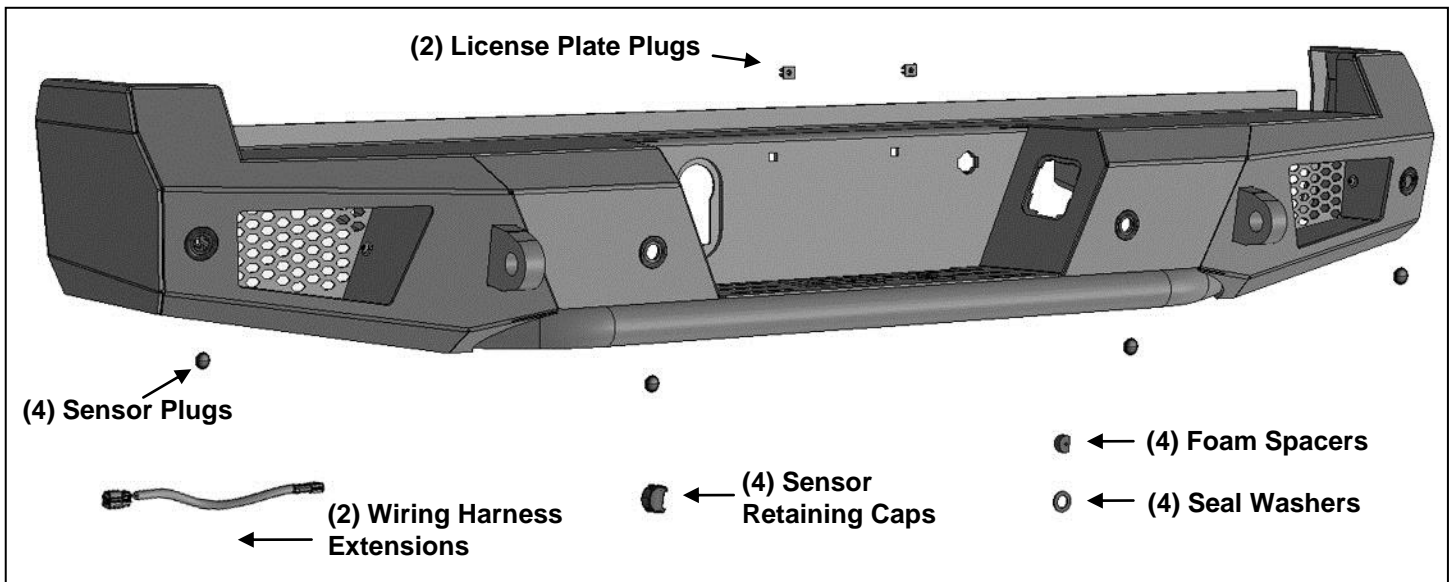


## 2017-2021 F250/350 SUPER DUTY AMBUSH REAR BUMPER PART #FD-3166

### PARTS LIST:

1	Ambush Rear Bumper Assembly	4	Sensor Plugs
2	Plastic Plugs for license plate mount	2	Wire Harness Extensions
4	Sensor Retaining Caps	1	Sensor Covers Kit
4	20mm x 10mm Foam Spacers	8	4mm Self Tapping Screws
4	15.5mm x 25mm x 2mm Foam Washers	10	Nylon Wire Ties



### PROCEDURE:

**REMOVE CONTENTS FROM BOX. VERIFY ALL PARTS ARE PRESENT. READ INSTRUCTIONS CAREFULLY BEFORE STARTING INSTALLATION. BUMPER IS HEAVY, ASSISTANCE IS HIGHLY RECOMMENDED TO AVOID POSSIBLE INJURY OR DAMAGE TO THE VEHICLE.**

1. Remove the license plate and bracket. Unplug all harnesses leading to the bumper, towing plug and sensors, **(Figure 1)**. Move the wiring harness away from the bumper.
2. Place blocks or jack stands under the bumper to support it during mounting bolt removal. Once the bumper has been safely supported, remove the (4) large hex nuts per side attaching the bumper to the side of the frame, **(Figure 2)**. Also remove the bolt plates. **WARNING!** Assistance is required to hold the bumper in place during hardware removal to prevent the bumper from falling.
3. With assistance, remove the bumper assembly and move it to clean work area., **(Figures 3 & 4)**. **NOTE:** Do not remove the support brackets attached to the top of the receiver hitch, **(Figure 3)**.
4. Disassemble factory bumper to remove parking sensors, license plate lights, spare tire access lock and wiring harness, **(Figure 4)**.
5. Determine if vehicle is equipped with parking sensors. **NOTE:** Sensors, (if equipped), must be installed before attaching the Bumper to the vehicle.

#### **Models without bumper sensors:**

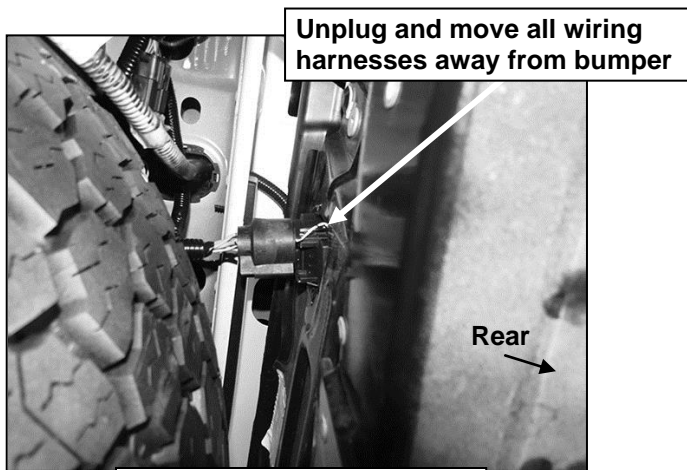
- a. From front of bumper, push the included (4) Hole Plugs into sensor mounting holes, **(Figure 5)**.

#### **Models with bumper mounted sensors:**

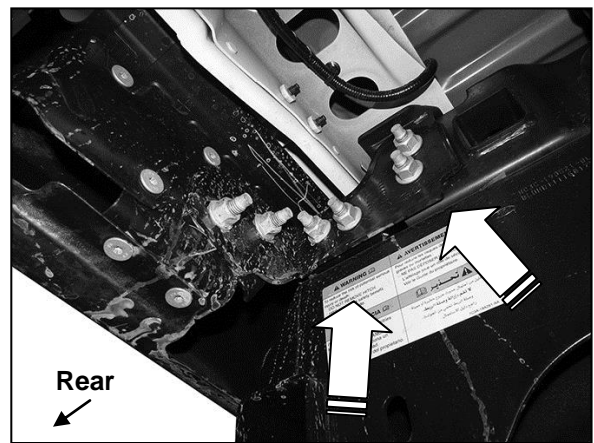
- a. Remove the small factory sealing washer from the sensor. Attach the provided larger (1) Foam Washer onto the front of the sensor, **(Figure 6)**.

- b. Push the sensor in from the back of the Bumper until it is flush with the sensor sleeve. Attach the adhesive side of (1) Foam Spacer to the sensor. Push the Retaining Cap onto the sensor mount until it snaps into the mounting holes, **(Figure 6)**.
  - c. Repeat the previous Steps to attach each sensor to the back of the Bumper.
  - d. Install the factory wiring harness, **(Figure 7)**. **NOTE:** Use the included (2) Wiring Harness Extensions to extend the factory harness to reach the outer sensors if necessary. Plug harness into sensors.
- 6. LED light installation at end of bumper, (lights sold separately).**
- a. Insert light into the driver/left side opening and up to mounting slots, **(Figure 8)**. Check for clearance between front and back of light. If necessary, remove the screen from the back of the opening for additional clearance or access to light, **(Figure 8)**.
  - b. Follow the light manufacturer's instructions to attach (1) light to the center slot or (2) lights to the inner and outer slots in the top of the light opening.
  - c. Repeat the above steps for passenger/right side light installation.
  - d. Follow light manufacturer's instructions to properly wire the light to vehicle electrical system.
- 7.** Attach license plate lights, spare tire lock and towing harness plug to Ambush Bumper, **(Figures 7 & 9)**. Use the included wire ties to attach harness to Bumper.
- 8.** With assistance, position the mounting brackets on the back of the Ambush Bumper Assembly up to the outside of the frame. Temporarily support the weight of the Bumper Assembly. **WARNING:** To avoid possible injury or damage to the vehicle, do not proceed until the Bumper is fully and safely supported.
- 9.** Line up the (4) holes in the passenger/right side mounting plate with the (2) holes in the side of the frame and the (2) holes in the support bracket on the hitch. Reuse the factory double bolt plates and hardware to attach the mounting plate to the frame and support bracket, **(Figure 10)**. Leave hardware loose. Repeat this **Step** to attach the driver/left side mounting plate.
- 10.** Slowly open the tail gate and check for clearance. Level and adjust the Bumper as necessary and fully tighten all hardware.
- 11.** Plug the Bumper wire harness into the vehicle.
- 12.** Use the included (2) push-in Plastic Plugs to attach the license plate to the (2) holes in the Bumper Assembly, **(Figure 11)**.
- 13.** Do periodic inspections to the installation to make sure that all hardware is secure and tight.

**To protect your investment,** Do not use any type of polish or wax that may contain abrasives that could damage the finish. Mild soap may be used to clean the Ambush Bumper assembly.



**(Fig 1) Trailer plug pictured**



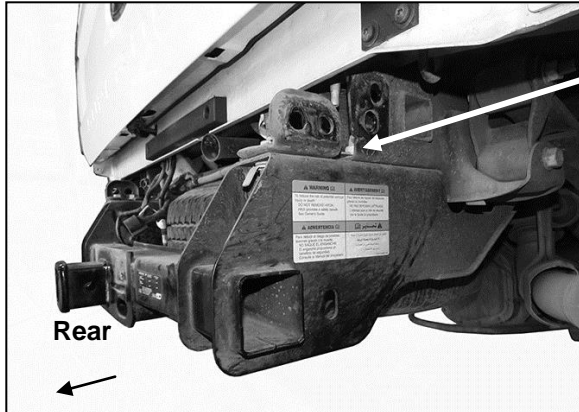
**(Fig 2) Remove hex nuts to remove bumper assembly (arrows). Passenger/right side pictured**



**Passenger/right Side Installation Pictured**

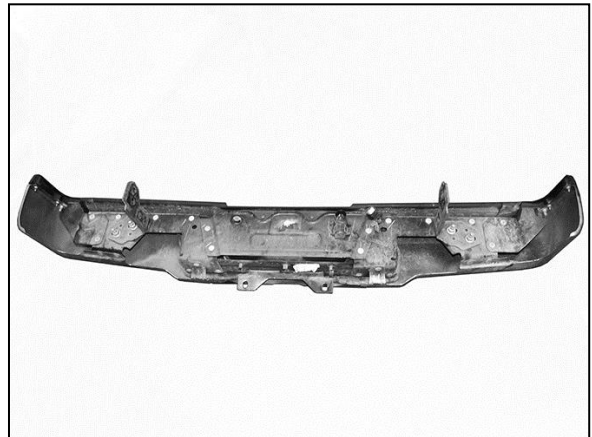
**WARNING!** Do not remove bumper bolts unless the bumper is properly supported on blocks or stands or it may fall.

**WARNING!** Do not crawl under bumper unless it is properly supported on blocks or stands or the bumper may fall.

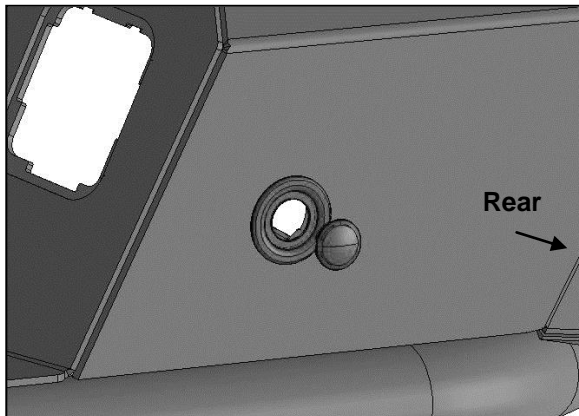


Factory 90-degree support bracket

(Fig 3) Remove factory bumper and double bolt plates. Do not remove support Brackets

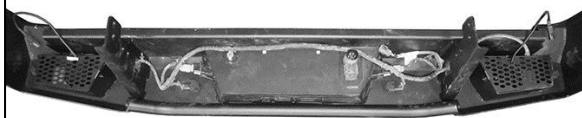


(Fig 4) Disassemble factory bumper to remove license plate lights, trailer plug, spare tire access lock, parking sensors and wiring harness

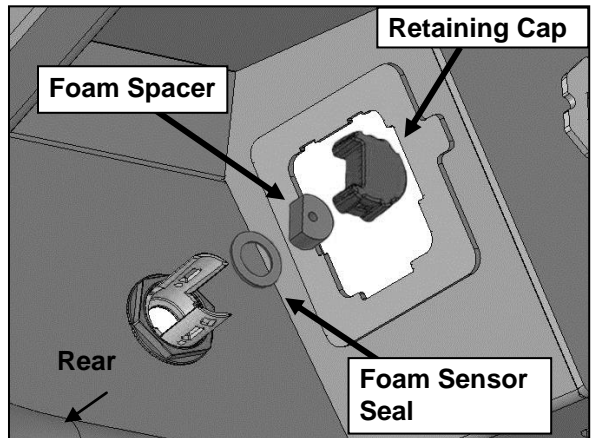


(Fig 5) Models without parking sensors, push the included Plugs into sensor mounting holes

Use included Wiring Harnesses to reach outer sensors



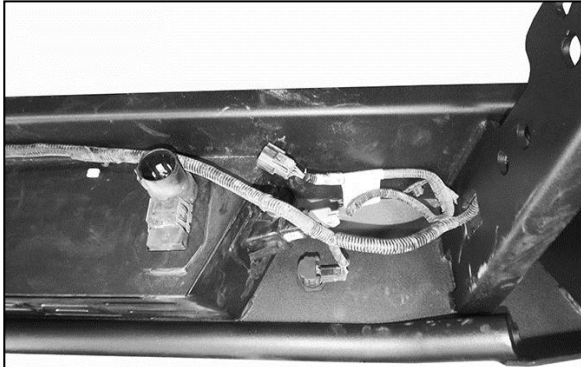
(Fig 7) Attach sensors and wiring harness to Bumper as equipped. Plug Harness Extensions into outer plugs in harness



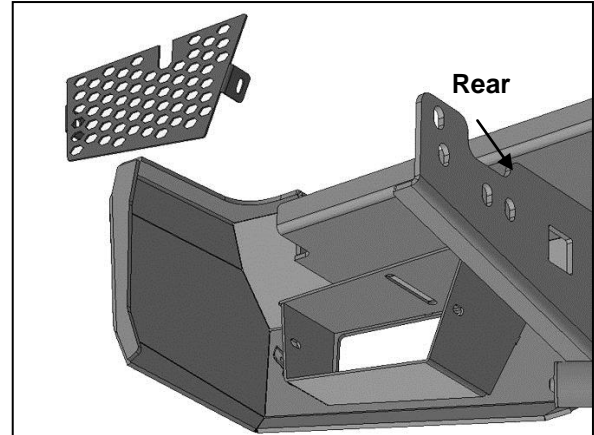
(Fig 6) Sensor assembly mounted to the sensor sleeve on the back of the Bumper

Passenger/right Side Installation Pictured

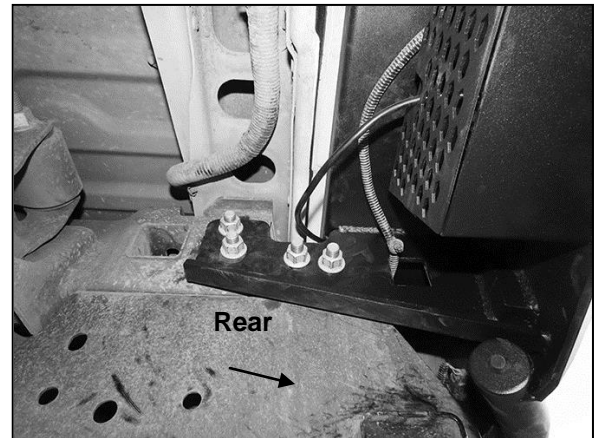
**WARNING!** Do not crawl under bumper unless it is properly supported on blocks or stands or the bumper may fall.



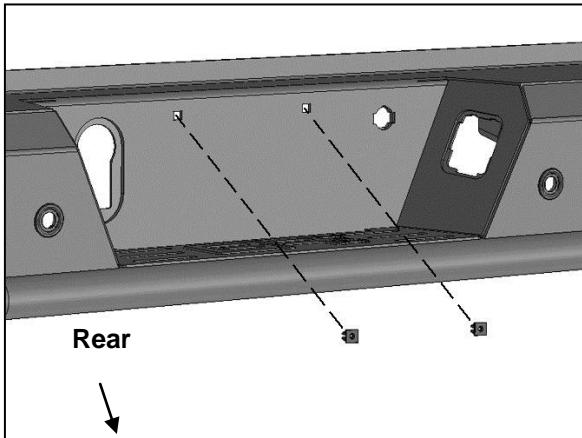
(Fig 9) Attach license plate lights, spare tire access lock and trailer plug to Bumper as equipped



(Fig 8) Remove screens from Bumper if necessary for additional clearance around or access to lights



(Fig 10) Reuse factory hardware to attach Bumper to frame (driver/left side pictured)



(Fig 11) Push plastic plugs into holes in Bumper for license plate



Complete Installation  
(lights pictured not included)