Step 1 Vanguard Rear Bumper Install Instructions



Step by step on how to install the JCR Offroad Vanguard Rear Bumper for the Jeep Wrangler JL. Please read all steps carefully before starting the install.
Installation Video: https://youtu.be/MEBJ7_PTUOQ
Questions or Support: Phone: 269-353-1184 Email: info@jcroffroad.com

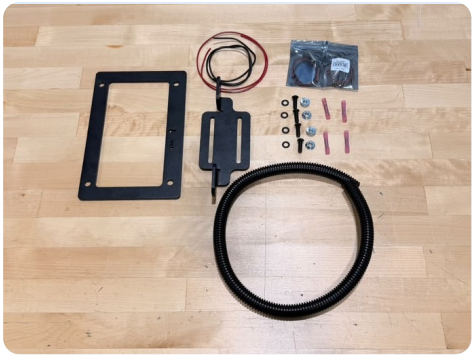
Step 2 Included Parts



Included: (1) JCR Offroad Vanguard Rear Bumper for the Jeep Wrangler JL, (2) nut plates, (1) spindle stiffening bracket with spacer, (4) backup sensor hole plugs, (2) spindle sleeve caps, and mounting hardware.

Step 3 Included Hardware





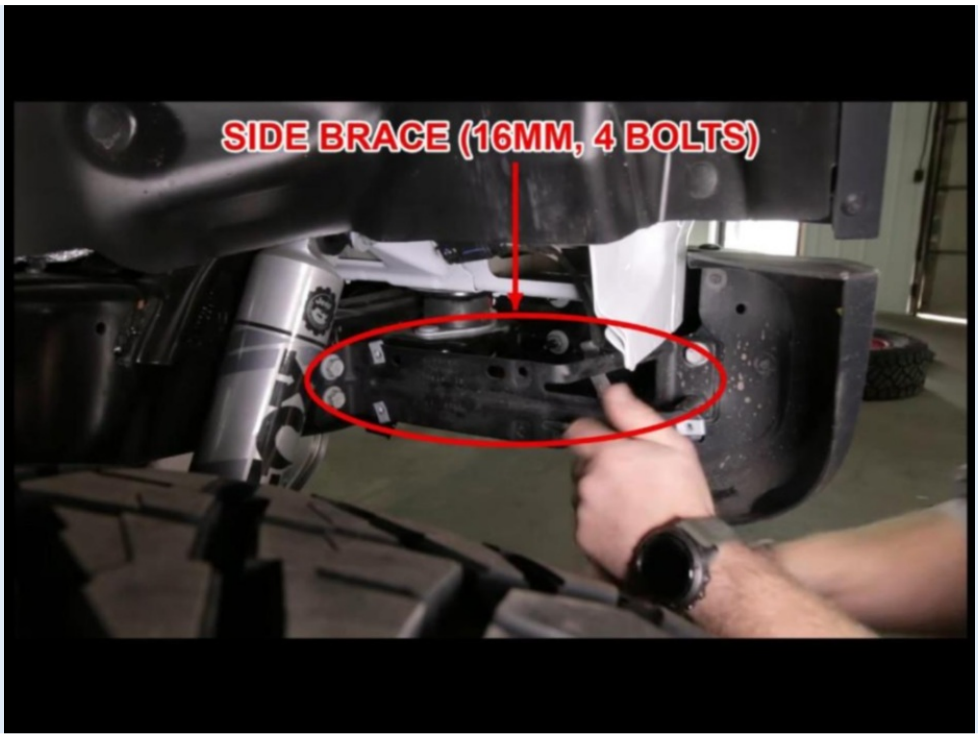
Hardware includes: large fine thread metric bolts (8.8 stamped on the head) with washers, 1/2" coarse thread bolts (three hash marks on the head) with washers, (2) 7/16" bolts with washers and flange nuts, and (2) 3/8" bolts (about 1" long) with washers and flange nuts. Only use the supplied hardware with the nut plates.
RUBICON USES 2 FINE THREAD ON THE DRIVER SIDE BOTTOM INSTEAD OF NUT STRIPS & COARSE THREAD BOLTS

Step 4 Remove Plastic Mud Guards



Remove the plastic mud guard behind the rear tire using an 8mm (or 5/16") socket. There are three bolts: one on the outside and two on the inside. Repeat on the opposite side. Video timestamp: 0:40

Step 5 Remove Side Braces



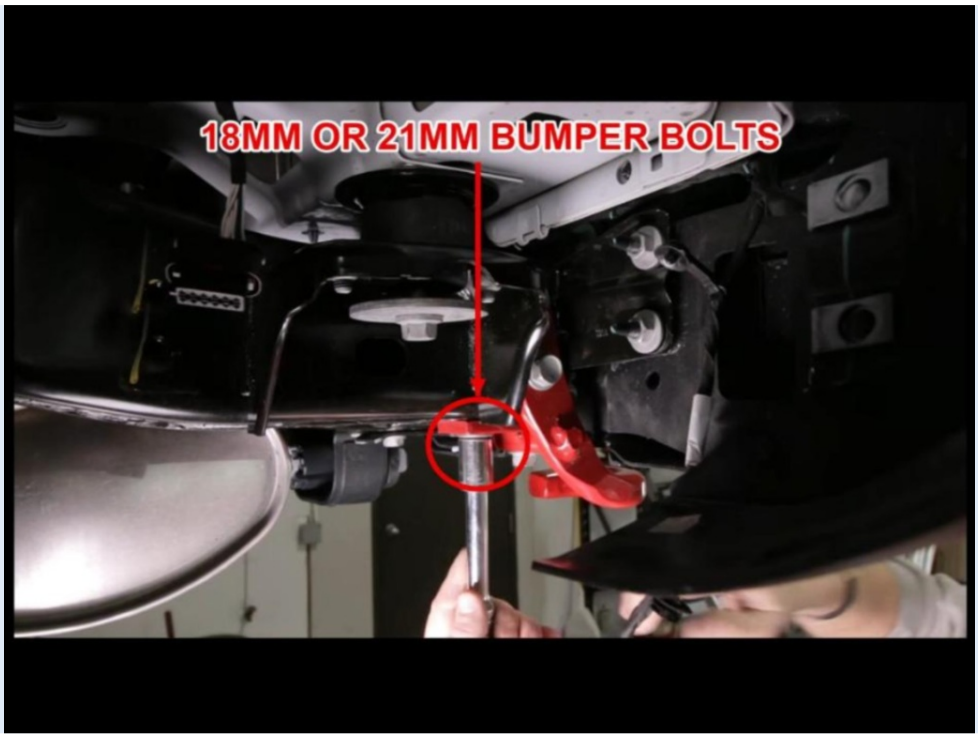
Remove the side brace using a 16mm socket. There are four bolts: two on the bumper and two on the frame. Pull the brace off; it will not be reused. Repeat on the opposite side. Video timestamp: 1:00

Step 6 Disconnect Sensor Wiring



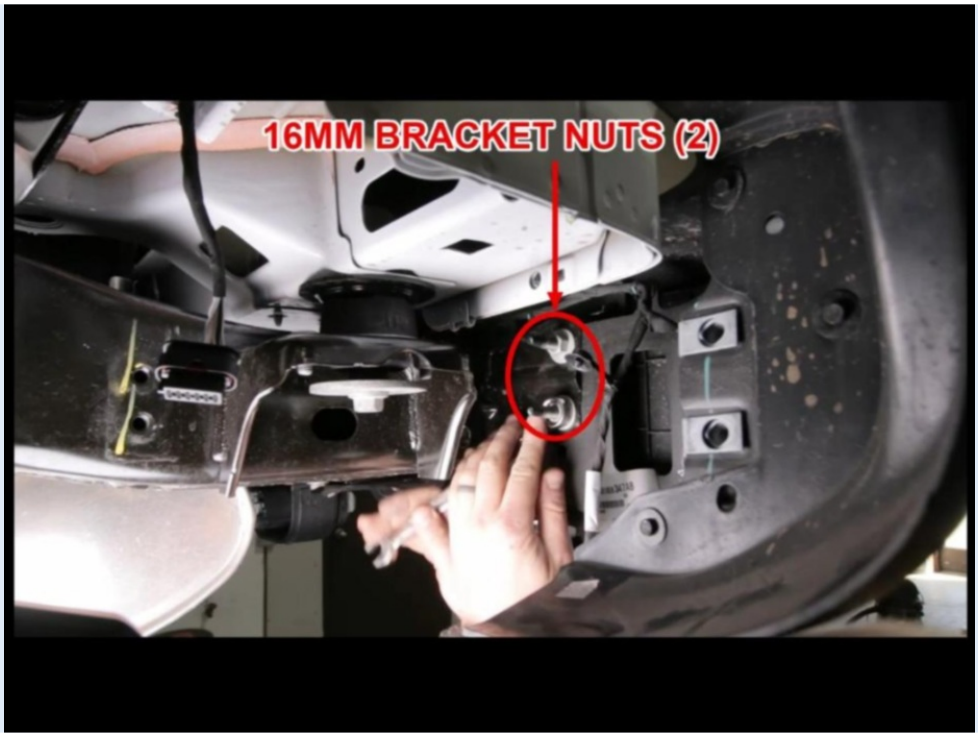
Driver side only (if equipped with backup sensors): pop the connector off the body, then pop the second connector off. There is one more in the back that can be done now or once the bumper is looser. To separate a connector, use a pick or small screwdriver to push the gray lock out, push it down and pull the connector apart. Video timestamp: 1:25

Step 7 Remove Factory Bumper Bolts



With a tow hook: two bolts on the side and two on the bottom on the driver side, and two bolts on the side on the passenger side. Without a tow hook: two bolts on the side on each side. These use an 18mm socket, but some may be 21mm, so have both ready. Repeat on the other side. Video timestamp: 2:05

Step 8 Remove Factory Frame Brackets



The factory brackets are indexed into the frame, so remove them entirely to make the install easier. Use a 16mm end wrench to remove the two nuts on each side. Video timestamp: 2:45

Step 9 Remove Crossmember Bolts



Once all of the frame bolts are removed on each side, remove the crossmember bolt on each side (one per side) with a 16mm socket. Video timestamp: 3:00

Step 10 Remove Factory Bumper



Once everything is loosened up, pull the factory bumper all the way off the Jeep. Video timestamp: 3:20

Step 11 Disconnect Sensor Connectors



If your Jeep has backup sensors, they need to be removed from the factory bumper. On each connector, pry the gray clip backwards with a pick or screwdriver until it opens, press the clip toward the wiring and pull the connector off. Do this for all four backup sensors and the license plate light. Video timestamp: 3:35

Step 12 Remove Wiring Harness



Use a trim tool or flat blade screwdriver to pop all of the Christmas tree type fasteners out along the whole bumper and remove the wiring harness. Keep the harness; it will be reused. Video timestamp: 4:00

Step 13 Remove Backup Sensors



Each sensor is three pieces: an outer ring, a middle ring and an inner ring. Be careful not to break them. Pull up the small clip on each side of the outer ring and work it up around the outside (it has a bottom portion under the connector, so pull it off at an angle). Then pop out the middle ring and pull the sensor out of the face of the bumper. Repeat for the other three sensors. Video timestamp: 4:25

Step 14 Install Sensor Bezels



Install each sensor in the same position it came from (outer wing to outer wing, inner to inner). Starting with the passenger outside, point the thickest part of the bezel outward and line it up with the notches in the bumper. Push it in until flush; a rubber mallet may be needed. Video timestamp: 5:40

*If you do not have sensors refer to step 35.

Step 15 Install Sensors from Back



Install the sensor from the back, with the connector side going into the slightly larger opening on the inside. Push them together until they clip. The safety clips can be reattached if desired. Repeat for the remaining sensors. Video timestamp: 6:15

Step 16 Reconnect Sensor Wiring Harness



Reconnect the wiring harness to all of the sensors. The main connector goes on the driver side. Leave the harness loose for now; it will be zip tied to the frame and body once the bumper is installed. Video timestamp: 6:40

Step 17 Extend Harness if Needed



Depending on your harness, it may not be quite long enough to reach. If so, unwrap some of the harness tape (including at the license plate light lead) to gain about 1 to 1-1/2 inches of extra wire, then retape. Video timestamp: 7:05

Step 18 Tape Off License Plate Light Lead



If the license plate light is not being used, tape the lead up watertight to the harness so the circuit does not short out. Then tape the junction to protect the sensor wires. Video timestamp: 7:45

Step 19 Install Lights (Optional)



If installing reverse or scene lights, do it now. Depending on the light, the light bracket may need to be flipped to change the light height: remove the screws on each side with an Allen tool, flip the bracket and reinstall the hardware. Install the light attachment hardware before tightening, check that the light is centered in the hole, and leave the hardware loose for now. Video timestamp: 8:35

Step 20 Install Nut Plates in Frame





The hardware kit includes two nut plates. If your Jeep has a tow hook, only one is needed (passenger side) because the driver side has factory weld nuts. Slide the plate into the frame rail. Only use the supplied hardware with these plates. Video timestamp: 9:40

Step 21 Drill Hole for Spindle Bracket



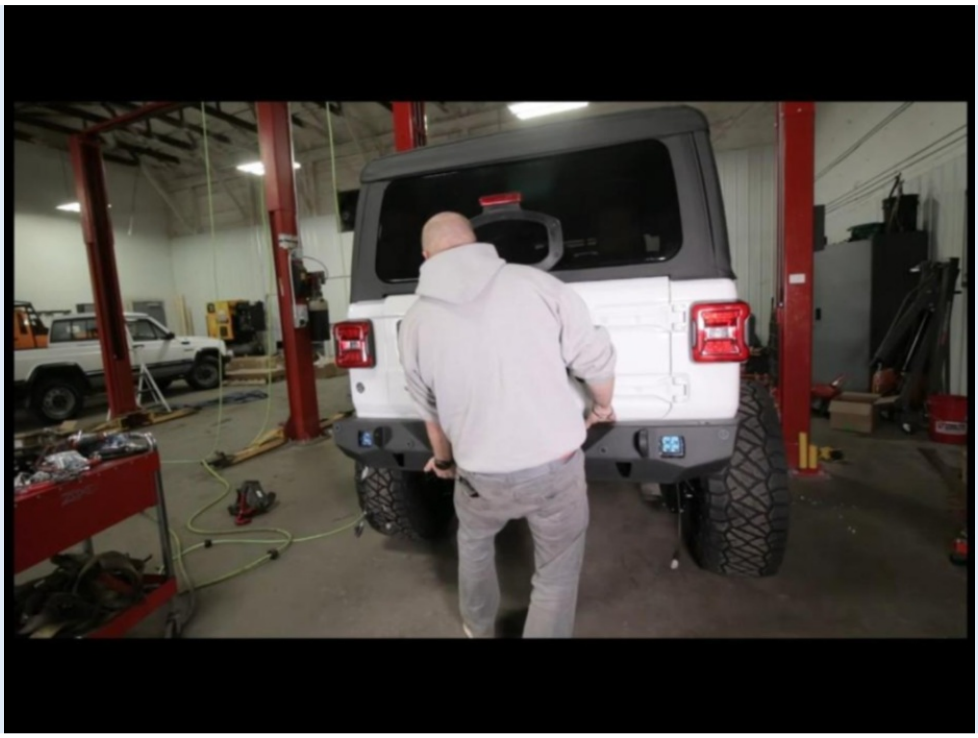
For the spindle stiffening bracket, measure over 1-1/8" from the outside of the frame and up 1-1/2". Drill where the marks cross, starting with a small drill bit and working up to 1/2". Touch up the hole with black paint or primer. Video timestamp: 10:25

Step 22 Insert Spacer into Frame



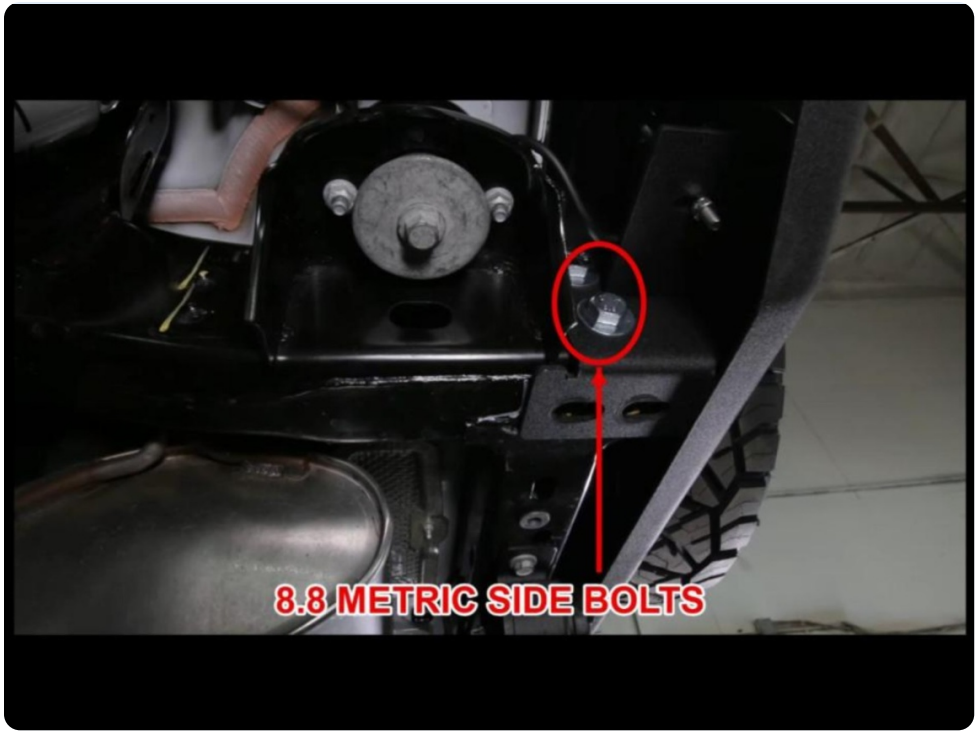
Drop the supplied spacer into the frame now. It will be used when the stiffening bracket is bolted on after the bumper is installed. Video timestamp: 11:00

Step 23 Install New Bumper



Install the JCR bumper, tilting it as you go in so it clears the receiver hitch. Do not pinch the backup sensor wiring. Rest the bumper on the receiver and frame. Video timestamp: 11:10

Step 24 Install Side Frame Bolts









Loosely install the side frame bolts using the larger fine thread metric bolts (8.8 stamped on the head): two bolts and two washers on each side of the frame. Video timestamp: 11:35

Step 25 Install Driver Bottom Bolts





With a factory tow hook, the driver side bottom of the frame has factory weld nuts: use two more 8.8 fine thread metric bolts with washers. Without a tow hook, use the nut plate with 1/2" coarse thread bolts (three hash marks on the head) and washers. Video timestamp: 11:55

Step 26 Install Passenger Bottom Bolts



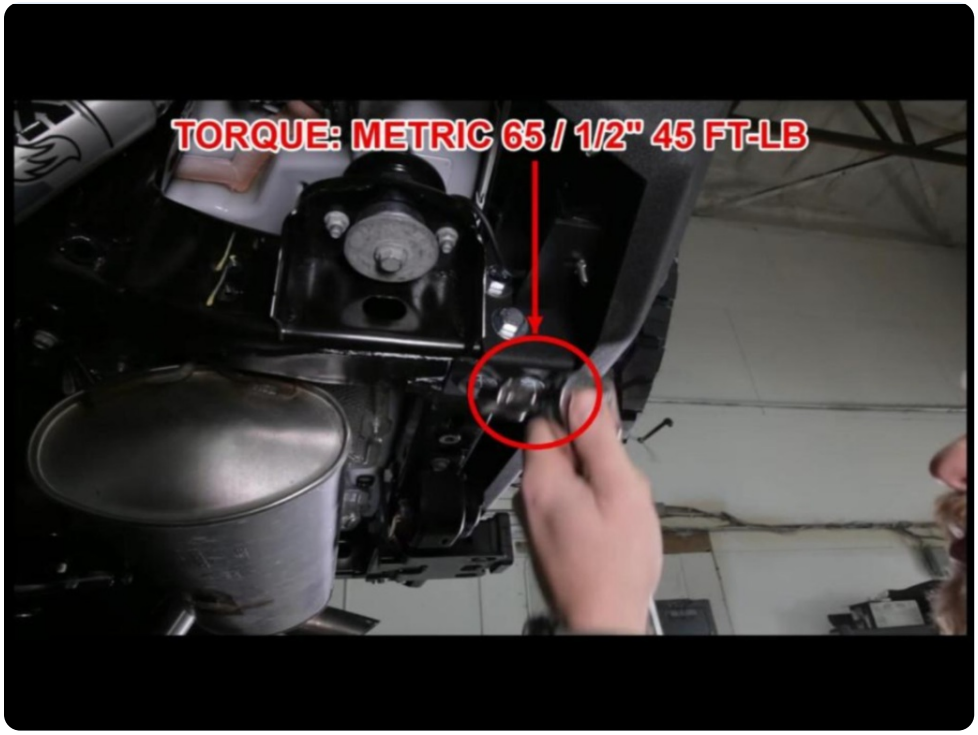
The passenger side always uses the nut plate. Make sure the plate is centered in the holes, then carefully start the 1/2" coarse thread bolts with washers a few threads without moving the plate. Leave all hardware loose. Video timestamp: 12:35

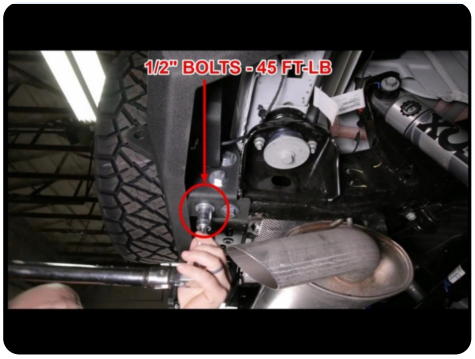
Step 27 Check Bumper Alignment



There is adjustment in the brackets because the JL tub moves on the frame. Do not push the bumper tight against the tub or it will hit the sheet metal. Make sure the bumper is level and the gap to the tub is the same on the driver and passenger sides. Video timestamp: 13:25

Step 28 Torque Bumper Bolts







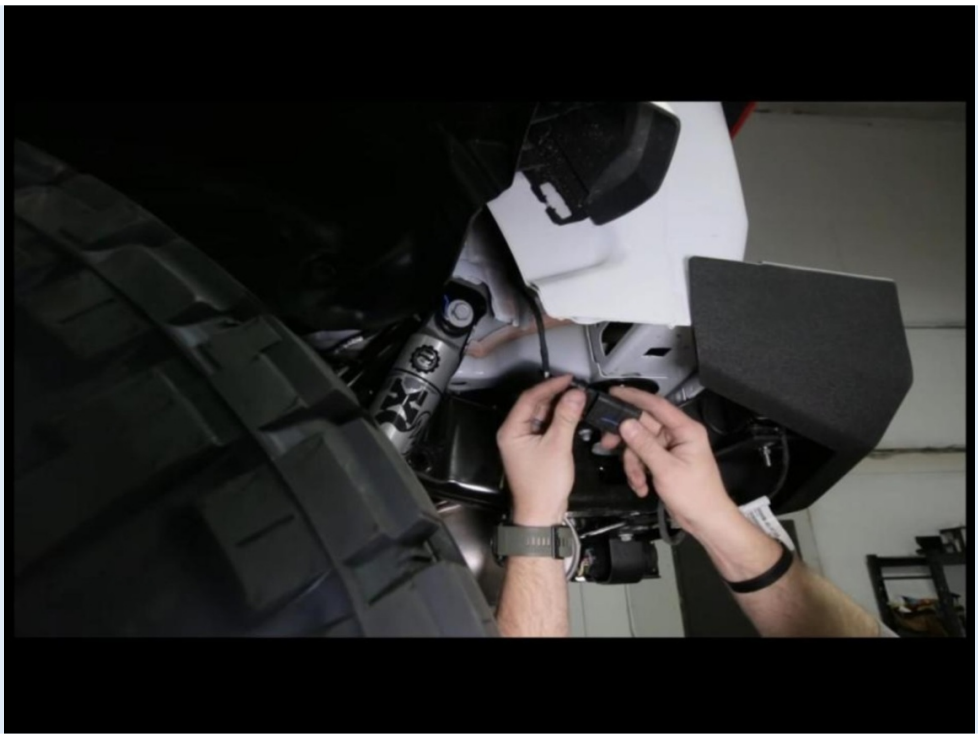
Torque the larger 8.8 metric bolts (side frame bolts, and driver lower bolts if equipped with a tow hook) to 65 ft-lb using a 22mm socket. Torque the 1/2" bolts (passenger side, and driver side without a tow hook) to 45 ft-lb. Video timestamp: 14:00

Step 29 Secure Sensor Wiring Harness



If you have backup sensors, tie up the wiring harness so it cannot fall down. A clip can go into a hole in the tub; use zip ties where needed. Video timestamp: 14:40

Step 30 Reconnect Body Wiring



Backup sensor equipped Jeeps only: push the clip down, push the connector back into the hole it came from and reconnect the wiring in the same holes. Video timestamp: 15:00

Step 31 Install Spindle Stiffening Bracket



The bracket installs on the inside (toward the center of the Jeep) of the tab welded on the spindle sleeve. Push a 7/16" bolt and washer through the drilled hole from the back and loosely install the flange nut hand tight to hold the brace. Video timestamp: 15:20

Step 32 Install Bolt Through Spacer



Align the spacer with the hole in the side of the brace and frame (reach through the hole on the inside of the frame to feel it; if it was forgotten, it can be fed in through the high lift jack hole). Push the second 7/16" bolt and washer through the brace and spacer. Put the flange nut in an 11/16" socket, pass it through the inside hole (use the high lift jack hole to line up) and thread it on hand tight. Video timestamp: 16:00

Step 33 Bolt Bracket to Spindle Tab



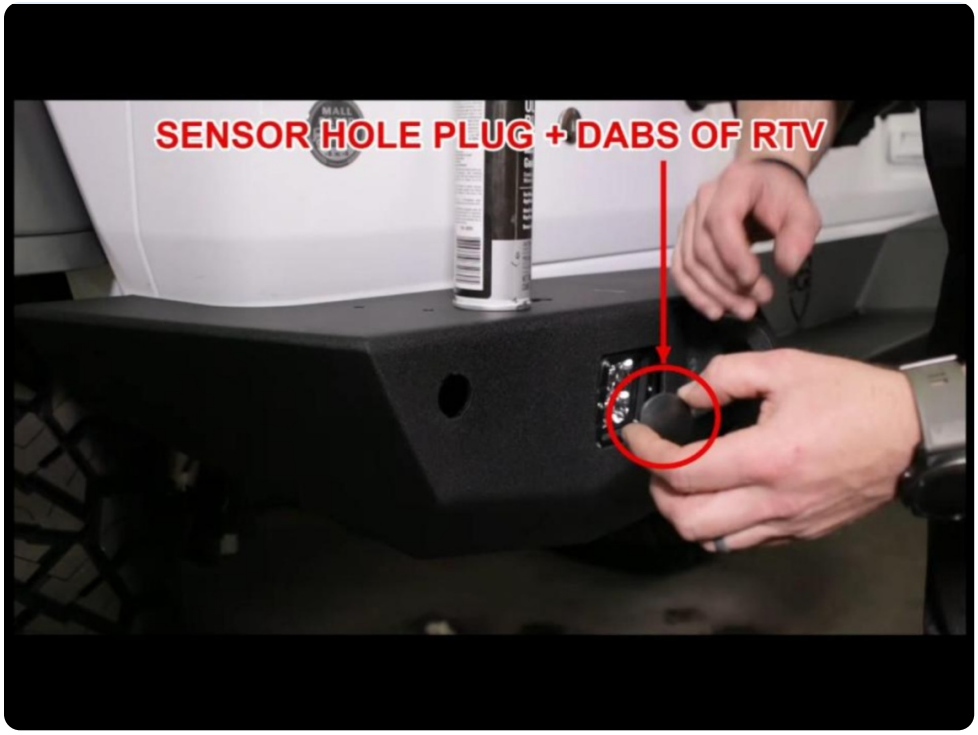
Install two 3/8" bolts (about 1" long) with washers through the upper and lower holes of the brace and the spindle tab, from either side. Put the flange nuts on the other side; holding the nut on the end of a 9/16" wrench helps. Doing the top bolt first can be easier. Video timestamp: 17:45

Step 34 Tighten Bracket Bolts



Tighten the frame and body mount bolt with a 5/8" end wrench on the outside and the 11/16" socket on the inside. Tighten the spindle tab bolts with a 9/16" socket and 9/16" end wrench. There is no torque spec; tighten until tight. Finally, center the lights in their holes, tighten them down and wire them as desired. Video timestamp: 19:00

Step 35 Install Sensor Hole Plugs





If your Jeep does not have backup sensors, install the four supplied plastic plugs. Use a few dabs of RTV to hold them in, push them in and wipe off the excess. Video timestamp: 19:40

Step 36 Cap Spindle Sleeves



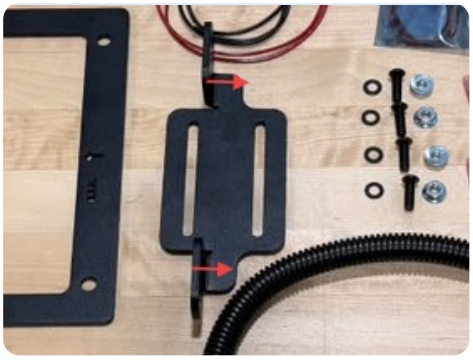


If you are not installing a tire carrier now, protect the machined spindle sleeve with the two supplied caps. Put a small bead of RTV around the cap, press it into place and wipe off the excess. Do this on the top and bottom. Video timestamp: 20:15

Step 37 License Plate Bracket Install

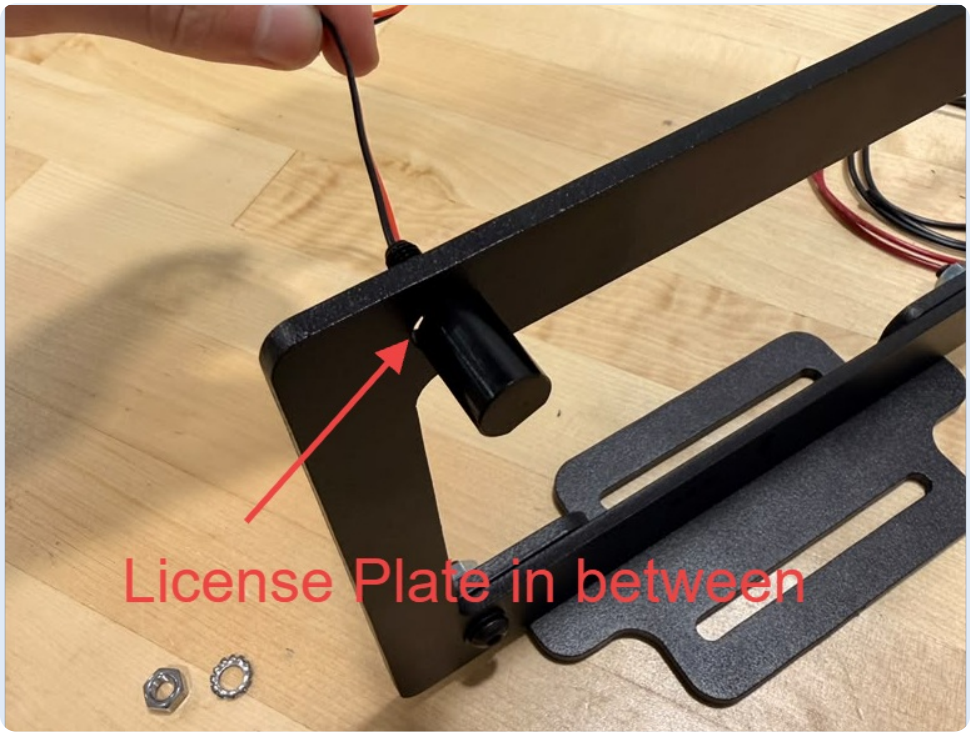


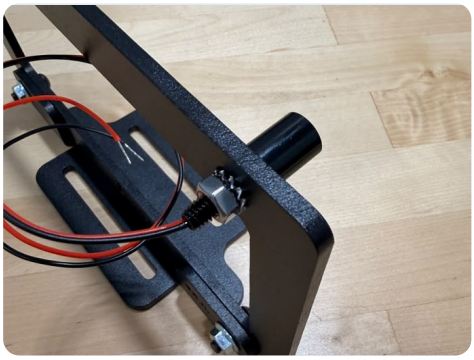


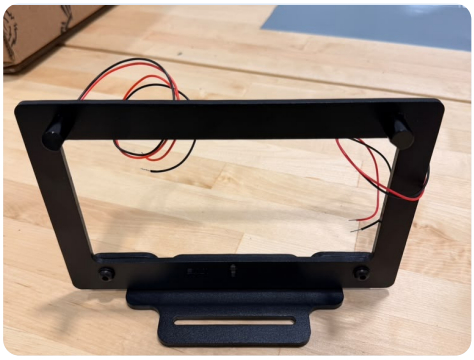


Start by using the supplied button heads, washers, and nuts and assemble the bracket as shown in the images. Make sure the license plate bracket is mounted on the side shown in the 3rd picture.

Step 38 Attach License Plate Lights



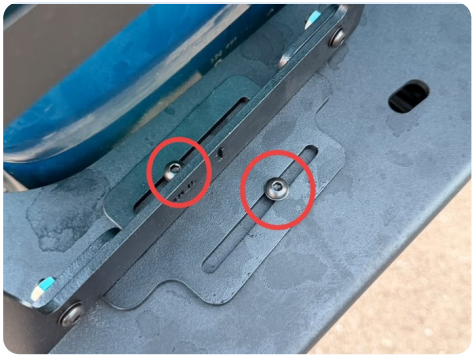


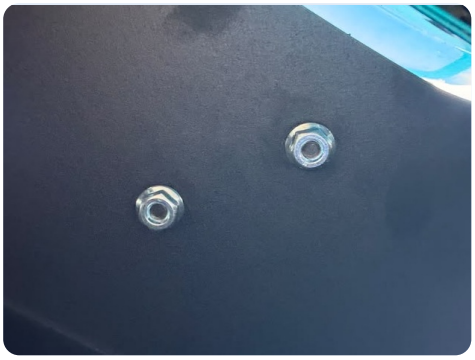


Using the supplied license plate lights attach them in both top mounting locations on the bracket.
Note: At this time install the license plate as well, these will sit over them.

Step 39 Mount Bracket

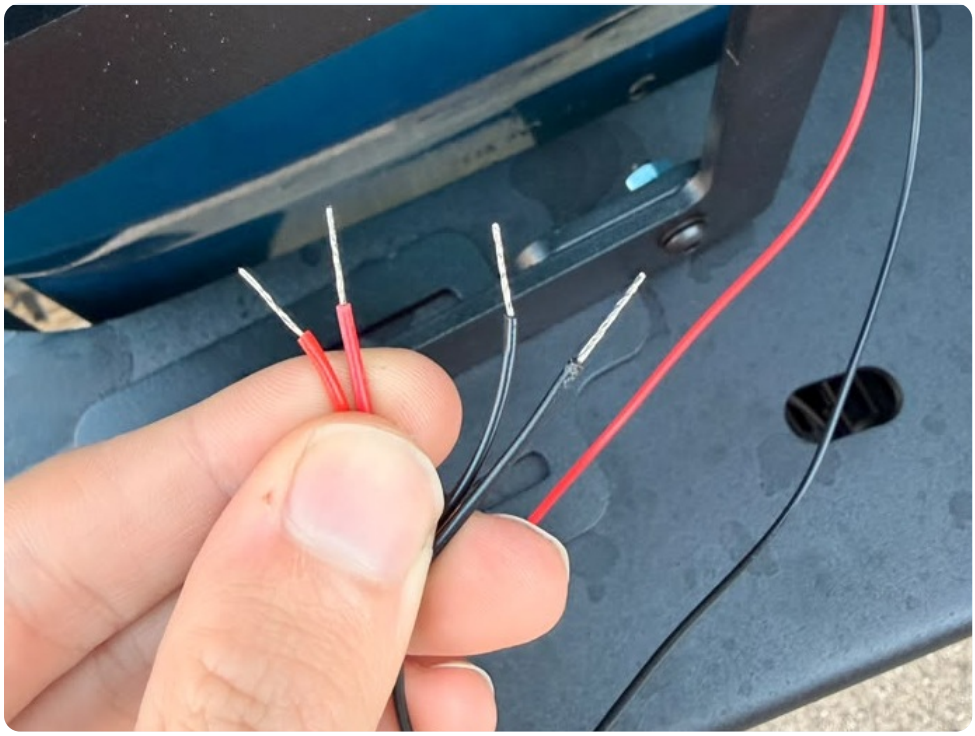


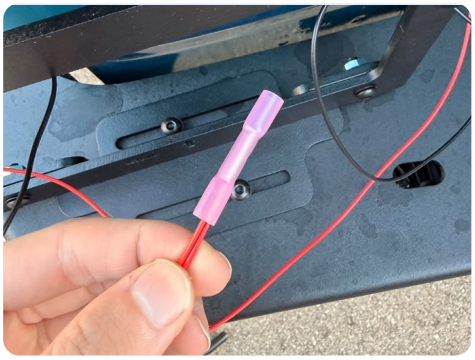




Using the 2 button heads, washers, and nuts install the bracket onto the bumper using the 2 mounting holes on the left side.

Step 40 Wire the light connectors together





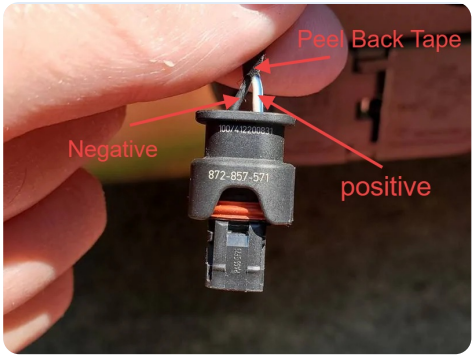


Using the supplied connectors, connect the 2 red wires together and 2 black wires together.

Then connect the supplied wires, red to red, black to black. (these will be what you connect to your factory harness)

Step 41 Connect to factory wires





With everything in place you can use the supplied connectors and cut your factory wiring connector off and the very end nearest to the connect and then splice the wires that way.

If you do not want to cut your factory wires you can use t-taps on the wires although those are not supplied.

Step 42 Installation Complete



Confirm all hardware is tightened. Congrats! Your installation of the JCR Offroad Vanguard Rear Bumper is now complete. Enjoy!