) for passenger side assembly. Tighten all hardware to (50-60 ft/lbs) of torque. **(Fig 7)**



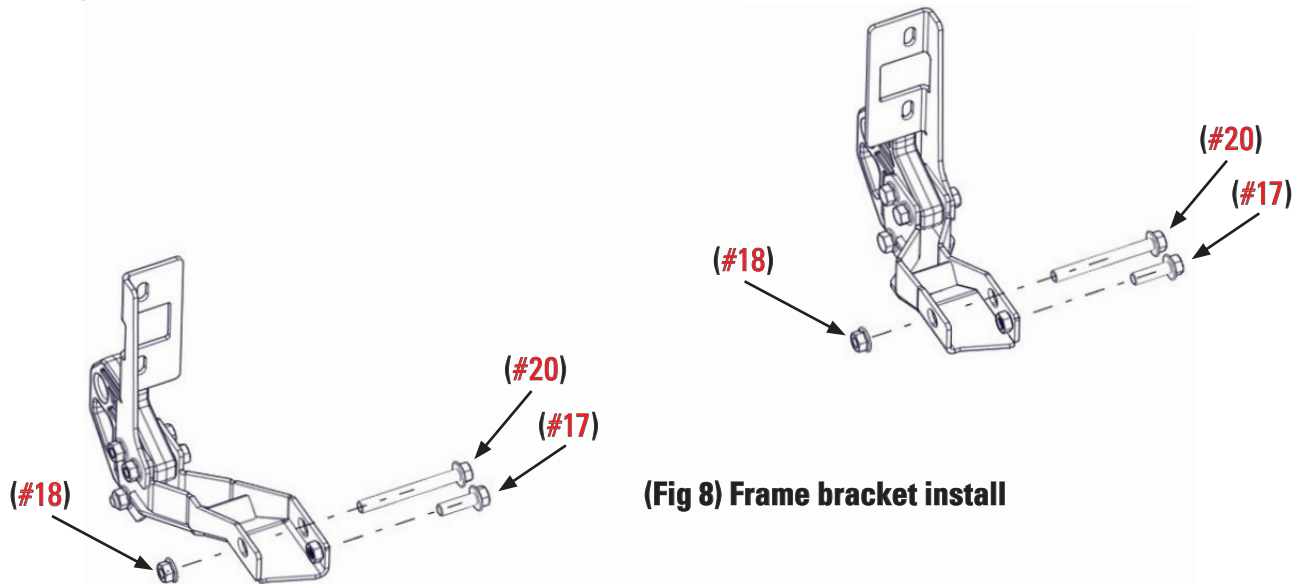
**(Fig 7) Tow hook and mounting bracket assembly**

**(Driver side assembly)**

## INSTALL

Step 12. Slide driver and passenger bracket assemblies through the bumper and into the frame.

Step 13. Install hardware in reverse of removal, but do not fully tighten at this time. You may need to adjust slightly for final install. **(Fig 8)**

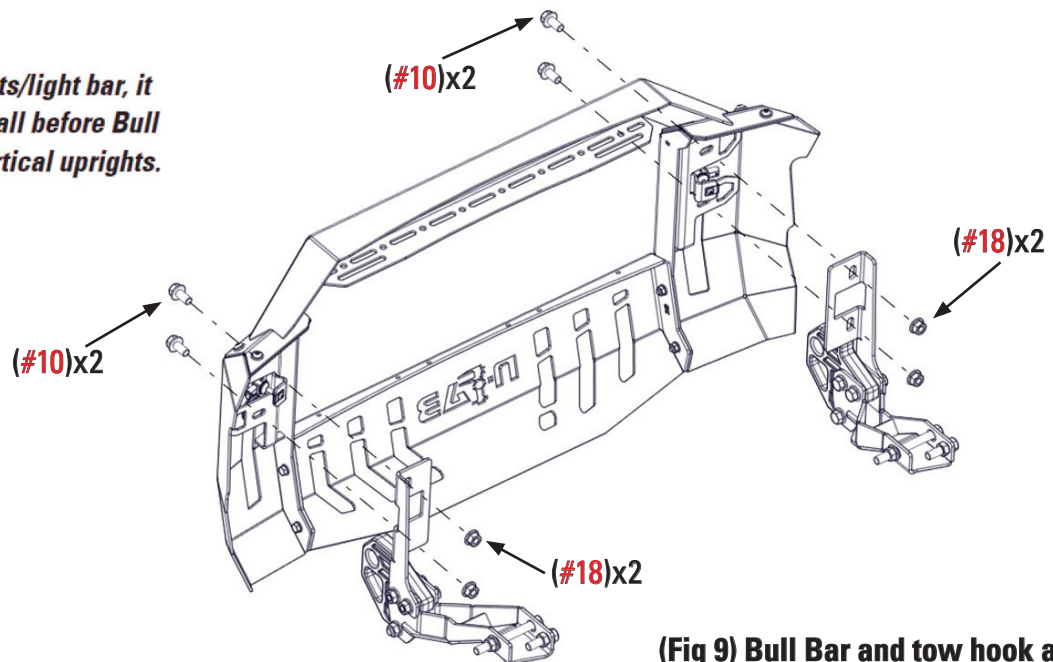


**(Fig 8) Frame bracket install**

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 supplied (#10)x4 M12-1.75x25mm flanged hex bolt and (#18)x4 Flanged serrated hex nut and carefully attach Bull Bar to vertical uprights so tow hooks protrude through the rectangular cut outs. Make adjustments needed to 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.

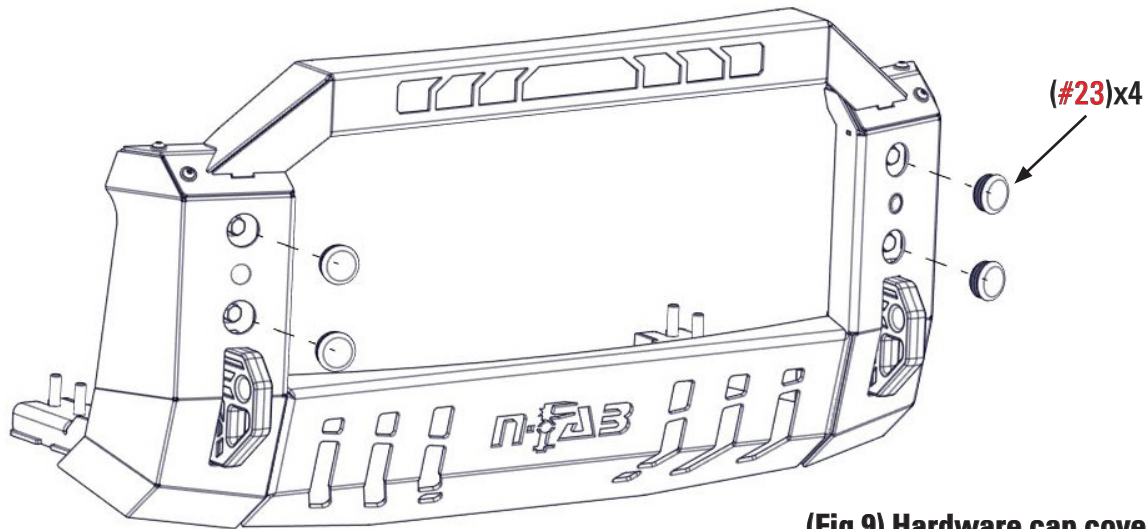


**(Fig 9) Bull Bar and tow hook assembly**

## INSTALL

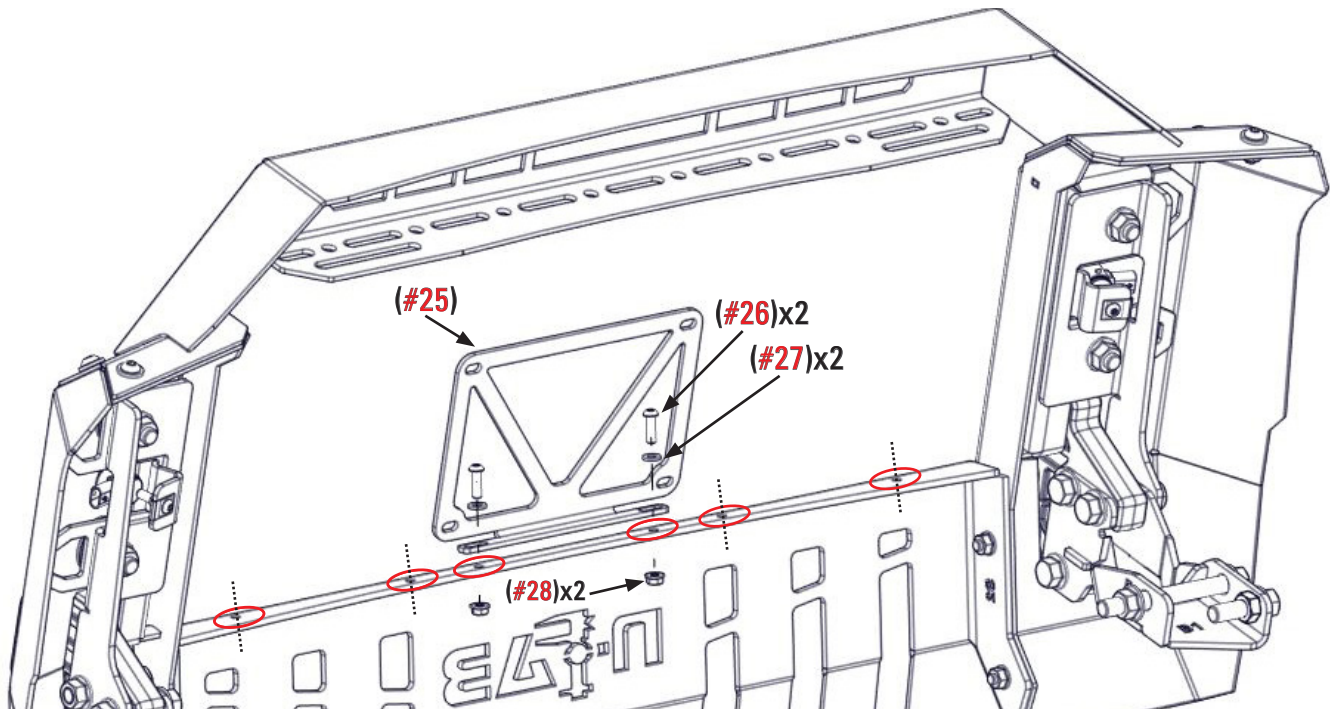
Step 16. Insert (#23)x4 tube plugs in the Bull Bar facia to cover hardware. **(Fig 9)**

Step 17. Use a drive way or parking lot to ensure sensors are working properly.



**(Fig 9) Hardware cap cover install**

Step 18. Install the (#25) license plate relocation bracket using the supplied (#26)x2 M6-1x20mm button head bolt, (#27)x2 M6 narrow washer, and (#28)x2 M6 flanged hex nut to one of three mounting locations on top of skid plate. Fully tighten hardware. **(Fig 11)**

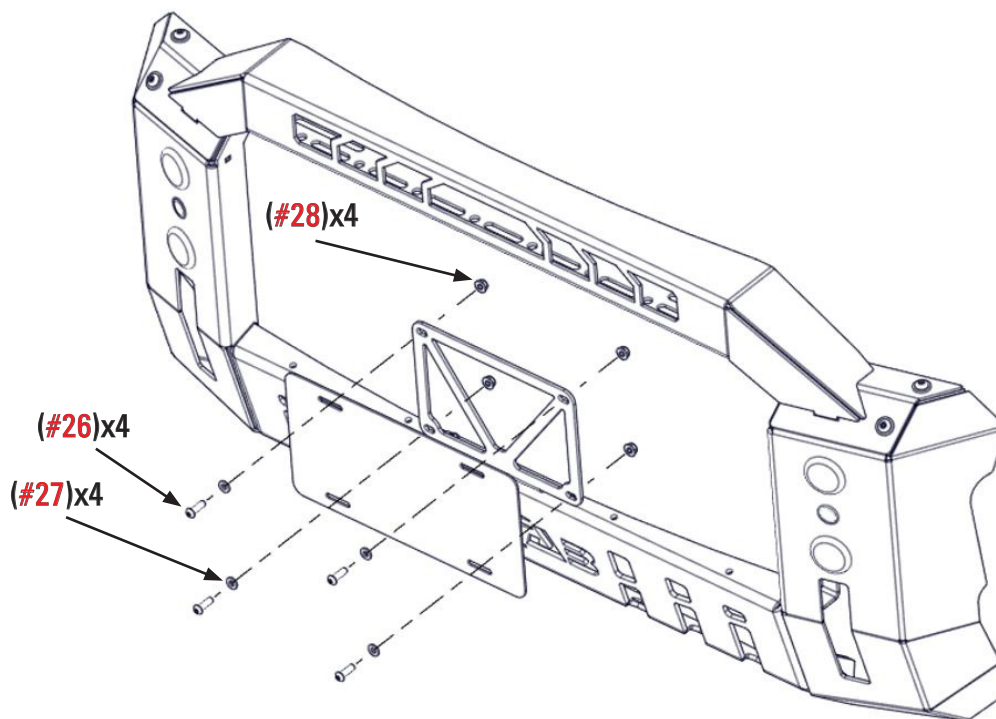


**(Fig 11) License plate bracket install**

## INSTALL

Step 19. Attach license plate to relocation bracket using the supplied (#26)x4 M6-1x20mm button head bolt, (#27)x4 M6 narrow washer, and (#28)x4 M6 flange hex nut and fully tighten. **(Fig 12)**

Step 20. To complete the install, use a driveway or parking lot to ensure sensors are working properly.



**(Fig 12) License plate install**