### MAINTENANCE/CARE

• Periodically check and tighten all fasteners.

 Stripped, fractured, or bent bolts or nuts need to be replaced.

 After washing of the vehicle make sure to fully dry all surfaces

## SENSOR DISCLAIMER

PLEASE NOTE PARKING SENSORS ARE EXTREMELY DELICATE AND MUST BE HANDLED WITH CARE!

Do NOT touch or shift the clear rubber grommet that surrounds the sensor face. DO NOT glue housing into place until orientation and functionality is determined.

## APPENDIX

#### **Troubleshooting Vehicle Sensors**

- Start with a general inspection of the sensor fitment. Check that both the sensors and the sensor clips are fully secure and the sensors are properly centered in the housing.
- Confirm plastic housing is in the correct mounting holes. Misplaced sensor housings could compress sensor and give false readings or faults.
- Use a clean microfiber to wipe the front face of the sensor.
- Inspect connection. Be sure that the sensor is firmly seated into the harness.
- Run through several start cycles (i.e. fully turn the vehicle on and off).
- Finally, disconnect the battery to reset the sensors.

### WARNING

If your vehicle has adaptive cruise, please ensure that your adaptive cruise is working correctly once the Ranch Hand bumper is installed. Adaptive cruise may need to be cleaned or adjusted to ensure it functions properly. See your owner's manual for care of the adaptive cruise.

Special care should be exercised in the handling, storage and installation of Kaspar Ranch Hand equipment. The actual weight of each piece of equipment will vary depending on style and model. The weight of the equipment is sufficient in volume to warrant special care, assistance and in some instances, the use of mechanical equipment during the transfer and installation of the equipment. Do not assume a position directly under the equipment during installation. Be sure the equipment has been connected and stabilized during installation to prevent falling or shifting of positions. Periodically check tightness of bolts to make sure they are tight, and unlikely to fail.

## SAFETY

- In order to help you make informed decisions about safety, we have provided installation instructions and other information.
- These instructions alert you to potential injury hazards
  Please do a job safety analysis before each task to identify potential hazards for your situation and remove/protect against them.
- You must use your own good judgment.
- Read and understand all safety precautions and instructions before installing this product

### HAZARD

FAILURE TO OBSERVE THESE INSTRUCTIONS COULD LEAD TO SEVERE INJURY OR DEATH.

- Always remove jewelry and wear eye protection.
- Always use extreme caution when jacking up a vehicle for work. Set emergency brake and use tire blocks. Locate and use the vehicle manufacturers designated lifting points. Use jack stands.
- Always use appropriate and adequate care in lifting components into place.
- Always insure components will remain secure during installation and operation.
- Always wear safety glasses when installing this kit. A drilling operation will cause flying metal chips. Flying chips can cause serious eye injury.
- Always use extreme caution when drilling on a vehicle. Thoroughly inspect the area to be drilled (on both sides of material) prior to drilling, and relocate any objects that may be damaged.
- Always use extreme caution when cutting and trimming during fitting.
- Always tighten all nuts and bolts securely per installation instructions.
- Always route electrical cables carefully. Avoid moving parts, components that become hot and rough or sharp edges.
- Always insulate and protect all exposed wiring and electrical terminals.
- Always perform regular inspections and maintenance on mounts and related hardware.



# INSTALLATION INSTRUCTIONS

### DESCRIPTION

2010-Up Dodge Ram 2500 & 3500 Legend Grille Guard

## PART #: GGDIØIBL1/PBDIØIBL1



## **INSTALLATION INSTRUCTIONS:**

- 1. On the back side of the airdam, find the center. There should be a line that runs down the center.
- Measure out from the center and mark a vertical line at 19 1/4" then at 21 1/2". Measure up from the bottom of the airdam 2" (will be at the bend). Measure down 3/4" and mark a horizontal line. Then measure up 3/4" and mark a line. Use a utility knife to cut a rectangle slot in the airdam.
- 3. Remove the tow hooks by removing four 13mm bolts and 15mm nuts from each tow hook. They will be remounted during the grille guard install. (Note: You will need a long extension and a swivel to remove the tow inner nuts.)
- Install the mounting brackets with the offset towards the outside of the vehicle. Use four 7/16" x 1 1/2" bolts to install each bracket. (Note: make sure the brackets are 40 1/8" apart or less).
- Remove the two 18mm factory bumper nuts from the side of the frame. Place three washers over each bolt and install the bottom brackets. Reinstall the factory nuts.
- Mount grille guard by using four 7/16" x 2" carriage bolts and flange nuts on each side. Place bolts through the upright, mounting bracket and then the tow hook, if present. (Note: Uprights go to the outside of the bracket.)
- 7. Tilt the grille guard as needed so that the loops follow the headlights. Tighten all the carriage bolts.
- 8. Use a 1/2" x 1 1/2" bolt to mount the bottom bracket to the upright strap.
- 9. Make sure all nuts and bolts are tight!!

# 2010-Up Dodge Ram 2500 & 3500 Legend Grille Guard GGD101BL1/PBD101BL1

## **TOOLS REQUIRED**

Metric and SAE sockets Metric and SAE wrenches



