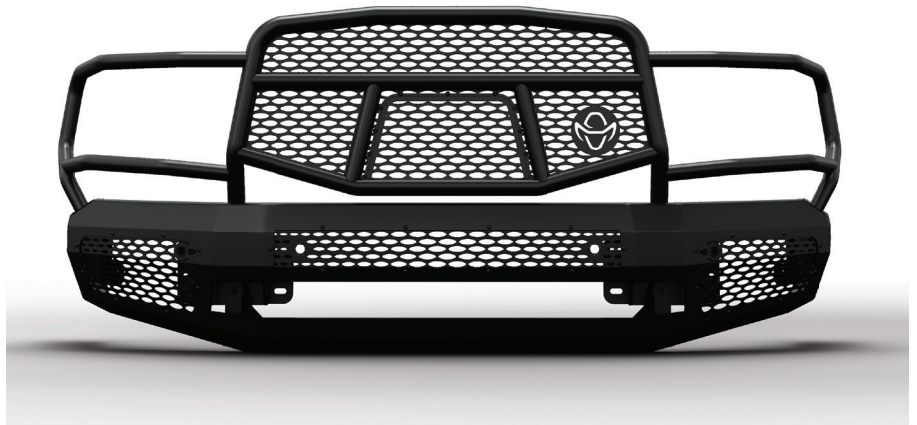


TOOLS REQUIRED

- Plastic panel pry tool
- 10mm socket
- 13mm socket
- 18mm socket
- 24mm socket
- 3/4" socket
- 7/16" socket
- 1/2" socket
- 24mm open end wrench
- 18mm open end wrench
- Zip-ties



Please read through the entire set of instructions before continuing with installation to familiarize yourself with the process, save time, and make sure that you have all the correct tools and parts needed to complete this installation. More detailed instructions can be found on our website.

DISASSEMBLY INSTRUCTIONS

1. Use the plastic panel pry tool to remove the four (4) ribbed shank push pins from the under-hood shroud. Remove the shroud.
2. Using the 10mm socket, then remove the four (4) screws holding the grille to the center support. Depending on the year model of the vehicle, there may be one (1) additional screw on either side of the grille. If so, remove the additional screws using the 10mm socket.
3. Once all the screws are removed, firmly pull outward from the top of the grille. This will release the push pins at the lower inside of the grille. Depending on the year and model of your vehicle, there could be two (2) or (4) push pins. Use the same process to remove both.
4. Now disconnect the two (2) electrical connectors inside the driver side of the bumper. To accomplish this, depress the tab and separate the two (2) pieces of each connector.
5. Using a 18mm socket and an 18mm open end wrench. Use these tools to remove the four (4) nuts per frame rail. These nuts hold the bumper shell to the frame horns.
6. Using the 13mm socket, remove the two (2) screws on either side of the intercooler that attach the intercooler supports to the frame rails.
7. With a 10mm socket, remove the four (4) screws holding the intercooler shroud to the front of the intercooler. Remove the shroud.
8. Now use a 13mm socket to loosen the clamps at the inlet and outlet of the intercooler. Remove the intercooler from the vehicle.
9. You will now remove the parking sensor from the bumper, but the sensor will remain within its harness. Using your plastic panel pry, begin by removing the strap by spreading it away from the tabs on the housing. Then, spread the housing itself and pull out on the sensor body. Last, pull the sensor housing out of the bumper from the front.
10. With an 18mm socket, remove the two (2) bolt strips per frame horn to remove the frame horns from the frame rails.
11. With a 24mm socket and 24mm open end wrench, remove the two (2) bolts per frame rail holding the underrun guards to the frame rail.

PREPPING THE MIDNIGHT FRONT BUMPER FOR INSTALLATION

To prepare for installation, begin by laying out the included components in the box. Each part required for installation is wrapped individually and should be accounted for along with the included checklist. Please inspect all parts of your new Ranch

Hand product before installing. If any parts are missing or damaged, please contact the Ranch Hand Customer Service Team, customerservice@ranchhand.com, immediately before proceeding with installation.

1. Begin by taking the bumper out of the box and position the bumper on the ground, just as it would sit on your truck/SUV.
2. Locate the passenger and driver side fog light inserts and fog light brackets. *Note: These must be installed at the same time as they share two of the provided bolts, washers, and bolt locations.
3. Place the fog light insert through the back of the bumper. Using a 5/32" Allen wrench, Allen key, or hex key and 7/16" wrench secure the two bottom and two outer edge holes with the provided 1/4" socket button head bolts and Keps nut.
4. Place the fog light bracket in position over the fog light insert. Secure both the fog light inserts and bracket to the bumper using the 1/4" socket button head bolts and Keps nuts (8x per side).
5. Repeat this step for both the passenger and driver side of the bumper.
6. Place the center fog light insert, from the inside, in the middle of the bumper and begin securing the 1/4" socket button head bolts and Keps nuts. Secure eight of the holes, leaving the center bottom two holes as is without bolts. These will be used to attach the license plate later.
7. Place the removable camera insert on the grille guard from the inside and attach with the 1/4" socket button head bolts and Keps nuts. *Note: If your vehicle comes equipped with a front mounted camera please skip this step.

FOR VEHICLES WITH SENSORS

1. If your vehicle has OEM front parking sensors, carefully remove the sensors from the OEM bumper.
2. Carefully knockout the sensor holes located on the fog inserts so the proper diameter sensor hole is achieved. Do this for the two knockouts located on the bumper as well. If your bumper did not include knockouts on the bumper body, drill the sensor holes (1.25 inch Diameter) per the provided sensor location drawing.
3. Using the grommets provided in the included bolt pack, reinstall the OEM sensors. Place the grommet inside the hole directly on the insert. Once it is in place, apply WD-40 around the inside of the grommet to help guide the sensor into place without damaging it. Push the sensor through the grommet from the back side of the insert.
4. Take the sensor pigtail/wires that were removed from the OEM bumper and route the wiring harness from sensor to sensor on the bumper. Route the wires through the mounting bracket using the holes located on the sides of both brackets. Be sure to avoid leaving the wiring harness on top of the bracket.
5. If using the OEM fog lights, use the provided OEM fog light mounting bracket (specific to your vehicle) and bolt it directly into the light pod mount.
6. Any and all aftermarket products that you plan to attach to the bumper, including lightbars, should be installed at this time for ease of installation.

INSTALLING THE MIDNIGHT FRONT BUMPER

Refer to the provided schematic diagram that indicates proper placement of bolts and their locations. The following steps are recommended to be performed with at least one partner; we recommend having two partners to assist. One to help hold the bumper in place and the other to guide the bolts through the brackets and into the frame.

1. With one person supporting each side, line the bumper's mounting plate up with the mounting bracket. A third person should be underneath the vehicle to temporarily tighten each of the bolts to secure the bumper to the mounting bracket per mounting diagram.
2. With two people still supporting each side of the bumper, adjust the bumper so that there is an even amount of space along the grille, the headlights, and all the way across the front of the truck. Once the bumper is in place, continue by tightening all the mounting hardware.
3. Reconnect any OEM wiring harnesses disconnected when removing the OEM bumper. This includes fog light wiring harnesses or sensor wiring harnesses. All must be plugged back into OEM location on truck. It may be necessary to use zip ties to secure loose wiring.

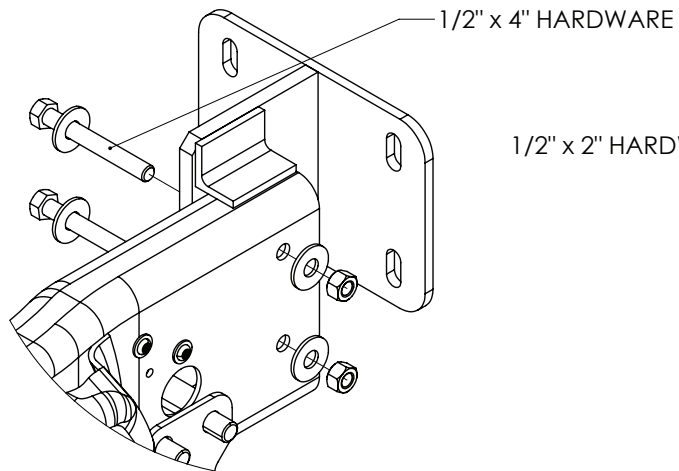
ADA INSTALLATION

1. See packing list to identify ADA for installation.
2. Have one person hold the ADA bar in place while the other places bolts through the bolt holes and hand tighten the nuts (very similar to step 1 above titled, "Installing the Midnight Front Bumper). DO NOT over-tighten the bolts, otherwise step 2 will become difficult.
3. Adjust the placement of the ADA until it is flush and aligned with the rest of the bumper. Once in place, firmly tighten the bolts.

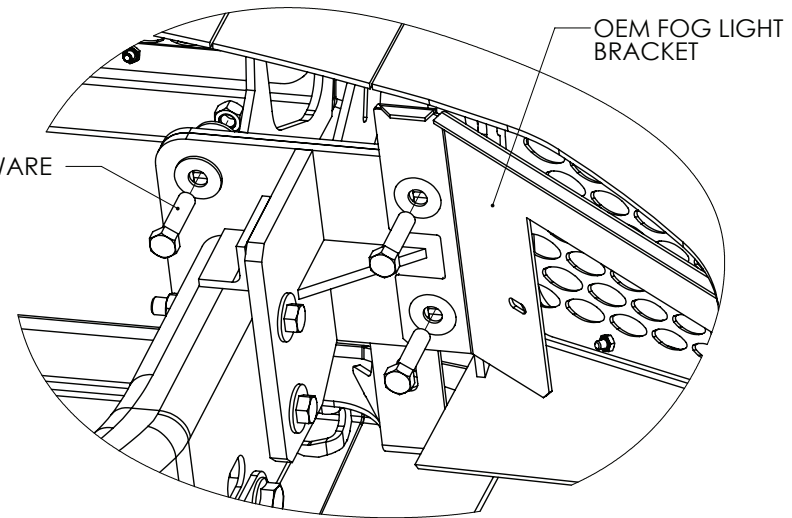
Note: If installing a winch tray (packaged/sold separately), do not install the ADA bar and please refer to the winch installation instructions at this time.

LICENSE PLATE BRACKET INSTALLATION

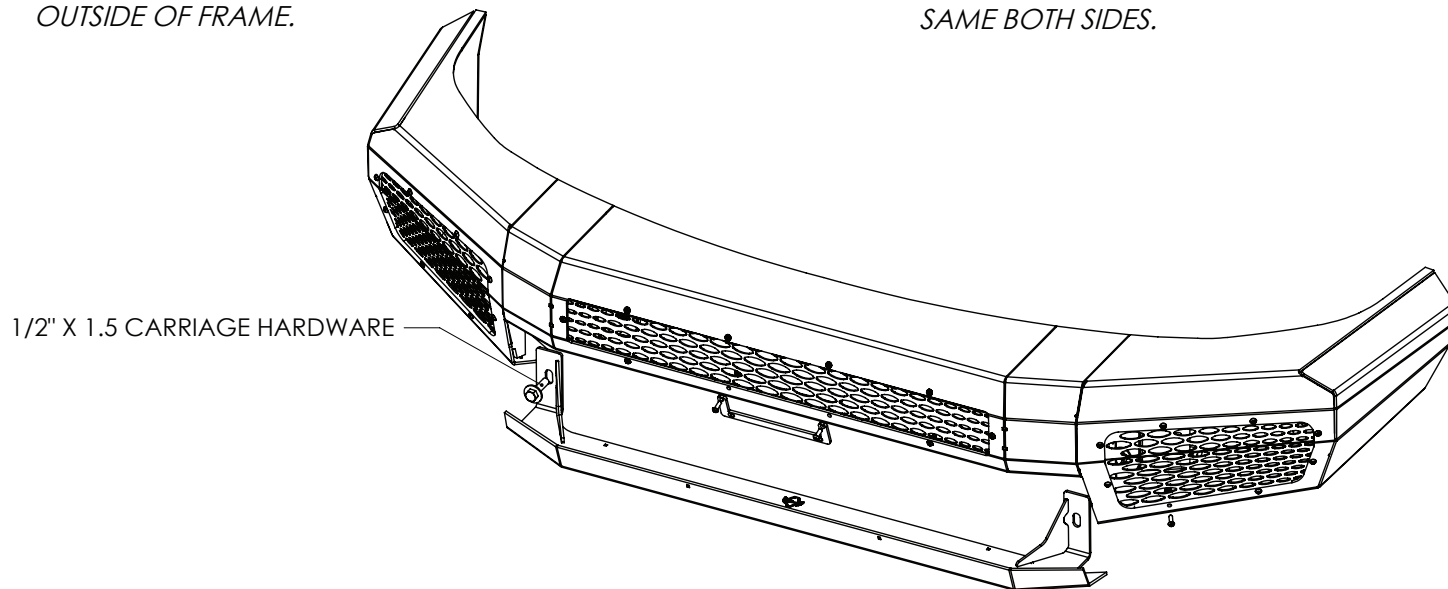
1. Retrieve the U-shaped license plate bracket as well as the four ¼" socket button head bolts and Keps nuts.
2. Attach the top of the U-bracket to the grille guard using the two ¼" socket button head bolts and Keps nuts.
3. Attach the license plate to the bottom of the U-bracket using the two ¼" socket button head bolts and Keps nuts.
4. Check and tighten all mounting fasteners.

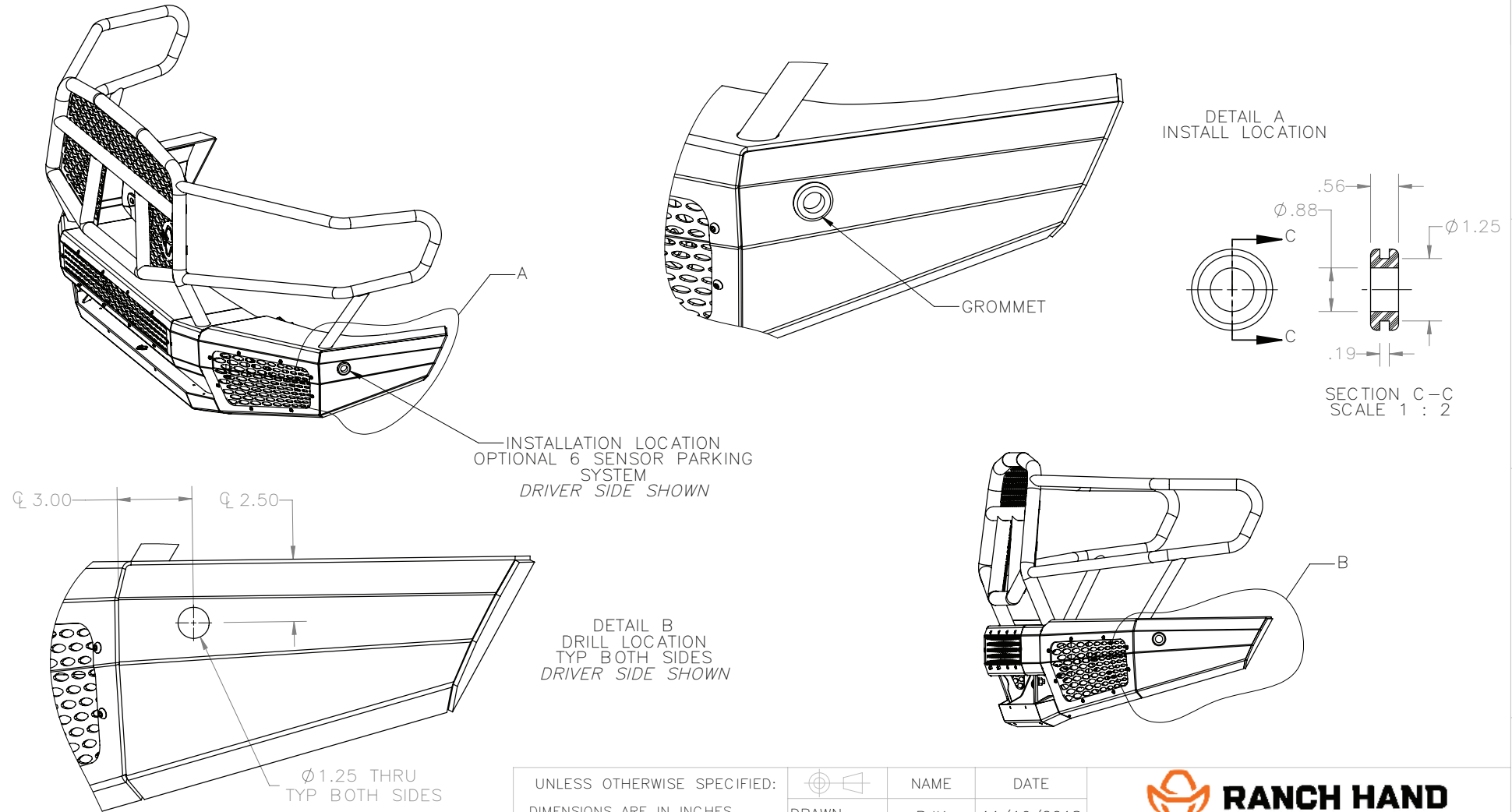


*DRIVER FRAME MOUNT SHOWN.
NOTE ORIENTATION OF PLATE TO
OUTSIDE OF FRAME.*



*PASSENGER BUMPER MOUNTING CONFIG SHOWN.
SAME BOTH SIDES.*





INSTALLATION LOCATION
OPTIONAL 6 SENSOR PARKING
SYSTEM
DRIVER SIDE SHOWN

DETAIL B
DRILL LOCATION
TYP BOTH SIDES
DRIVER SIDE SHOWN



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES PER ASME Y14.5M ANGULAR: MACH ± .5° BEND ± 1° TWO PLACE DECIMAL ± .06 THREE PLACE DECIMAL ± .03 PROPRIETARY AND CONFIDENTIAL THE INFORMATION CONTAINED IN THIS DRAWING IS THE SOLE PROPERTY OF KASPAR RANCH HAND. ANY REPRODUCTION IN PART OR AS A WHOLE WITHOUT THE WRITTEN PERMISSION OF KASPAR RANCH HAND IS PROHIBITED.		NAME	DATE	RANCH HAND TITLE ADDITIONAL SENSOR LOCATION RAM 1500 6 SENSOR PACKAGE SIZE DWG NO MFD19HNBL1 REV A01 DO NOT SCALE DRAWING SHEET 1 OF 1
	DRAWN	BJK	11/19/2018	
	CHECKED	BJK	05/04/2020	
	ENG APPR.	BJK	05/04/2020	
MATERIAL	See BOM			
WEIGHT (LBS.)	183.46			

MFD101BM1/ MFD101BMN