

INSTALLATION MANUAL

LWF231BL1

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	Mounting plate, driver-side
1	Mounting plate, passenger-side
1	Mounting bracket, driver-side
1	Mounting bracket, passenger-side
1	Sensor bracket, driver-side
1	Sensor bracket, passenger-side
1	License plate bracket
10	Hex nut, 1/2"-13
10	Hex lock nut, black, 1/2"-13
6	Carriage bolt, black, 1/2"-13 x 1-1/2", grade 5
4	Carriage bolt, black, 1/2"-13 x 2", grade 5
20	Flat washer, 1/2"
10	Flat washer, black, 1/2"
10	Lock washer, 1/2"
6	Hex head bolt, 1/2"-13 x 1-1/2", grade 5
4	Hex head bolt, 1/2"-13 x 1-3/4", grade 8
4	Button head bolt, black, 1/4"-20 x 3/4"
4	Kep nut, black, 1/4"-20
2	Button plug
2	Rubber grommet
2	Sensor pigtails
1	Winch plate

Tools Required

Torque wrench	Ratchet
SAE socket set	SAE wrenches
Allen wrench, 5/32"	Socket extension

Torque Specifications

M12 bolt	59 ft-lbs.
1/2" bolt, grade 5	75 ft-lbs.
1/2" bolt, grade 8	110 ft-lbs.

Use above torque setting unless otherwise noted

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.

Be sure to inspect and test fit product before having it coated or painted. Ranch Hand will not be responsible for the cost of the coating if any problems with fit or finish are not noted and addressed beforehand.

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.

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

Step 1

Locate the vehicle battery in the engine compartment and disconnect the vehicle battery, making sure to fasten this wire down and away from the battery while completing the installation process.

⚠ CAUTION

Failure to disconnect the battery may result in accidental triggering of the impact sensors and unintentional deployment of the vehicle airbags.

Step 2

Locate the main wiring harness on the driver side frame and disconnect it, being careful not to damage the locking tabs.

Locate and disconnect the fog light wiring harnesses.

Step 3

Using a 15mm socket, remove the four (4) side bumper bracket bolts, two on each side.

Remove the plastic bumper inserts from around the tow hooks on each side.

Step 4

Using an 18mm socket, remove the eight (8) bolts securing the factory bumper, four on each side, and pull the bumper away from the truck slowly, disconnecting the bumper push clips and the clip for the engine block plug to release the bumper.

Step 5

Using an 18mm socket, remove the four (4) bolts securing each tow hook and remove the hooks.

Step 6

Remove the blocker brackets located on the bottom of the frame rails.

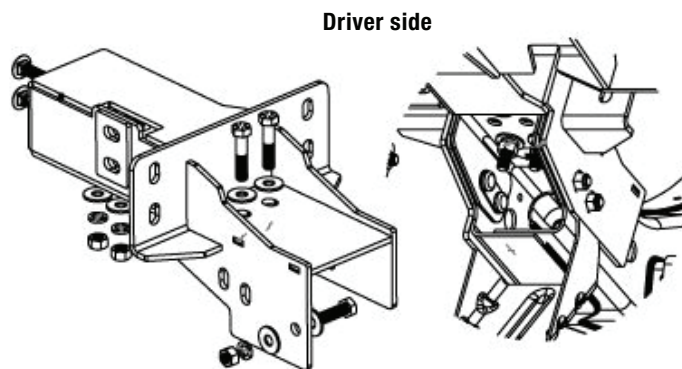
Step 7

Note: Before installing the mounting plates, make sure the top of the frame rails and the bottom sides of the mounting plates are clean and free of mud and dirt.

Insert 1/2" x 1-3/4" bolts through the top bracket holes of the mounting plates and into the frame.

Insert 1/2" x 1-1/2" bolts on the side rear bracket holes.

In the side front two holes, use the factory blocker bracket bolt tabs or 1/2" x 1-1/2" bolts.



Step 8

Locate the two center sensors and mark their orientation with a piece of masking tape and remove them from the bumper.

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.

Step 9

Reinstall the factory and secure it onto the two inside holes using the factory nut tab and bolts.

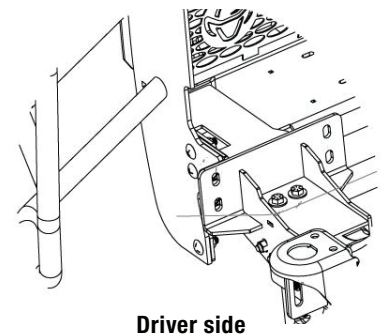
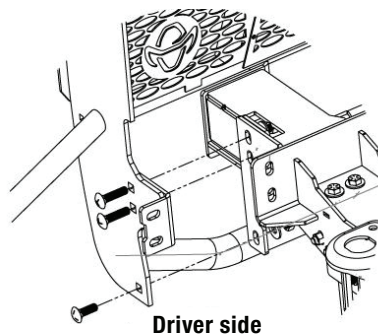
Reinstall the side bumper brackets.

Step 10

Install the grill guard mounting brackets to the two outside bumper holes, securing them with the factory nut tab and bolts.

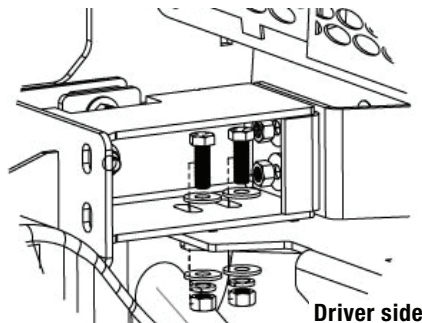
Step 11

Secure the grill guard by inserting 1/2" x 2" carriage bolts through top two holes of the grill guard into the mounting plates. Use 1/2" x 1-1/2" carriage bolts through the bottom holes.



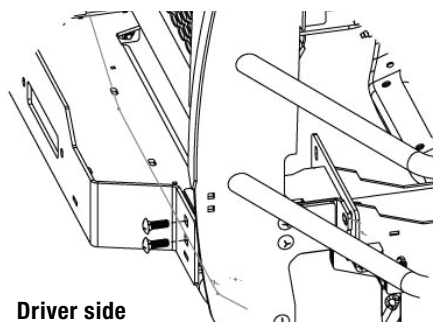
Step 12

Mount the winch plate to the bottom of the mounting brackets using 1/2" x 1-1/2" bolts and hardware. Hand tighten.



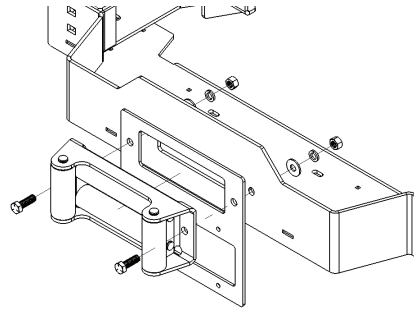
Step 13

From the front, insert 1/2" x 1-1/2" carriage bolts and hardware through the winch plate. Once in place, tighten all bolts and nuts.



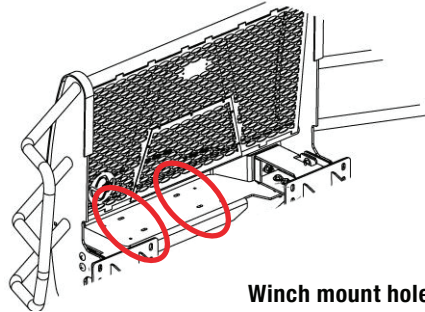
Step 14

Mount the fairlead and the license plate bracket to the front holes of the winch plate.



Step 15

Mount the winch to the four holes on the winch plate.



Winch mount holes

Step 16

If the vehicle does not have a camera, install the small insert using black button head bolts and nuts.

Step 17

Mount the license plate using 1/4" hardware.

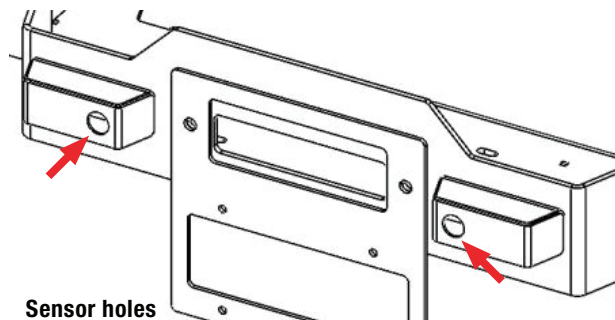
Step 18

If no sensors are present, insert the two button plugs into the sensor holes in the winch plate on each side of the fairlead roller.

Step 19

If sensors are present, connect the sensor pigtails to the factory sensor wires. Mount the sensor brackets to the front of the winch plate using 1/4" nuts and bolts.

Make sure to mount the sensors on the correct side and orientation based on the markings made in step 8.



Sensor holes

Step 20

Install the rubber grommets into the sensor bracket. Slide the pigtails through the holes and plug them into the sensor. Install the sensors into the grommets.