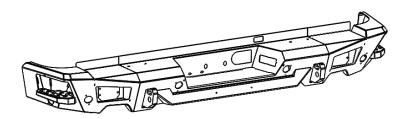
GORHINO

INSTALLATION INSTRUCTIONS

PART NO.

28130T



PRODUCT DESCRIPTION:

BR20 BUMPER REPLACEMENT

APPLICATION:

RAM 1500

PRODUCT SAFETY & LEGAL DISCLAIMER

- IMPORTANT READ ALL INSTRUCTIONS CAREFULLY BEFORE INSTALLING, FAILURE TO DO SO MAY CAUSE PERSONAL INJURY OR DAMAGE TO PRODUCT AND/OR PROPERTY.
- **Review the product package and contents prior to beginning the installation.** Take care when opening the packaging and removing items. If a return is needed you will want to return the product in its original packaging if possible.
- This instruction guide is provided as a GENERAL installation guide, some vehicles vary dimensionally and may require additional steps.
- Test fit the product on the vehicle prior to any third party modifications and or finishing. The manufacturer and/or distributors do not accept responsibility for third party charges, labor and or third part replacement modifications. Some modifications may void the factory warranty.
- Exercise due-diligence when installing this product. The manufacturer and distributors of this product do not accept any responsibility for vehicle damage or personal injury resulting from the installation of this product. Careless installation and operation can result in serious injury or equipment damage.
- This product is for general off-road use. All liability for installation and use rests with the owner/operator.
- INSTALLER: Once installation is complete, please return this guide along with other documentation included in this product back to the consumer for future reference. The manufacturer/distributors of this product do not guarantee this particular version will be available at a later date.

WARNING: Cancer and Reproductive Harm—www.P65Warnings.ca.gov

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INJURY HAZARD

Please complete a shop and tool inspection prior to beginning the installation.

- Always make sure you have a clean, dry and well lit work area.
- Always remove jewelry, loose fitting clothing and wear protective gloves and eye protection.
- Always use extreme caution when jacking or raising a vehicle for work. Set the emergency brake and use tire/wheel blocks and jack stands. Refer to the vehicle manufacturer hand book. Utilize the vehicle manufacturers designated lifting points.
- Always use appropriate and adequate care in lifting parts during disassembly and installation. Seek help in lifting heavy or large items into place. Utilize jacks and or lifting devices when available.
- Always insure products are secure during disassembly and installation.
- Always wear eye protection and take steps to protect any exposed skin during the installations. Drilling, cutting and grinding plastic and metal may create flying particles that can cause injury.
- Always use extreme caution when drilling, cutting and or grinding on a vehicle. Thoroughly
 inspect the area to be drilled, on both sides of material, prior to modification and relocate any
 objects that may become damaged.
- Always assemble and tighten all fasteners per the installation instructions.
- Always route electrical cables carefully. Avoid moving parts, parts that may become hot and rough or sharp edges.
- Always insulate and protect all exposed wiring and electrical connections.

MAINTENANCE AND CARE

- Always perform regular inspections and maintenance on mounts and related fasteners.
- Periodically check and tighten all fasteners.
- Stripped, fractured, or bent fasteners must be replaced.
- After washing the vehicle make sure to fully dry all surfaces.
- In areas with cold temperatures make sure to wash the product often to remove harmful materials used on road ways.
- Never use abrasive cleaners or polish compounds. Clean with a gentle soap and water. If you use wax use a non-abrasive automotive wax such as pure carnauba wax.

WARNING

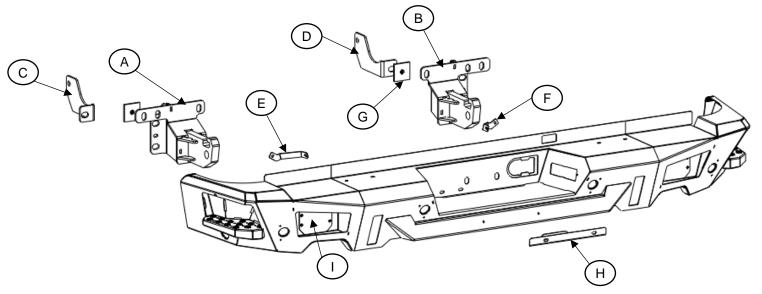
Some products have been designed to work together with factory rear sensor systems, factory forward facing sensor systems and factory air bags.

- Installation of some of these products may alter the factory sensor system performance.
- Factory sensors may read shackles or hooks protruding from the fairlead and or tow hooks.
- All sensor testing is completed by Go Rhino Products and or third party testing labs on modified vehicles.
- Sensor sensitivity, factory sensor housing, orientation, and operating conditions are all variables that will influence functionality of the sensors.
- Installation of some product may effect the factory air bag systems.
- Some products allow the use of third party products such as winches, shackles, hooks, etc. Follow the respective manufacturers operating instructions for use with our products.
- Make sure to fully understand the product, it's intended use and operation prior to use.
- Above all... be safe!



PARTS INCLUDED IN THIS LIST:

ITEM	QTY.	DESCRIPTION	ITEM	QTY.	DESCRIPTION	ITEM	QTY.	DESCRIPTION
Α	1	Frame Bracket (driver)	J	6	Sensor plates (pre-installed)	S	2	1/4 x 3/4" Carriage Bolt
В	1	Frame Bracket (passenger)	К	6	½ x 1 ½" Carriage Bolt	Т	2	1/4 x 3/4" Hex Bolt
С	1	Auxiliary Bracket (driver)	L	8	½ x 1 ½" Hex Bolt	U	4	½" Flat Washer
D	1	Auxiliary Bracket (passenger)	М	18	½" Flat Washer	V	2	1/4" Lock Washer
Е	1	Light Bracket (driver)	N	14	1/2" Lock Washer	W	2	1/4" Hex Nut
F	1	Light Bracket (passenger)	0	11	½" Hex Nut	х	2	1/4" Lock Nut
G	2	Nut plate	Р	2	1/4 x 3/4" Hex Bolt	Υ	2	Zip-Tie
Н	1	License Plate Bracket	Q	2	1/4" Flat Washer			
I	2	Light Pods Plates (pre-installed)	R	2	1/4" Lock Nut			



Go Rhino recommends you, the installer, read this installation instruction manual from front to back before installing the product. You may also <u>click here</u> to view an installation video or visit http://www.gorhino.com/Installation-Videos.

TOOLS NEEDED FOR INSTALLATION:

- 3/4" Socket & Wrench
- 9/16" Socket & Wrench
- 8, 10, 12 & 18mm Socket
- Ratchet & Extension

ESTIMATED TIME FOR INSTALLATION:

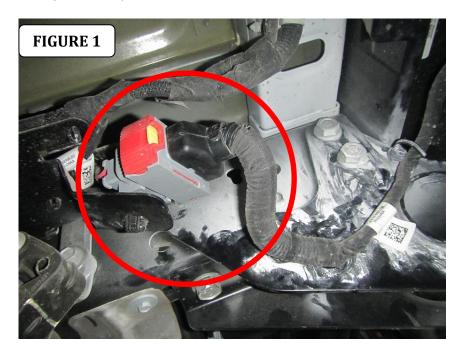
1.5 Hour

If you need installation service for your new product, call the authorized distributor from whom you purchased the product or an authorized installation service company which can be found by calling toll free 1-888-427-4466

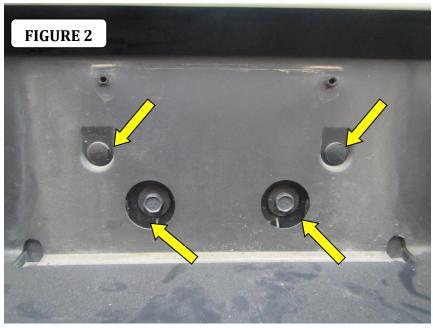


OEM Bumper Removal

Step-1 From under the vehicle, on the driver side, disconnect the bumper wiring harness from the vehicle wiring harness (FIGURE 1).

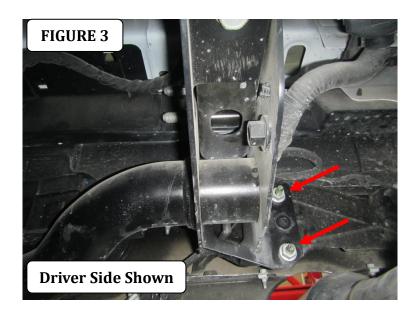


Step-2 Remove the license plate then remove (2) screws securing the rear bumper, and the (2) plastic clips (FIGURE 2).





Step-3 From underneath on each side of the vehicle, using a 18mm socket remove (2) nuts securing the OEM bumper, (FIGURE 3). Remove the OEM bumper from vehicle.

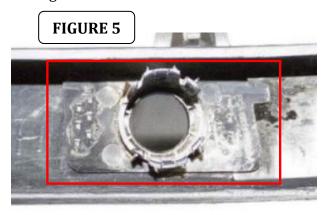


Step-4 Remove the key sensor from the OEM bumper. Release the two fasteners from the support by squeezing their tabs. Unplug the key sensor. Figure 4.





Step-5 Remove each parking sensor from the plastic bezel by gently spreading the bezel tabs and pulling out on the back of the sensor. Figure 5. Note: Do not push on the front of the sensor as this may damage it.

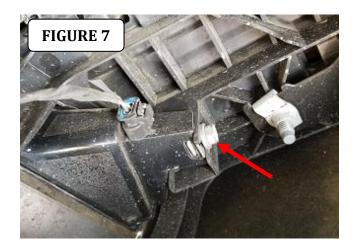




Step-6 Remove the parking sensor bezels from the OEM bumper by using a cutting knife to cut carefully the plastic welds holding the parking sensor bezel. Figure 6. NOTE: The sensors have to be positioned in the bumper replacement in the same location (inner and outer), (driver and passenger) as removed from the OEM bumper.

Step-7 Unplug the wiring connector on the back side of the OEM bumper for the trailer plug, and remove the trailer plug from the OEM bumper by pressing in the tabs on the back side of the trailer plug and pushing it out from the front of the bumper.

Step-8 Remove the license tag lights by loosening the bolt that holds the tag light using a 10mm socket. Figure 7. Unplug the wiring connector. NOTE: You will use the bolt removed later.



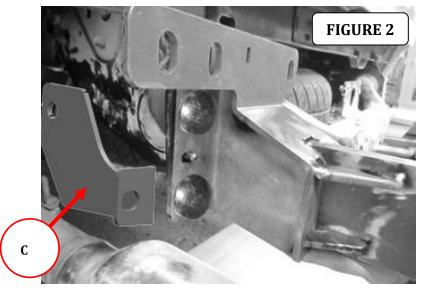


BR20.5 Bumper Installation

Step-1 Install the driver side frame bracket by positioning the bracket up to the end of the receiver hitch member plate, align the upper hole and secure using (1) $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " carriage bolt, (1) $\frac{1}{2}$ " flat washer, (1) $\frac{1}{2}$ " lock washer and (1) $\frac{1}{2}$ " hex nut. Leave the nut loose for final adjustment. Figure 1.

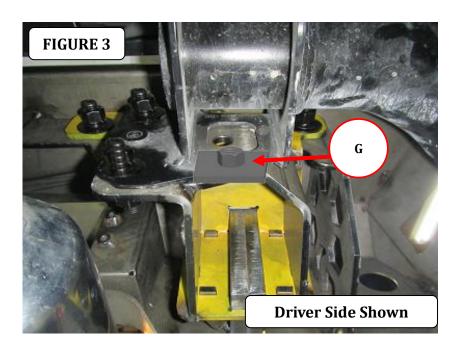


Step-2 Place the auxiliary bracket by positioning the bracket against the bracket of the receiver hitch, align the holes and secure to the receiver hitch bracket using (1) $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " hex bolt, (1) $\frac{1}{2}$ " flat washer, (1) $\frac{1}{2}$ " lock washer. Secure to the lower bolt on the frame bracket using (1) $\frac{1}{2}$ " flat washer, (1) $\frac{1}{2}$ " lock washer and (1) $\frac{1}{2}$ " hex nut. Leave the bolt and nut loose for final adjustment. Figure 2. **NOTE:** On passenger side use (1) $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " hex bolt, (1) $\frac{1}{2}$ " flat washer, (1) $\frac{1}{2}$ " lock washer and (1) $\frac{1}{2}$ " hex nut to attach the auxiliary bracket to the receiver hitch bracket.



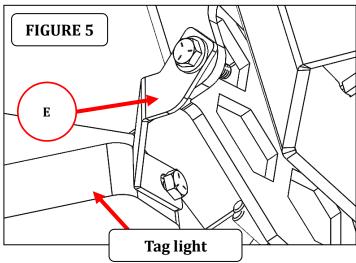


Step-3 Attach the nut plate by introducing at the back of the receiver hitch support, alinee the nut and secure using (1) $\frac{1}{2}$ " x 1 $\frac{1}{2}$ " hex bolt, (1) $\frac{1}{2}$ " flat washer, (1) $\frac{1}{2}$ " lock washer. Leave the bolt loose for final adjustment. Figure 3.



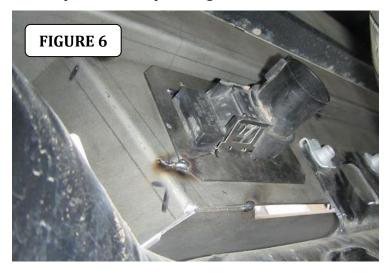
Step-4 Install in the driver side the tag light housing by positioning the housing through the slot in the BR20.5 bumper, figure 4. Secure the housing to the bumper using the tag light bracket with (1) $\frac{1}{4}$ " x $\frac{3}{4}$ " hex bolt, (1) $\frac{1}{4}$ " flat washer and (1) $\frac{1}{4}$ " lock nut, and the bracket to the housing with the factory bolt previously removed. Figure 5. Tighten the bolts. Repeat for the passenger side tag light housing.







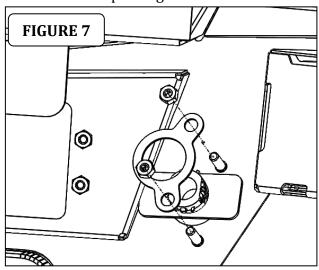
Step-5 From the front of the BR20.5 bumper, install the trailer plug by pressing it into its precut hole in the bumper until the metal clips move into place, figure 6.



Step-6 Remove the (6) plastic plugs from the sensor bezel plates that are preinstalled in the BR20.5 bumper.

Step-7 Aline each sensor bezel in the BR20.5 sensor openings, attach to the rear of the BR5.5 bumper using the sensor bezel plates, (2) ¼" lock washers and (2) ¼" lock nuts. Figure 7. **Note:** The Park Assist sensors and bezels have to be installed in the BR20.5 bumper replacement in the same position as removed from the OEM bumper. If necessary you will have to trim the parking sensor bezel to ensure the same position as they came off the OEM bumper.

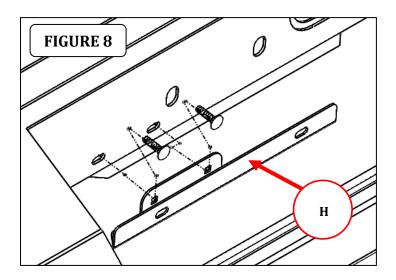
Step-8 Install the parking sensors in the sensor bezels and transfer the OEM bumper wiring harness to the BR20.5 bumper and re-connect to the parking sensors.

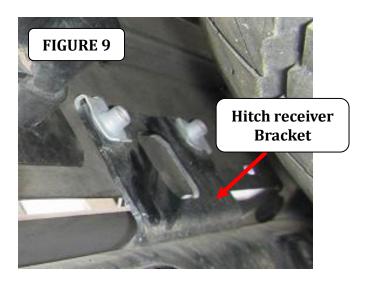




Step-9 If your state law requires a rear license plate, attach the license plate bracket to the holes in the face of the bumper shell using (2) $\frac{1}{4}$ x $\frac{3}{4}$ " carriage bolt, (2) $\frac{1}{4}$ " flat washers and (2) $\frac{1}{4}$ " lock nuts. Figure 8.

Step-10 Use the zip-ties to secure the key sensor to the hitch receiver bracket. Figure 9.





Step-11 With assistance lift the BR20.5 bumper up to the vehicle, and position the bumper so the driver and passenger side frame bracket D-Shackle mounts protrude out through the rectangular openings in the bumper.

Step-12 Align the holes and attach the frame brackets using (3) $\frac{1}{2}$ " x 1- $\frac{1}{2}$ " carriage bolts, (3) $\frac{1}{2}$ " flat washers, (3) $\frac{1}{2}$ " lock washers and (3) $\frac{1}{2}$ " Hex nuts, figure 10. Leave the nuts and bolts loose for final adjustment.





Step-13 Attach the center of the BR20.5 bumper to the receiver hitch using the (2) OEM bolts removed in step 4 of the OEM bumper removal, figure11.

Step-14 Reconnect the wiring connecter to the trailer plug, and the bumper wiring harness connector to the vehicle wiring harness connector.



Step-15 Align the BR20.5 bumper with the vehicle, verify that the tailgate clears the top of the bumper replacement when lowered, then tighten all nuts and bolts.





LIMITED WARRANTY

Go Rhino warrants to Buyer that for a period of five (5) years from the date of shipment of the product(s) ("Warranty Period") for black finishes and chrome finishes, that such products will materially conform to the specifications set forth in Go Rhino's specifications in effect as of the date of shipment(s) and will be free from material defects in material workmanship.

Go Rhino warrants to Buyer that for the life of the product(s) from the date of shipment of the product(s) ("Warranty Period") for polished stainless steel finished products purchased after April 2004, that such products will materially conform to the specifications set forth in Go Rhino's specifications in effect as of the date of shipments and will be free from material defects in material workmanship.

Warranty claims must be accompanied with the original invoice and photos of the product. It is the customer's responsibility to clean regularly and protect finish with regular applications of a nonabrasive polish that is compatible with the product's finish.

This warranty covers the cost of the product only and does not include the cost of removal, installation, third party modifications or shipping of the product. In no event shall Go Rhino be liable to buyer or any third party for any damage or harm caused by the product or use thereof, regardless of whether such damages were foreseeable and whether or not Go Rhino has been advised of the possibility of such damages, not withstanding the failure of any agreed or other remedy of its essential purpose. This warranty is void if the product shows signs of alteration, misuse, mishandling, improper care, neglect, improper application and/or damage due to improper installation.

With respect to any such product(s) during the limited warranty period, Go Rhino shall, in its sole discretion, either: (i) provide a one-time repair or replacement of such products (or the defective part) or (ii) credit or refund the price of such products at the pro rata contract rate provided that, if Go Rhino so requests, Buyer shall, at Go Rhino's expense, return such product(s) to Go Rhino. The remedies shall be the Buyer's sole and exclusive remedy and Go Rhino's entire liability for any breach of the limited warrant(ies).

Go Rhino disclaims all other warranties except to the extent that any such warranty cannot be validly disclaimed under applicable law.

Finish Limited Warranty:

Limited lifetime on stainless steel products (after April 2004) 5 year warranty on black powder coat products 5 year warranty on chrome products
This warranty does not cover exposed welds

Finish warranty covers peeling, flaking, or cracking. Washing all finishes regularly with car wash soap and rinsing well with water is the best method for maintaining the finish on your products. You must also protect the finish with nonabrasive automotive wax on a regular basis. The use of any compound which contains abrasives becomes a self-defeating exercise as the compound scratches the finish and opens it to corrosion. The use of harsh chemicals used to remove bugs and tar may also cause the finish to fail and should be avoided.

If you are unsatisfied with your purchase please contact the establishment you purchased the product from.

If you need to place a warranty claim or need assistance, the Go Rhino customer service team will answer any questions you may have. Please contact the Go Rhino customer service team at 1-888-427-4466 during normal business hours Monday thru Friday 7 am to 5 pm PST. You may also email warranty@gorhino.com. In order to better serve you please provide a copy of the original invoice / receipt, a photo of the issue you are experiencing and a photo of the vehicle the product is installed on.

All warranty returns must have an approved RGA number. The RGA number must be clearly marked on the exterior of the return package. All approved warranty returns must be shipped to Go Rhino Products, 810 Nafta Blvd Laredo, TX 78045

PRODUCT REGISTRATION

Please remember to register your new purchase. You may register your product at www.gorhino.com. Registering your product may help speed any future warranty or customer service inquiries.

Thank you again for purchasing from Go Rhino Products

Please take a few minutes to view additional products for your vehicle and more at GORHINO.com These installation instructions are available on the Go Rhino web site along with installation videos for many of our products.

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