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:

1. Check Kit Contents for accuracy.
2. Vehicle Preparation: Remove factory running boards and hardware (if applicable).
3. Start by locating the driver side running step. This can be accomplished by placing the largest step toward the front of the vehicle.
4. With the correct step placed on each side of the vehicle, please take note of where the brackets are located. Look under the vehicle and locate the factory supplied mounting positions. (Note: Some vehicles require the use of clips and nuts, which are supplied with the hardware kit.)
5. If your vehicle requires the use of clips, install them now. This requires the removal of a plastic body plug. Using a screwdriver, remove the plug and install one of the supplied clips.
6. Align the steps with the mounting holes and starting from the front use 1-M8-1.25 Bolt and 1-Fender washer for each mounting hole location and thread the bolts into the mounting holes. (Note: Some vehicles require the use of an additional nut and washer for the lower portion of the mounting bracket. The nuts and washers are supplied with the bolt kit.)
7. After final positioning, start at the front of the vehicle and tighten the lower part of the bracket to 15-20 ft./lbs. of torque. Continue this until all of the lower bolts have been tightened, then move to the top bolts and repeat the process.
8. Repeat for the passenger side. This concludes the installation.

1. Periodically check and tighten all fasteners.
2. Stripped, fractured, or bent bolts or nuts need to be replaced.
3. 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 faulty.
• 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.

PARTS LIST

NOT LISTED

TOOLS REQUIRED

• Metric and SAE sockets
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