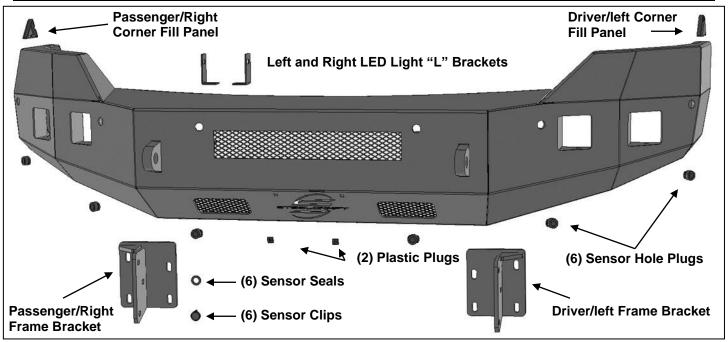
#### **PARTS LIST:**

1	Fortis Bumper Assembly	2	10-1.5mm x 45mm Hex Bolts
1	Driver/left Frame Mounting Bracket	4	10mm x 27mm OD x 3mm Flat Washers
1	Passenger/right Frame Mounting Bracket	2	10mm Lock Washers
1	Driver/left Top Corner Fill Panel	2	10mm Hex Nuts
1	Passenger/right Top Corner Fill Panel	2	8-1.25mm x 25mm Hex Bolts
2	Plastic Plugs for license plate mount	2	8-1.25mm x 16mm Hex Bolts
6	Sensor Hole Plugs	6	8mm x 24mm OD x 2mm Flat Washers
6	Sensor Sealing Washers	4	8mm Lock Washers
6	Sensor Clips	2	8mm Hex Nuts
1	Sensor Cover Kit	4	6-1.00mm x 20mm Button Head Bolts
1	Driver/left LED "L" Light Bracket	4	6mm x 12mm x 1.6mm Flat Washers
1	Passenger/right LED "L" Light Bracket	4	6mm Lock Washers
12	12-1.75mm x 45mm Hex Bolts	12	4mm x 10mm Button Head Bolts
24	12mm x 32mm x 3mm Flat Washers	1	2.5mm Wrench
12	12mm Lock Washers	1	4mm Wrench
12	12mm Hex Nuts		



#### 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.
- 2. Next, remove the plastic fascia fill panel between the headlights and the top of the bumper. NOTE: Release inner fender liner to access hardware attaching the ends of fascia panel to the bottom of the front fenders, (Figures 1—3). On some model years, it may be necessary to temporarily remove the grille to remove the fascia or 1pc plastic bumper cover.
- 3. On models with factory fog lights and/or sensors, unplug wiring harness leading to the bumper, (Figure 4). Release the harness from the clips attached to the back of the bumper and move harness away.

- **4.** On models equipped with tow hooks, remove the tow hooks and mounting brackets. **NOTE**: Tow hooks cannot be reinstalled.
- 5. Place blocks or jack stands under the front bumper to support it during mounting bolt removal. Once the bumper has been safely supported, remove the (3) hex nuts attaching each bumper bracket to the end of the frame, (Figure 5). WARNING! Assistance is required to hold the bumper in place during hardware removal to prevent the bumper from falling. Slide the bumper assembly off of the end of the frame.
- **6.** Next, remove the plastic inner support blocks from the bottom of the grille and headlights, (**Figure 6**).
- 7. Select the driver/left side Frame Mounting Bracket, (Figure 7). NOTE: Holes in mounting flange on end of frame are two sizes (3-large, 1-small). Attach the Bracket to the end of the frame with (3) 12mm x 45mm Hex Bolts, (6) 12mm Flat Washers, (3) 12mm Lock Washers and (3) 12mm Hex Nuts. Use (1) 10mm x 45mm Hex Bolt, (2) 10mm Flat Washers, (1) 10mm Lock Washer and (1) 10mm Hex Nut to attach the Bracket to the smaller, top inner mounting hole in the bumper flange, (Figures 7 & 8).
- **8.** Repeat **Step 7** to install the passenger/right side Frame Bracket.
- 9. Optional Center LED light installation (sold separately). NOTE: It may be easier to install the center light (not included) and sensors on the Bumper before Bumper Assembly is attached to the vehicle.
  - a. Select the L/R "L" Brackets, (Figure 9). Attach the Brackets to the top of the (2) mounting tabs welded onto the back of the bumper with the included 8mm x 25mm Hex Bolts, (4) 8mm Flat Washers, (2) 8mm Lock Washers and (2) 8mm Hex Nuts. Leave loose.
  - **b.** Attach the LED light assembly to the "L" Brackets with the included (2) 8mm x 16mm Hex Bolts, (2) 8mm Lock Washers and (2) 8mm Flat Washers, **(Figure 9)**. Do not fully tighten hardware at this time. **IMPORTANT**: "L" Brackets are designed for 8mm light mounting hardware only. Modify "L" Brackets if necessary or use brackets supplied by your light manufacturer if possible to install hardware larger than 8mm.
  - **c.** Follow light manufacturer's instructions to properly wire the light.

# **Models without bumper sensors:**

- a. Select the included (6) Rubber Plugs.
- **b.** From behind bumper, push plugs into sensor mounting holes, (Figure 10).

# Models with bumper mounted sensors:

- **a.** Unplug and remove sensors and wiring harness from factory bumper. Test fit sensor in sleeve. It may be necessary to cut or grind off the tabs on the sides of the sensor to fit into the sleeve, **(Figure 12)**.
- **b.** Remove the silicone seal from the end of the sensor. Slide the included larger Sensor Seal over front of sensor, (Figure 11).
- c. Insert sensor with Seal into sensor mount, (Figure 12).
- d. Push Sensor Retaining Clip into sensor mount and lock into mounting holes, (Figure 12).
- **e.** Repeat previous Steps to install remaining sensors.
- **f.** Install wiring harness for sensors.
- **g. Optional**: Secure each sensor to the socket with (2) 4mm x 10mm Button Head Screws. **IMPORTANT**: Sensors fit snug in sockets. The 4mm Screws are used to apply slight pressure to lock the sensors in place. Tighten both screws evenly until they touch the sensor body only. Do not overtighten screws or damage to sensors will result.
- 10. With assistance, position the Bumper Assembly up to the inside of the Frame Brackets, (Figure 13). Temporarily support the weight of the Bumper. WARNING: To avoid possible injury or damage to the vehicle, do not proceed until the Bumper is fully and safely supported.

- 11. Line up the (3) holes in the driver side mounting plate on the inside of the Bumper with the slots in the Frame Bracket. Attach the Bumper to the Bracket with the included (3) 12mm x 45mm Hex Bolts, (6) 12mm Flat Washers, (3) 12mm Lock Washers and (3) 12mm Hex Nuts, (Figures 13 & 14). Do not fully tighten hardware at this time. Repeat this **Step** to attach the passenger side of the Bumper to the Bracket.
- 12. Level and adjust the bumper and fully tighten all 12mm hardware to 65-70ft-lbs.
- **13.** Select the driver/left triangle shaped Top Corner Fill Panel, **(Figure 15)**. Attach the Panel to the top of the bumper with (2) 6mm x 20mm Button Head Screws, (2) 6mm Lock Washers and (2) 6mm x 12mm Small Flat Washers. **NOTE**: The Driver and passenger side Top Corner Fill Panels look similar but are unique. The side of the triangle with the small notch, **(Figure 15)**, will go toward the rear, (toward the fender). Repeat to install the passenger/right Top Corner Fill Panel.
- **14.** Reattach the factory wiring harness to both lights and/or sensors if equipped.
- **15.** Use the included (2) push-in Plastic Nuts to attach the front license plate, (if required), to the (2) holes in the front of the Bumper, **(Figure 15)**.

# **LED light installation at ends of bumper** (sold separately).

- **a.** Insert light into opening and onto mounting slot.
- **b.** Follow the light manufacturer's instructions to attach light to the light opening. **IMPORTANT**: On two light systems, attach the flood light to the outer slot and the spot light to the inner slot.
- **c.** Repeat the above steps for passenger side light installation.
- **d.** Follow light manufacturer's instructions to properly wire the light.
- **16.** Do periodic inspections to the installation to make sure that all hardware is secure and tight.

**To protect your investment**, wax this product after installing. Regular waxing is recommended to add a protective layer over the finish. 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 Bumper assembly.

#### **Driver Side Installation Pictured**



(Fig 1) Remove hardware attaching plastic fender liner to fender

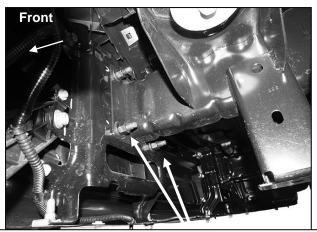


(Fig 2) Pull back fender liner to locate fascia attachment at bottom of front fender

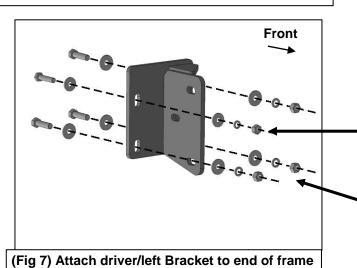
# **Driver Side Installation Pictured**



(Fig 3) Remove fascia body panel from top of bumper, (arrows) or 1pc plastic bumper cover



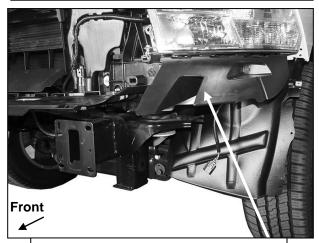
(Fig 5) Remove (3) factory hex nuts from each side



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



(Fig 4) Unplug lights and sensors if equipped. Unplug harness to bumper and move harness

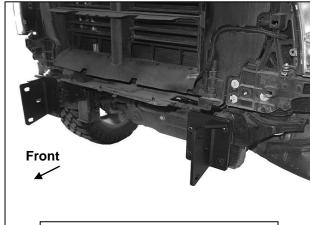


(Fig 6) Remove plastic blocks from below headlight and from below grille

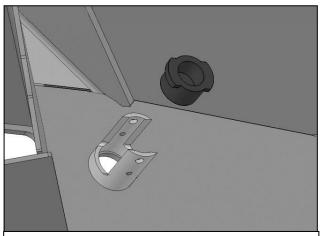
10mm x 40mm Hex Bolt (2) 10mm Flat Washers 10mm Lock Washer 10mm Hex Nut

- (3) 12mm x 45mm Hex Bolts
- (6) 12mm Flat Washers
- (3) 12mm Lock Washers
- (3) 12mm Hex Nuts

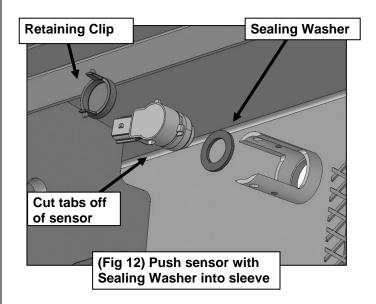
# **Driver Side Installation Pictured**

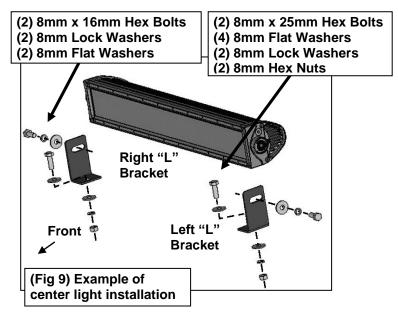


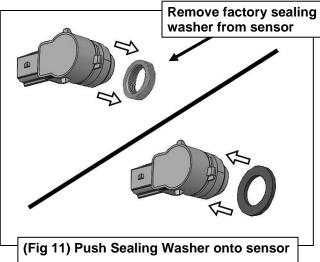
(Fig 8) Mounting Brackets installed



(Fig 10) Push Rubber Plug into mounting sleeve

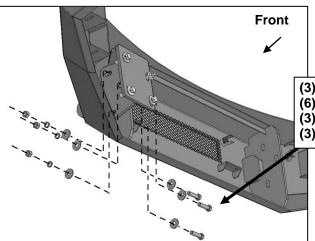




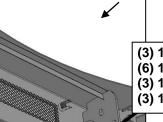


**WARNING!** Do not crawl under bumper unless the bumper is properly supported on blocks or stands or the bumper may fall.

# **Driver Side Installation Pictured**

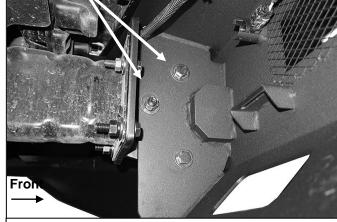


(Fig 13) Attach Driver/left side of Bumper assembly to Bracket assembly (Figure 10)



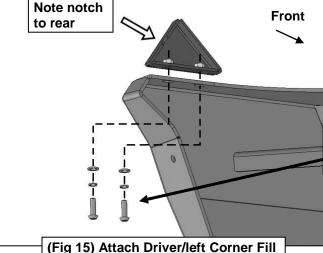
**WARNING!** Do not crawl under bumper unless the bumper is properly supported on blocks or stands or the bumper may fall.

- (3) 12mm x 45mm Hex Bolts
- (6) 12mm Flat Washers
- (3) 12mm Lock Washers
- (3) 12mm Hex Nuts



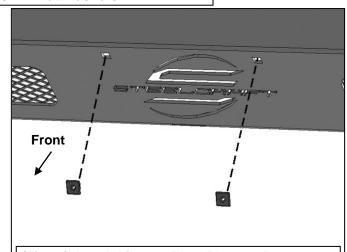
(Fig 14) Attach Driver/left side of Bumper assembly to Bracket (pictured from behind Bumper)

- (2) 6mm x 20mm Button Head Bolts
- (2) 6mm Lock Washers
- (2) 6mm Flat Washers



(Fig 15) Attach Driver/left Corner Fill Panel to top of Bumper assembly





(Fig 16) Attach License Plate Plugs to Bumper

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