



INSTALLATION MANUAL

LWF24HBL1

Level of Difficulty

Moderate

Installation difficulty levels are based on time and effort involved and may vary depending on the installer level of expertise, condition of the vehicle and proper tools and equipment.

Parts List

Qty	Description
1	Winch Plate
1	DS Mounting Bracket
1	PS Mounting Bracket
1	DS Inner Support Bracket
1	PS Inner Support Bracket
1	DS Outer Support Bracket
1	PS Outer Support Bracket
1	DS Sensor Bracket
1	PS Sensor Bracket
1	License Plate Bracket
10	Black Carriage Bolt, 1/2"-13 x 1 1/2", Grade 5
10	Black Flat Washer, 1/2"
10	Black Hex Lock Nut, 1/2"-13 UNC, Grade 8
12	Hex Head Bolt, 1/2"-13 x 1 1/2", Grade 5
24	Flat Washer, 1/2"
12	Lock Washer, 1/2"
12	Hex Nut, 1/2"-13 UNC, Grade 5
8	Black Button Head Screw, 1/4"-20 x 3/4", Grade 5
8	Black Keps Nut, 1/4"-20 UNC, Grade 5
2	Rubber Grommet
2	Sensor Pigtails
2	Button Plug

Torque Specifications

M12 bolt	59 ft-lbs.
1/2" bolt gr5	75 ft-lbs.
1/2" bolt gr8	110 ft-lbs.

Use above torque setting unless otherwise noted

Product Registration and Warranty

Ranch Hand stands behind our products with industry-leading warranties. To get copies of the product warranties, register your purchase or provide feedback, visit: warranty.curtgroup.com/surveys

CAUTION

Use all tools as manufacturer recommended.

Product Photo



NOTICE

Visit www.ranchhand.com for a full-color copy of this instruction manual, as well as helpful videos, guides and much more!

Before you begin installation, read all instructions thoroughly.

Proper tools will improve the quality of installation and reduce the time required.

Always disconnect the vehicle battery before removing sensors or disconnecting wiring harnesses. Ranch Hand is not responsible for sensor miscalibration or accidental deployment of airbags during installation.

Always mark the orientation of sensors prior to removal from the factory bumper. Many vehicle sensors are calibrated to a particular orientation, and reinstallation sideways or upside down will impact vehicle performance. A piece of masking tape, a grease pencil, or other mark to indicate the sensor's original orientation will help to ensure proper re-installation.

Periodic inspection of your product should be performed to ensure all hardware and / or components remain secure.

To help prevent damage to the product or vehicle, refer to the specified torque specifications when securing hardware during the installation process.

Tools Required

Electric/Air Impact	Torque Wrench	Allen Wrench, 5/32"
SAE Socket Set	Metric Socket Set	Socket Swivel Head
SAE Wrenches	Metric Wrenches	Ratchet
SAE Ratcheting Wrenches	Metric Ratcheting Wrenches	Socket Extensions (optional)

Maintenance

Mild automotive detergent may be used to clean the product. Do not use dish detergent, abrasive cleaners, abrasive pads, wire brushes or other similar products that may damage the finish.

Step 1

Disconnect the battery from the vehicle.

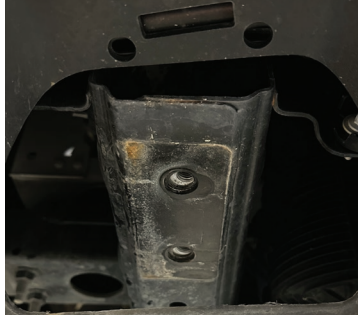
⚠ CAUTION

Be sure to disconnect the vehicle battery and fasten this wire down and away from the battery while completing the installation process. Failure to disconnect the battery may result in accidental triggering of the impact sensors and unintentional deployment of the vehicle airbags.

Step 2

Unbolt and remove the tow hooks from the vehicle frame.

Save the bolts for use later.



Step 3

NOTICE

Mark the orientation of the sensors prior to removal to ensure correct re-installation. Failure to reinstall the sensors in the correct orientation may impact vehicle performance.

Remove the two front parking sensors from the bumper through the back of the bumper.

Unplug the sensor and remove the housing from the front bumper.

Step 4

Remove the innermost nut connecting the bumper to the frame.

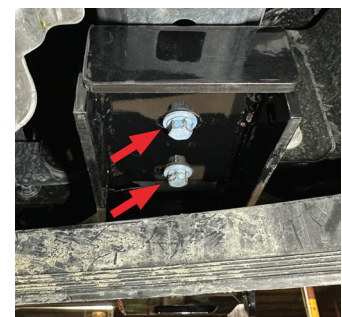
Save this nut for reuse later.



Step 5

Slide the back of the Mounting Bracket through the bumper from the front.

Use the bolts from the tow hook removal in Step 2 to secure the Mounting Bracket to the frame.



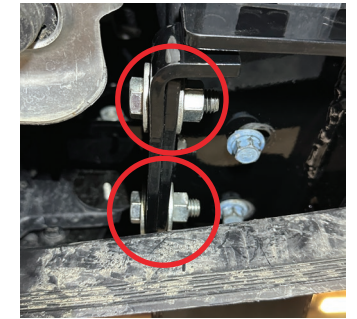
Step 6

Install the Inner Support Bracket and secure it to the frame using the nut from Step 4.



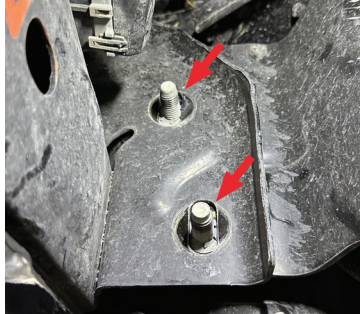
Step 7

Bolt the Inner Support Bracket to the Mounting Bracket using two of the provided hex bolts, hex nuts, and crush washers, as well as four washers.



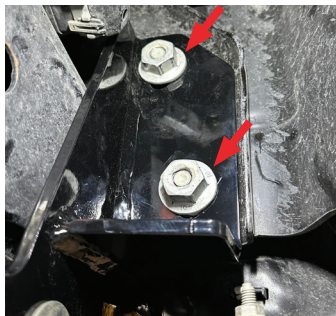
Step 8

Remove the two outermost nuts connecting the bumper to the frame. Save these nuts for reuse.



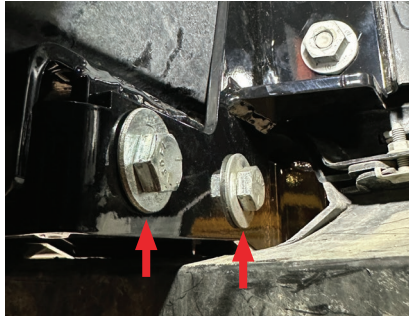
Step 9

Install the Outer Support Bracket and secure it to the frame using the nuts from Step 8.



Step 10

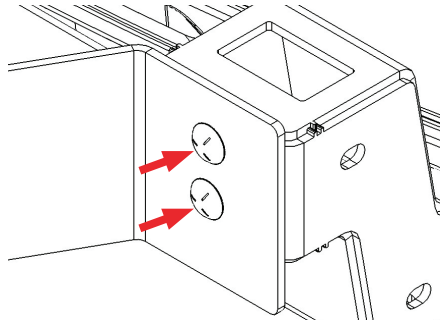
Bolt the Outer Support Bracket to the Mounting Bracket using two of the provided hex bolts, hex nuts, and crush washers, as well as four washers.



Step 11

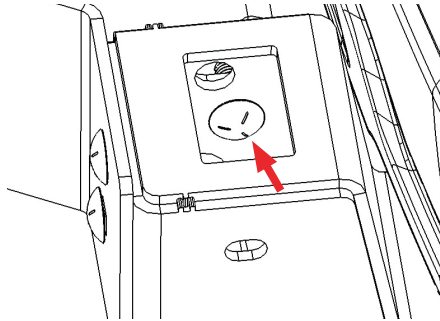
Once the mounting system is bolted in, the Winch Plate can be installed in the front. Using four carriage bolts, black washers, and lock nuts, secure the Winch Plate to the Mounting Brackets through the front holes.

Note: Driver side shown. Two bolts will be used on each side for a total of 4.



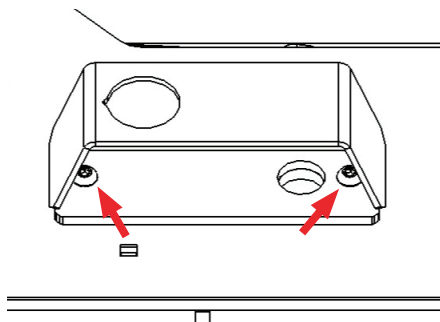
Step 12

Using two carriage bolts, black washers, and lock nuts, bolt the Winch Plate to the inner side of the Mounting Brackets.



Step 13

Mount the Sensor Brackets to the front of the Winch Plate using four of the Black Button Head Screws and Black Keps Nuts.

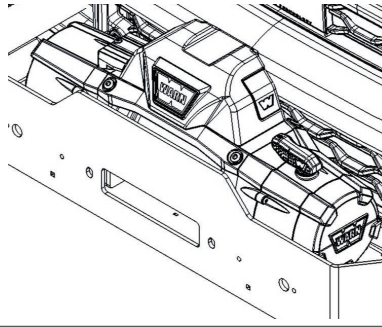


Step 14

Thread the Sensor Pigtails through the sensor holes in the stock bumper and connect them to the electrical connections. Lead the Pigtails off to the side for now

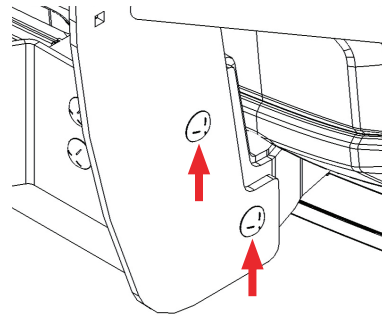
Step 15

Install the winch using the hardware provided with the winch.



Step 16

Carefully slide the Grille Guard over the Winch Plate and secure it to the Mounting Brackets using four of the carriage bolts, black washers, and lock nuts.



Step 17

Insert the grommets into the Sensor Bracket holes.

Step 18

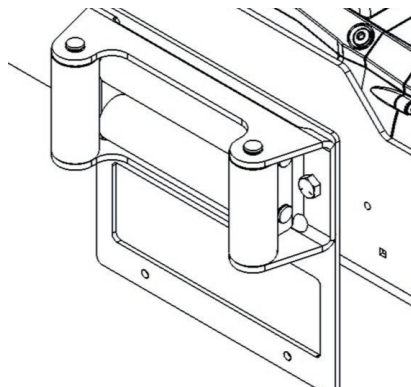
Route the Sensor Pigtails through the holes in the front of the Winch Plate and connect the sensors to the electrical connections.

Step 19

Use WD-40 or another type of oil to lubricate the inner surface of the grommets, and carefully push the sensors into the grommets and orient them in the same way as previously documented in Step 3.

Step 20

Mount the roller bracket provided with the winch as well as the License Plate Bracket to the front of the Winch Plate using 2 hex bolts, washers, lock washers, and hex nuts.



Step 21

Ensure all cables and sensors are reconnected and reconnect the battery.