



**Assembly, Installation, Operation and
Maintenance Instructions
Front LD Bumper**

**Part Number:
FLDB010TI**

240 minutes

Dealer / Installer: Provide a copy of these instructions to the end user of this product. These instructions provide important operating and safety information for proper usage of this product. Demonstrate the proper use of the product with the end user. Have the end user demonstrate that they understand the proper use of the product.

End User: Read and follow all instructions included in this manual. Ask your Dealer / Installer for assistance if you do not understand the proper use of the product. Never remove any decals from the product. Failure to follow these instructions can result in injury or death.

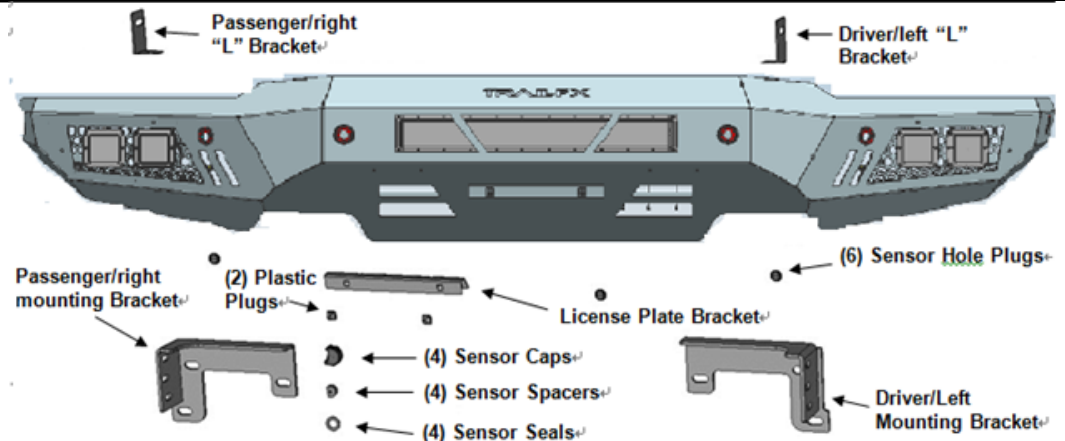
⚠️ WARNING ⚠️

APPLICATION: 2021 – Ford F150

PARTS LIST:

| Qty | Part Description | Qty | Part Description |
|-----|--|-----|---|
| 1 | Front Bumper Assembly | 12 | 10mm x 27mm x 3mm Flat Washer |
| 1 | Driver/left Frame Bracket | 6 | 10mm Lock Washer |
| 1 | Passenger/right Frame Bracket | 6 | 10mm Hex Nut |
| 1 | Driver/left "L" Bracket (center LED light) | 2 | 8-1.25mm x 25mm Hex Bolts |
| 1 | Passenger/right "L" Bracket (center LED light) | 2 | 8-1.25mm x 16mm Hex Bolts (LED light bar) |
| 1 | License Plate Bracket | 6 | 8mm x 24mm Flat Washers |
| 2 | Plastic Plugs for license plate mount | 4 | 8mm Lock Washers |
| 6 | Sensor Retaining Caps | 2 | 8mm Hex Nuts |
| 6 | 20mm x 10mm Foam Spacers | 2 | 6mm x 20mm Button Head Bolts |
| 6 | 15.5mm x 25mm x 2mm Foam Seals | 4 | 6mm x 18mm x 1.6 Flat Washers |
| 6 | Plastic Sensor Hole Plugs | 2 | 6mm Nylon Lock Nuts |
| 6 | 12-1.75mm x 35mm Hex Bolt | 12 | 4mm Self Tapping Screws |
| 12 | 12mm x 32mm x 3mm Flat Washer | 1 | 4mm Wrench |
| 6 | 12mm Nylon Lock Nut | 10 | Nylon Wire Ties |
| 6 | 10-1.5mm x 35mm Hex Bolt | | |

| Torque Specs | |
|--------------|-------------|
| 12mm | 70 ft/lbs |
| 10mm | 34.5 ft/lbs |
| 8mm | 20 ft/lbs |
| 6mm | 102 in/lbs |
| Factory | See Mfg. |



INSTALLATION PROCEDURE:

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

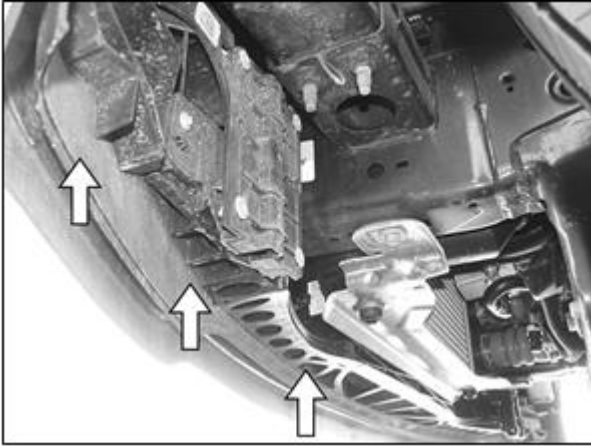
1. Remove the license plate and bracket.
2. From behind the front bumper, unplug and remove the active air dam from the bottom of the frame, **(Figures 1 & 2)**. It is not necessary to remove the lift motors, only remove the (6) bolts to remove the air dam.
3. With the air dam out of the way, locate and unplug the main harness plug on the top of the passenger/right frame rail behind the bumper bracket, **(Figure 3)**. Unplug any remaining harnesses leading to the bumper. On hybrid models, temporarily unplug and remove the speaker assembly for the pedestrian audible alert system from the driver/left frame channel, **(Figure 4)**. Note speaker is located on the inner side of the frame, behind the driver/left bumper bracket. From below, remove the hex bolt and drop the speaker down, unplug and remove, **(Figure 5)**.
4. Place blocks or jack stands under the front bumper to support it during mounting hardware removal. Once the bumper has been safely supported, remove the large hex nuts from the back of each bumper bracket attaching the bumper to the bumper brackets, **(Figure 6)**. **WARNING!** Assistance is required to hold the bumper in place during hardware removal to prevent the bumper from falling. Carefully slide the bumper off over the tow hooks if equipped.
5. On models with bolt on frame extensions, remove the extensions from outside of frame, **(Figure 6)**. **NOTE:** It may be necessary to cut the factory bolts to remove frame extensions, (removal is optional).
6. Select the driver/left Frame Mounting Bracket. Attach the Bracket to the end of the frame with the included (3) 12mm x 35mm Hex Bolts, (6) 12mm Flat Washers and (3) 12mm Nylon Lock Nuts, **(Figures 7 & 8)**. Do not fully tighten hardware at this time. Repeat this Step to install the passenger/right Frame Bracket.
7. Determine if the vehicle is equipped front sensors:
 - Models without bumper sensors:**
 - a. Select the included (6) Plastic Plugs.
 - b. From the front, push the plugs into the sensor mounting holes, **(Figure 9)**.
 - Models with bumper mounted sensors:**
 - a. Disassemble front bumper to unplug and remove sensors and wiring harness from bumper. Pay attention to mounting location of all sensors for proper reinstallation.
 - b. Select the driver/left outer sensor. Remove the silicone seal from the end of the sensor. Slide the included larger Foam Sensor Seal over front of sensor, **(Figure 10)**.
 - c. Insert sensor with Seal into driver/left outer sensor mount, **(Figure 11)**.
 - d. Place Foam Spacer over end of sensor. Push Sensor Retaining Cap onto sensor mount and lock into mounting holes, **(Figure 11)**.
 - e. Repeat previous Steps to install remaining sensors.
 - f. Install wiring harness for sensors. **NOTE:** it may be necessary to remove some of the protective wrap around the harness to reach all sensor mounts.
 - g. **Optional:** Secure each sensor to the socket with (2) 4mm Self Tapping 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.

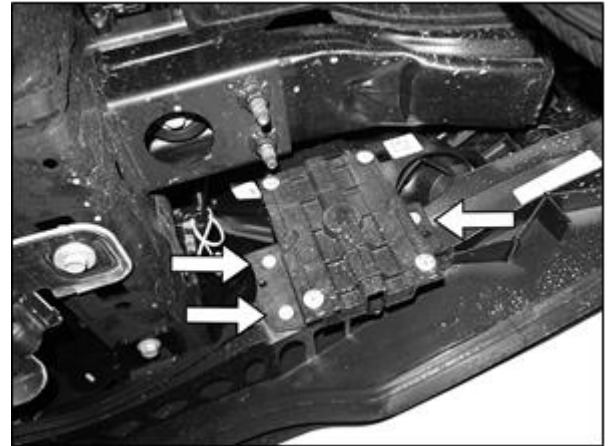
INSTALLATION PROCEDURE CONTINUED:

8. If front license plate is required, attach the License Plate Bracket to the holes in the bumper with the included (2) 6mm x 20mm Button Head Screws, (4) 6mm Flat Washers and (2) 6mm Nylon Lock Nuts. Insert (2) Plastic Plugs into the square holes in the Bracket. Reuse the factory screws to attach the license plate to the Plastic Plugs, **(Figure 12)**.
9. **Center LED light installation** (sold separately).
 - a. Select the L/R “L” Brackets, **(Figure 13)**. 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 at this time.
 - 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 13)**. 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 the light manufacturer to install hardware larger than 8mm.
 - c. Follow light manufacturer’s instructions to properly wire the light.
10. **LED light installation at ends of bumper** (sold separately).
 - a. Insert light into opening and up to mounting slots in the top of the driver/left light opening.
 - b. Check for clearance between front and back of light. If necessary, remove the screen from the back of the opening, **(Figure 14)**.
 - c. 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. **IMPORTANT:** On two light systems with (1) flood and (1) spot light per side, attach the flood light to the outer and the spot light to the inner slot.
 - d. Repeat the above Steps for passenger/right side light installation.
 - e. Follow light manufacturer’s instructions to properly wire the light.
11. With assistance, position the Bumper Assembly up to the outside of the Mounting Brackets. Temporarily support the weight of the Bumper. **NOTE:** On models with ecoboost, trim plastic shroud to fit Bumper profile as needed. **WARNING:** To avoid possible injury or damage to the vehicle, do not proceed until the bumper is fully and safely supported.
12. Attach the driver/left mounting plate on the back of the Bumper to the outside of the Mounting Bracket with the included (3) 10mm x 35mm Hex Bolts, (6) 10mm Flat Washers and (3) 10mm Nylon Lock Nuts, **(Figures 15 & 16)**. Repeat this Step to attach the passenger/right side of the Bumper to the Bracket. Do not fully tighten hardware at this time.
13. Level and adjust the bumper and fully tighten all hardware.
14. Do periodic inspections to the installation to make sure that all hardware is secure and tight.

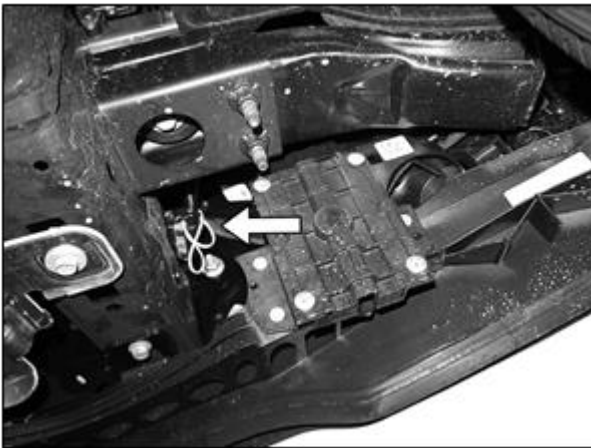
INSTALLATION PROCEDURE IMAGES:



(Fig 1) Active air dam behind bumper



(Fig 2) Remove bolts (arrows) to remove active air dam from motors (passenger/right side pictured)



(Fig 3) Locate and unplug main harness plug on passenger/right side of bumper (arrow)



(Fig 4) Hybrid Models Only, locate alert speaker behind driver/left side of bumper

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

INSTALLATION PROCEDURE IMAGES CONTINUED:

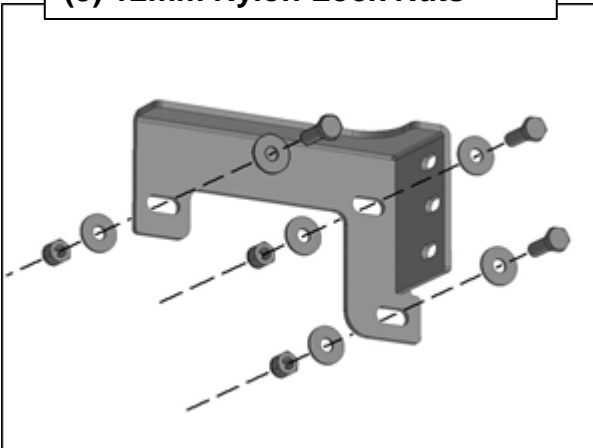


(Fig 5) Remove bolt (arrow) to temporarily remove audible alert speaker located behind driver/left side of bumper (hybrid models only-pictured from below)



(Fig 6) Remove bumper. Also remove the factory frame extension (arrow-optional)

- (3) 12mm x 35mm Hex Bolts**
- (6) 12mm Flat Washers**
- (3) 12mm Nylon Lock Nuts**

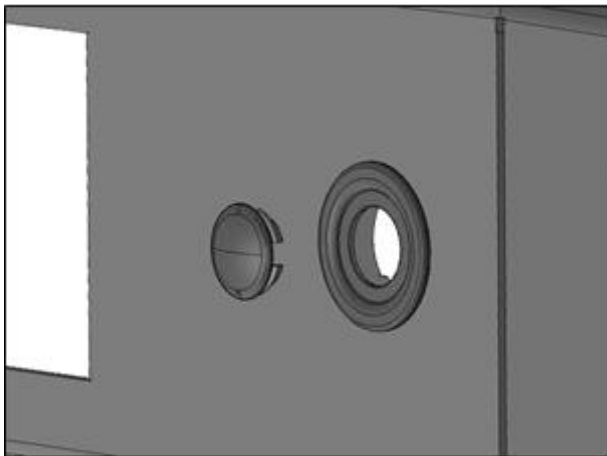


(Fig 7) Attach driver/left Frame Mounting Bracket to end of frame

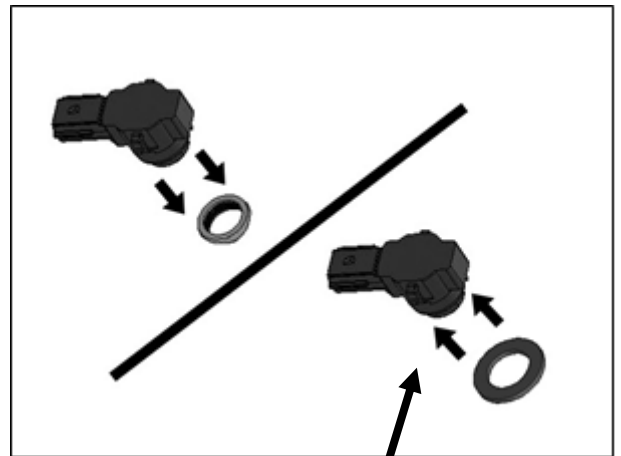


(Fig 8) Driver/left side Bracket installed

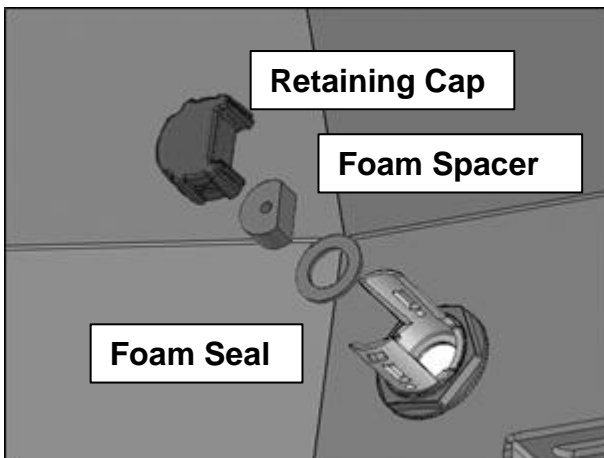
INSTALLATION PROCEDURE IMAGES CONTINUED:



(Fig 9) Push Plastic Plug into sensor mount

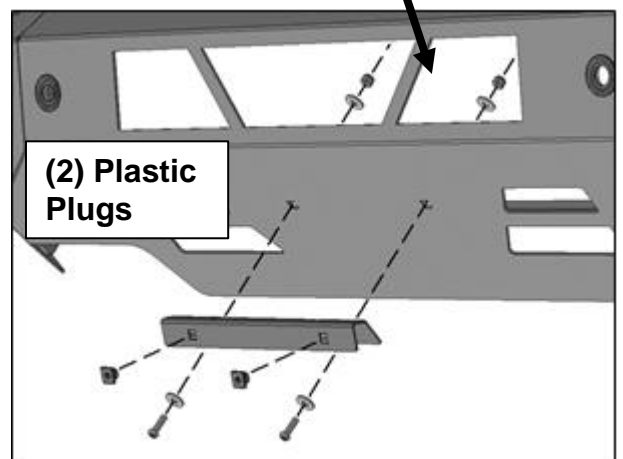


(Fig 10) Remove silicone seal from sensor. Slide large Seal over end of sensor (arrow)

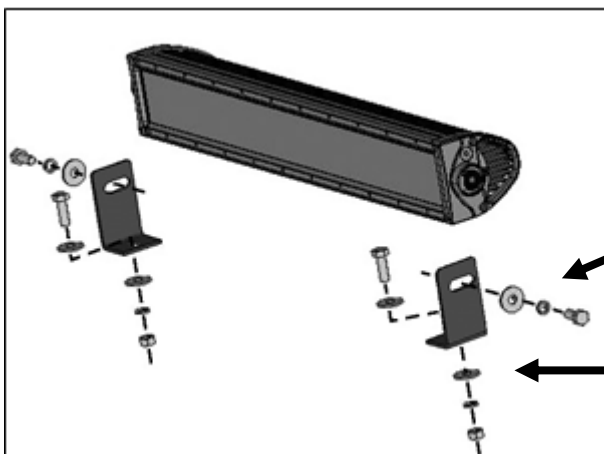


(Fig 11) Insert sensor assembly into the sensor mount on back of Bumper

- (2) 6mm x 20mm Button Head Screws
- (4) 6mm Flat Washers
- (2) 6mm Nylon Lock Nuts



(Fig 12) Attach License Plate Bracket to Bumper

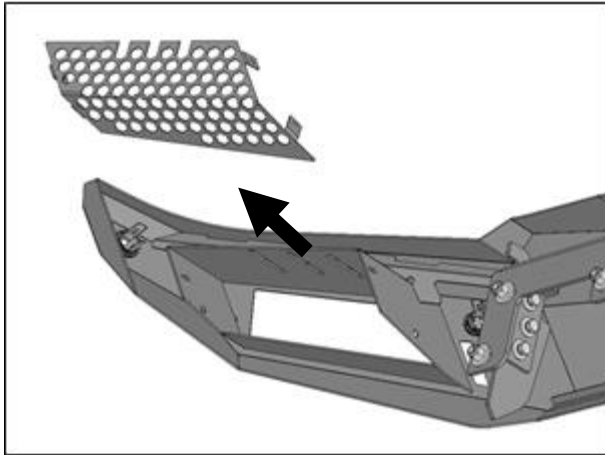


(Fig 13) Example of center light installation

- (2) 8mm x 16mm Hex Bolts
- (2) 8mm Lock Washers
- (2) 8mm Flat Washers

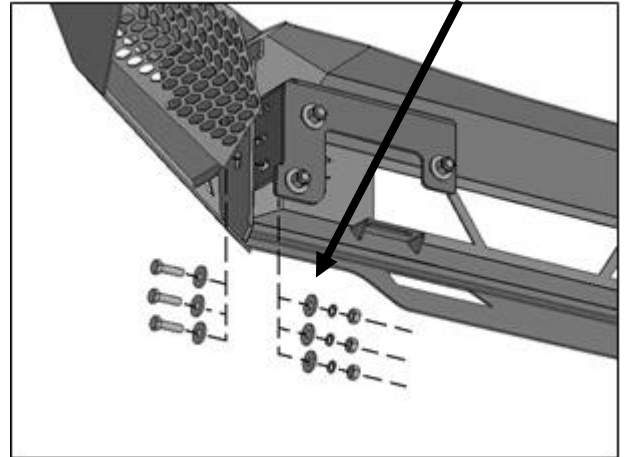
- (2) 8mm x 25mm Hex Bolts
- (4) 8mm Flat Washers
- (2) 8mm Lock Washers
- (2) 8mm Hex Nutsshers

INSTALLATION PROCEDURE IMAGES CONTINUED:

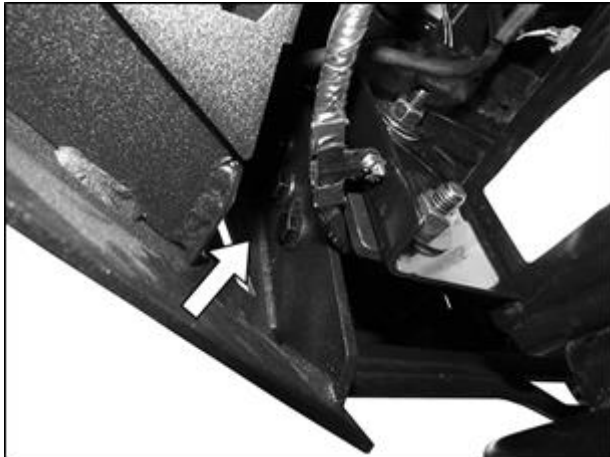


(Fig 14) Remove screens if necessary for clearance/access to outer light mounts

- (3) 10mm x 35mm Hex Bolts**
- (6) 10mm Flat Washers**
- (3) 10mm Lock Washers**
- (3) 10mm Hex Nuts**



(Fig 15) Attach Bumper to Frame Mounting Bracket (passenger/right side illustrated)



(Fig 16) Passenger/right side of Bumper attached to Bracket (pictured from below)



Installation is now complete, check all hardware is tightened and torqued to spec.

PRODUCT CARE:

- Periodically check the product to ensure all fasteners are tight and components are intact.
- Use ONLY Non-Abrasive automotive wax. Use of any soap, polish or wax that contains an abrasive is detrimental and can scratch the finish leading to corrosion.
- Mild soap may be used to clean the Black finish product.

FAQ'S

- **Hardware and mounting brackets are not aligning properly**
 - Ensure that hardware is being used on the correct side of the vehicle. In some cases, the hardware may appear same for driver or passenger side but may alter the alignment of mounting location. Check mounting brackets for both sides.
- **Products are thumping / rattling after installation**
 - Ensure that all required mounting brackets / hardware's are installed & tighten correctly. Suggest using white lithium / regular grease between metal-to-metal contact.
- **Missing / Excess Hardware**
 - Recheck hardware count as per the part list.
- **Product not installing properly**
 - Ensure the Year / Make / Model as well as cab and bed dimensions are correct for the application. Review all steps for installation to ensure they were followed correctly.
- **Who should be contacted for questions regarding product / installation assistance?**
 - www.trailfx.com / support@trailfx.com 1-(866) 638-4870

Warranty Terms:

3 Year Limited Warranty:

TrailFX and Keystone Automotive Operations Inc. make no guarantees or warranties for products not manufactured by Keystone Automotive Operations Inc. Such products are covered solely under any applicable warranty of the manufacturer. It is always recommended that the operating instructions and warranty instructions provided by the manufacturer are followed.

Keystone Automotive Operations Inc. warrants its products to be free from manufacturing and material defects to the original purchaser for the length of warranty stated above from the date of retail purchase. If any products are found to have a manufacturing or material defect, the product will be replaced or repaired at the option of TrailFX and Keystone Automotive Operations Inc. with proof of purchase by the original purchaser. The original purchaser shall pay all transportation and shipping costs associated with the return of the defective product and the defective product shall become the property of Keystone Automotive Operations Inc.

The Warranty applies to Keystone Automotive Operations Inc. products used for individual and recreational purposes. Commercial usage of the Keystone Automotive Operations Inc. products limits the warranty to 90-days from date of purchase.

The Warranty applies only to Keystone Automotive Operations Inc. products which are found to be defective in manufacturing or material. This warranty does not apply to normal wear and tear of the finish placed on Keystone Automotive Operations Inc. products.

TrailFX and Keystone Automotive Operations Inc. are not responsible for any labor costs incurred for removal or replacement of the defective product.

TrailFX and Keystone Automotive Operations Inc. are not responsible for repair or replacement of any product under the limited warranty where the product was improperly installed, misapplied, altered, abused, neglected, overloaded, misused or damaged as a result of an accident, including any use of the product not in accordance with all product operating and safety instructions.

Without limiting the generality of the foregoing, TrailFX and Keystone Automotive Operations Inc. shall under no circumstances be liable for any incidental or consequential loss or damage whatsoever arising out of, or in any way relating to any such breach of warranty or claimed defect in, or non-performance of the products. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you.

This limited warranty gives you specific legal rights, and you may also have other rights that vary from state to state.