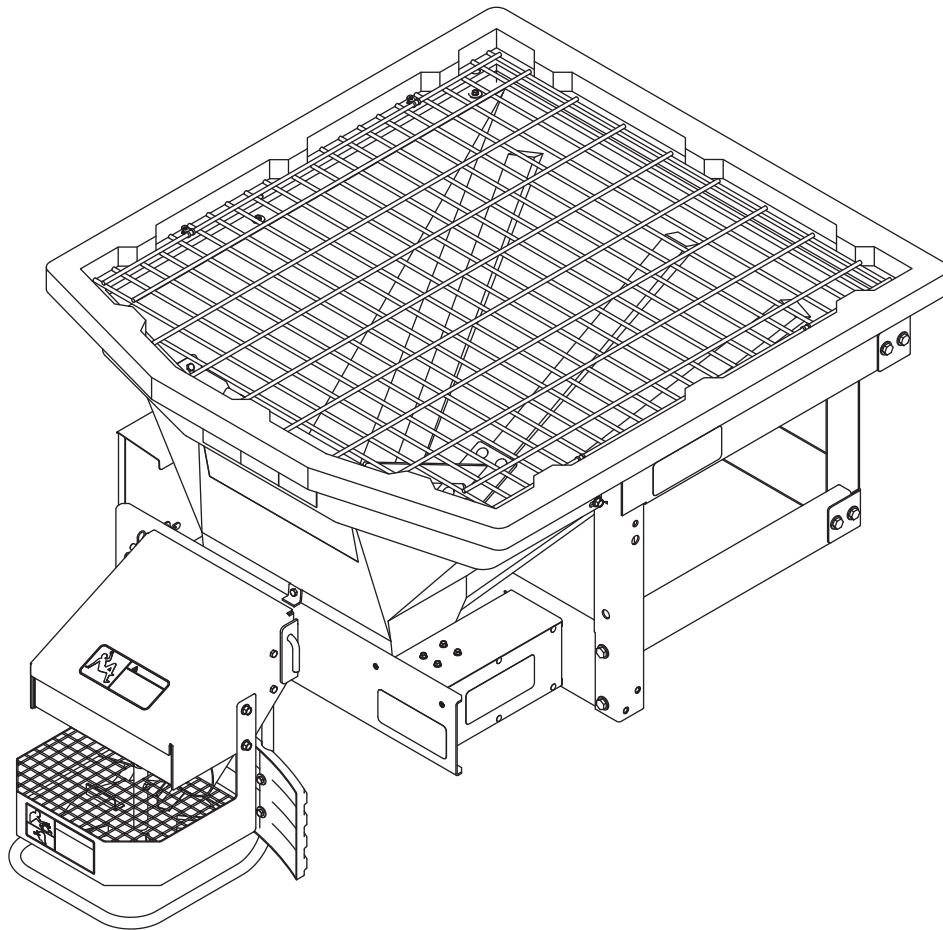


# **SNOWEX<sup>®</sup>**

## **V-Pro™ UTV Hopper Spreader**

### **32200**

### **Installation Instructions**



**⚠ CAUTION**

**Read this document before installing  
or operating the spreader.**

These Installation Instructions are for SnowEx® V-Pro model 32200 UTV hopper spreaders with serial numbers beginning with 190901 and higher.



# SAFETY

## SAFETY DEFINITIONS

### WARNING

Indicates a potentially hazardous situation that, if not avoided, could result in death or serious personal injury.

### CAUTION

Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

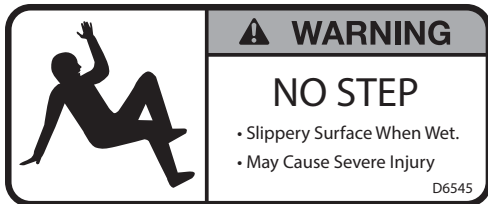
**NOTE:** Indicates a situation or action that can lead to damage to your spreader and vehicle or other property. Other useful information can also be described.

## WARNING/CAUTION LABELS

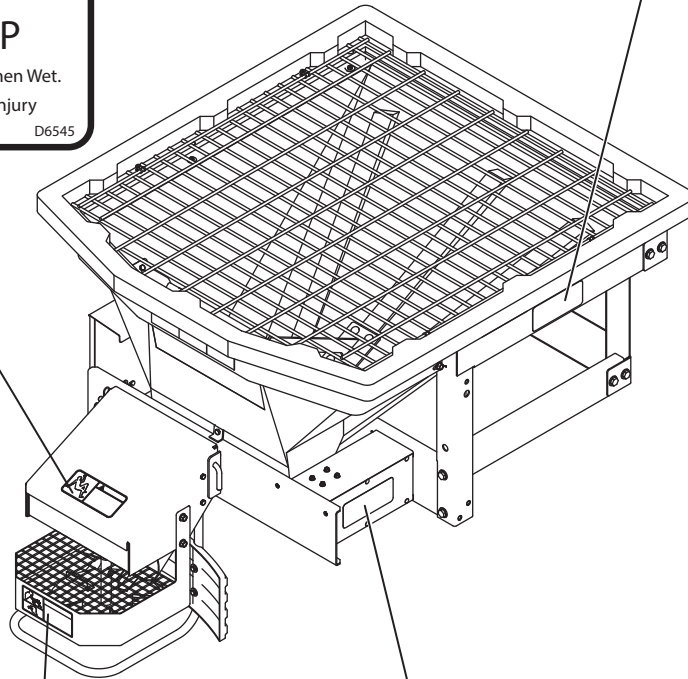
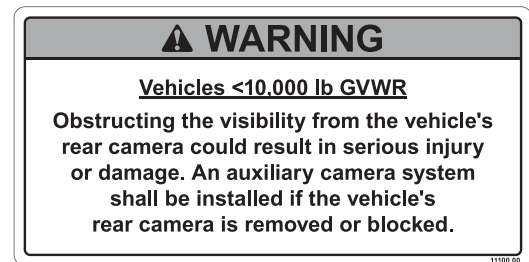
Become familiar with and inform users about the warning and caution labels on the spreader.

**NOTE:** If labels are missing or cannot be read, see your sales outlet.

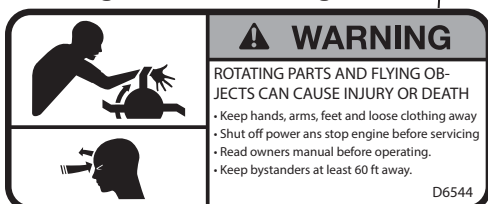
Warning Label – No Step



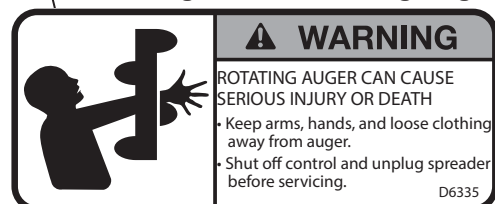
Warning Label – Rear Camera



Warning Label – Rotating Parts




Warning Label – Rotating Auger



**SAFETY**

**Warning/Caution Labels, continued**


**Warning Label – Read Owner's Manual**


**WARNING**

- Read Owner's Manual for Installation Instructions.
- Secure spreader to truck with ratchet straps.
- Anchor spreader securely to truck body with bolt kit provided to prevent slipping or sliding.
- Routinely check straps and hardware to make sure they are secure

D6548

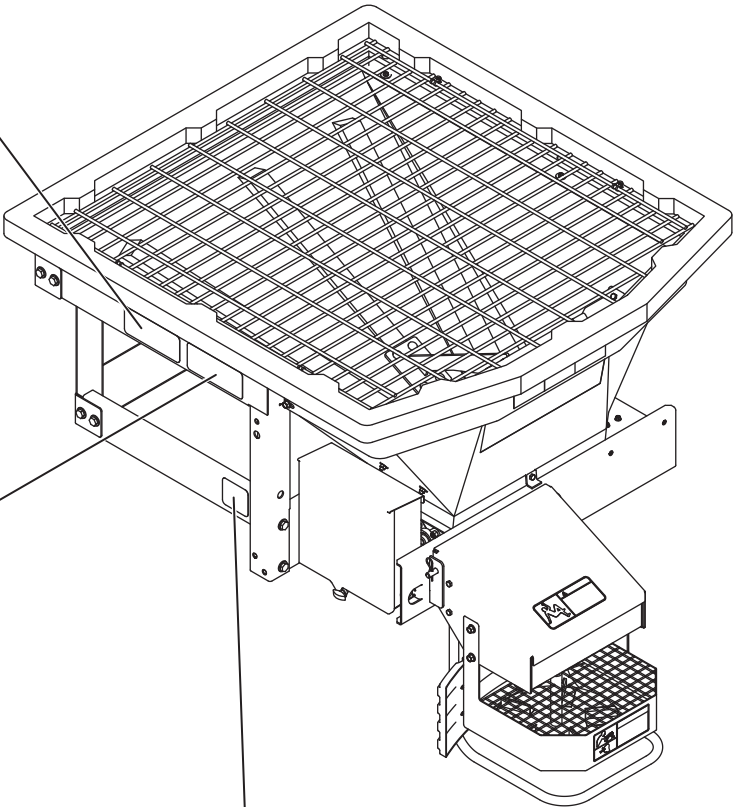
**Warning Label – GVWR**

**WARNING**



- DO NOT EXCEED GVWR OF VEHICLE
- DO NOT OVERLOAD SPREADER
- LOAD SPREADER EVENLY

D6546




**SERIAL NUMBER LABEL**

Code	Definition
YY	2-Digit Year
MM	2-Digit Month
DD	2-Digit Day
LL	2-Digit Location Code
XXXX	4-Digit Sequential Number
ZZZZZZ	5- to 7-Digit Assembly PN

XXXXXXXXXXXXXXXXXXXXXXXXXXXX

**YYMMDDLXXXXZZZZZZ**



# SAFETY

## SAFETY PRECAUTIONS

Improper installation and operation could cause personal injury and/or equipment and property damage. Read and understand labels and the Owner's Manual before installing, operating, or making adjustments.

### WARNING

- Driver to keep bystanders minimum of 25 feet away from operating spreader.
- Before working with the spreader, secure all loose-fitting clothing and unrestrained hair.
- Before operating the spreader, verify that all safety guards are in place.
- Before servicing the spreader, wait for conveyor, auger, and spinner to stop.
- Do not climb into or ride on spreader.

### WARNING

Overloading could result in an accident or damage. Do not exceed GVWR of UTV. See Loading section to determine maximum volumes of spreading material.

### WARNING

Vehicles <10,000 lb GVWR: Obstructing the visibility from the vehicle's rear camera could result in serious injury or damage. An auxiliary camera system shall be installed if the vehicle's rear camera is removed or blocked.

### CAUTION

If rear directional, CHMSL light, or brake stoplights are obstructed by the spreader, the lights shall be relocated, or auxiliary directional or brake stoplights shall be installed.

### CAUTION

- Do not operate a spreader in need of maintenance.
- Before operating the spreader, reassemble any parts or hardware removed for cleaning or adjusting.
- Before operating the spreader, remove materials such as cleaning rags, brushes, and hand tools from the spreader.
- Before operating the spreader, read the engine owner's manual, if so equipped.
- While operating the spreader, use auxiliary warning lights, except when prohibited by law.
- Tighten all fasteners according to the Torque Chart. Refer to Torque Chart for the recommended torque values.

### CAUTION

Disconnect electric and/or hydraulic power and tag out if required before servicing or performing maintenance.

### CAUTION

DO NOT leave unused material in hopper. Material can freeze or solidify, causing unit to not work properly. Empty and clean after each use.

**NOTE:** Lubricate grease fittings after each use. Use a good quality multipurpose grease.

## FUSES

The electrical system contains several automotive-style fuses. If a problem should occur and fuse replacement is necessary, the replacement fuse must be of the same type and amperage rating as the original. Installing a fuse with a higher rating can damage the system and could start a fire.

# SAFETY

## PERSONAL SAFETY

- Remove the ignition key and put the vehicle in PARK or in gear to prevent others from starting the vehicle during installation or service.
- Wear only snug-fitting clothing while working on your vehicle or spreader.
- Do not wear jewelry or a necktie, and secure long hair.
- Wear safety goggles to protect your eyes from battery acid, gasoline, dirt, and dust.
- Avoid touching hot surfaces such as the engine, radiator, hoses, and exhaust pipes.
- Always have a fire extinguisher rated BC handy, for flammable liquids and electrical fires.

## FIRE AND EXPLOSION

### ⚠ WARNING

Gasoline is highly flammable and gasoline vapor is explosive. Never smoke while working on vehicle. Keep all open flames away from gasoline tank and lines. Wipe up any spilled gasoline immediately.

Be careful when using gasoline. Do not use gasoline to clean parts. Store only in approved containers away from sources of heat or flame.

## CELL PHONES

A driver's first responsibility is the safe operation of the vehicle. The most important thing you can do to prevent a crash is to avoid distractions and pay attention to the road. Wait until it is safe to operate Mobile Communication Equipment such as cell phones, text messaging devices, pagers, or two-way radios.

## VENTILATION

### ⚠ WARNING

Vehicle exhaust contains lethal fumes. Breathing these fumes, even in low concentrations, can cause death. Never operate a vehicle in an enclosed area without venting exhaust to the outside.

## BATTERY SAFETY

### ⚠ CAUTION

Batteries normally produce explosive gases which can cause personal injury. Therefore, do not allow flames, sparks, or lit tobacco to come near the battery. When charging or working near a battery, always cover your face and protect your eyes, and also provide ventilation.

- Batteries contain sulfuric acid, which burns skin, eyes, and clothing.
- Disconnect the battery before removing or replacing any electrical components.





## TORQUE CHART

### ⚠ CAUTION





Read instructions before assembling. Fasteners should be finger tight until instructed to tighten according to the torque chart. Use standard methods and practices when attaching spreader, including proper personal protective safety equipment.

### Recommended Fastener Torque Chart

#### Inch Fasteners Grade 5 and Grade 8

Size	Torque (N·m)		Size	Torque (N·m)	
	 Grade 5	 Grade 8		 Grade 5	 Grade 8
1/4-20	11.4	16.2	9/16-12	148	209
1/4-28	13.1	18.5	9/16-18	164	232
5/16-18	23.6	33.3	5/8-11	203	287
5/16-24	26.0	36.9	5/8-18	230	325
3/8-16	41.8	59.1	3/4-10	365	510
3/8-24	47.5	67.0	3/4-16	403	569
7/16-14	67.0	94.6	7/8-9	582	822
7/16-20	74.8	105.6	7/8-14	643	907
1/2-13	102.1	144.3	1-8	873	1232
1/2-20	115.2	162.7	1-12	954	1349

#### Metric Fasteners Class 8.8 and 10.9

Size	Torque (N·m)		Size	Torque (N·m)	
	 Class 8.8	 Class 10.9		 Class 8.8	 Class 10.9
M6 x 1.00	10.4	15.0	M20 x 2.50	441	610
M8 x 1.25	26.4	36.5	M22 x 2.50	580	831
M10 x 1.50	52.2	72.2	M24 x 3.00	762	1055
M12 x 1.75	91	126	M27 x 3.00	1079	1544
M14 x 2.00	145	200	M30 x 3.50	1515	2095
M16 x 2.00	226	313	M33 x 3.50	1990	2849
M18 x 2.50	301	431	M36 x 4.00	2647	3662

These torque values apply to fasteners except those noted in the instructions.

## LOADING

These instructions cover vehicles that have been recommended for carrying the hopper spreader. Please see your local dealer for proper vehicle applications.

### **⚠ WARNING**

**Overloading could result in an accident or damage. Do not exceed GVWR of UTV.**

### **⚠ CAUTION**

**Read and adhere to manufacturer's ice-control material package labeling, including Safety Data Sheet requirements.**

### **⚠ CAUTION**

**Never use wet materials or materials with foreign debris with any of these spreaders. These units are designed to handle dry, clean, free-flowing material.**

## MATERIAL WEIGHTS

Material	Density		
	(lb/ft <sup>3</sup> )	(lb/yd <sup>3</sup> )	(kg/m <sup>3</sup> )
Salt	80	2160	1282
Sand	100	2700	1602

*Material densities are approximate and are based on dry, loose material. It is the responsibility of the operator to know the weight of the material to be spread and the vehicle carrying capacity.*

## DETERMINING VEHICLE PAYLOAD

### **⚠ WARNING**

**Overloading could result in an accident or damage. Do not exceed GVWR of the vehicle. See Loading section to determine maximum volumes of spreading material.**

1. Install the hopper spreader and optional equipment according to the instructions.
2. Install or attach any other equipment that will be on the vehicle while the hopper spreader will be in use (trailer hitch, snowplow, etc.). Fill gas tank.
3. Obtain the Gross Vehicle Weight Rating (GVWR) from the vehicle manufacturer.
4. With the occupants in the vehicle for normal hopper spreader operation, weigh the vehicle to obtain gross vehicle weight (GVW).
5. Subtract the GVW from the GVWR to determine the available material payload.
6. Obtain the weight per cubic meter (kg/m<sup>3</sup>) of the desired material. Divide the weight into the payload to determine the maximum volume of material that can be carried.
7. Fill the hopper with the calculated volume of material. Reweigh the vehicle with occupants and verify that the GVW is less than the vehicle's ratings.
8. Repeat Steps 6 and 7 for each type of material.

## SPREADER SPECIFICATIONS

Hopper Model	Overall Length	Overall Width	Overall Height	Empty Weight	Capacity Struck
V-Pro™ UTV Hopper Spreader	162.5 cm 64 in	123.2 cm 48.5 in	68.6 cm 27 in	130 kg 286 lb	0.8 m <sup>3</sup> 10.8 ft <sup>3</sup>



# MOUNTING THE SPREADER

## MOUNTING THE SPREADER

**NOTE:** Periodically throughout the snow and ice control season, verify that mounting devices are secure.

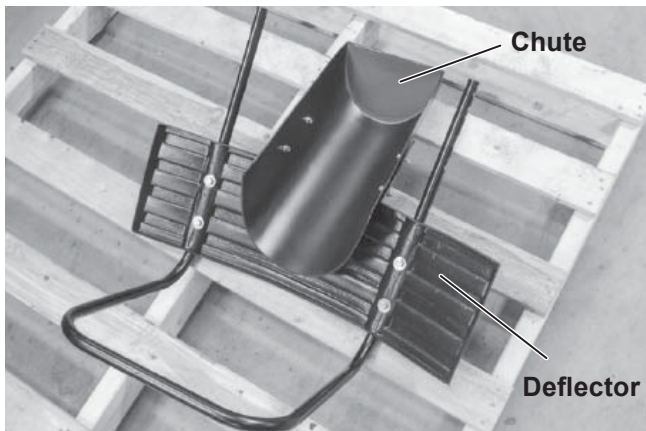
### **⚠ WARNING**

Spreader shall be bolted to vehicle frame. Do not rely on the tie-down chains or straps alone to hold spreader in vehicle.

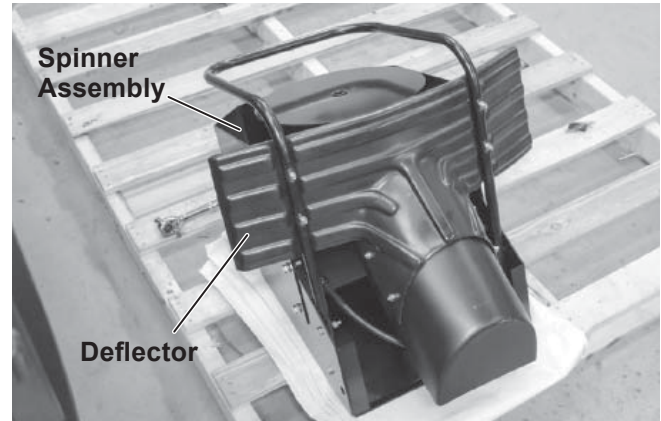
### **⚠ CAUTION**

Before lifting, verify that hopper is empty of material. The lifting device must be able to support the spreader's weight.

1. Remove the tailgate from the UTV bed.
2. Load the spreader onto the UTV bed.
3. Assemble the chute to the deflector using the four 1/4" x 3/4" serrated flange cap screws and 1/4" locknuts in the supplied hardware kit.



4. Install the chute/deflector assembly to the spinner assembly using the four 5/16" x 1-1/2" tapping screws and 5/16" locknuts in the supplied hardware kit to complete the drive assembly.



5. Mount the drive assembly to the spreader using the 1/2" x 17-5/8" bent pin and secure it with the 2-3/8" hairpin cotter. Ensure that the bent pin passes through the small center mounting tab on the auger drive enclosure.
6. Slide the spreader forward until the deflector/chute assembly makes contact with the vehicle. Then slide the spreader back approximately 1" to allow proper clearance.
7. Once the spreader is positioned front to back in the vehicle bed, center it left to right.
8. Looking at the inside corners of the spreader frame, you will notice four holes in the bottom of the frame. Using a paint pen or similar marking device, mark the hole locations on the vehicle bed.

**If mounting holes cannot be drilled in the marked locations,** install the mounting bars from the optional UTV mounting kit to the spreader frame using the supplied 1/2" x 1-1/2" carriage bolts and 1/2" locknuts. Use the existing holes in the mounting bars to mark drilling locations on the vehicle bed.



## MOUNTING THE SPREADER

### **⚠ CAUTION**

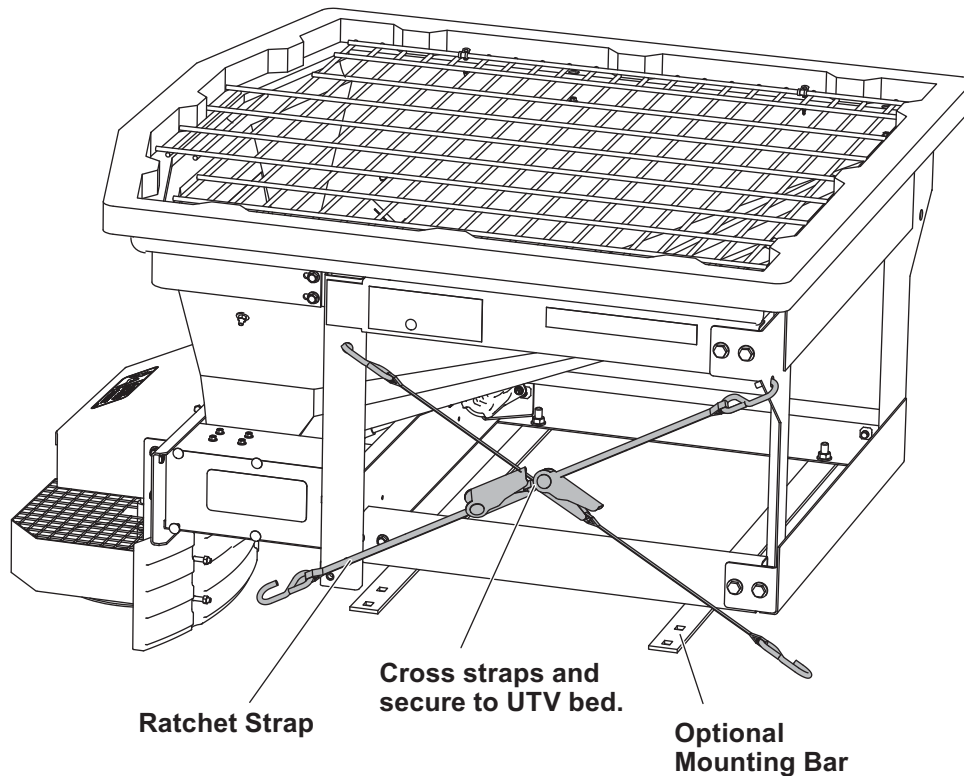
Before drilling holes, check to be sure that no vehicle wiring or other components could be damaged.

9. Remove the spreader from the vehicle bed and drill 1/2" holes at the marked locations.

**NOTE:** Pay special attention when drilling or clamping dissimilar metals to aluminum bodies. Galvanic corrosion can occur if not handled properly. Contact vehicle manufacturer for recommended attachment practices.

10. Install the spreader to the vehicle using the supplied 1/2" x 3" carriage bolts and 1/2" locknuts.
11. Tighten all fasteners according to the torque chart.
12. Install the four ratchet straps as shown below.

**NOTE:** It is important for safety that this strapping method be used as the standard mounting procedure.



# WIRING AND HARNESS INSTRUCTIONS

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## WIRING INSTRUCTIONS

Spreaders are shipped from the factory with the spreader harness wired to the motor and spreader module.

To properly wire the hopper spreader, follow this recommended installation sequence:

1. Install the vehicle cable assembly and control harness included with the spreader, following the steps given below.
2. Install the cab control as described under "Cab Control Installation."

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**NOTE: Use dielectric grease on all electrical connections.**

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### Vehicle Cable Assembly Installation

1. Remove the vehicle floor pan and battery cover. If possible, tip the bed up and lock it in place.
2. Route the vehicle cable assembly along the vehicle frame, running from the rear of the vehicle to the front. Cable tie the harness to the frame holes and frame supports.

---

**NOTE: For safety reasons, do not attach the cable ties to the fuel or brake line. Do not route the harness close to the exhaust system or engine; although the hopper spreader harness uses high-temperature wiring, it still could melt under extreme heat and short out the spreader and vehicle electrical systems.**

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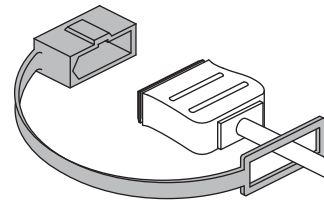
3. Mount the vehicle harness plug to the bumper frame using the supplied cable ties. Position the plug near the center of the bumper to reduce exposure to debris thrown up by the tires.

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**NOTE: Apply a small amount of dielectric grease to the plug. Try to mount plug facing upward to help keep plugs tightly sealed.**

---

4. Install the harness plug cover.



5. Route the red wire from the vehicle cable assembly to the battery, securing it using heavy-duty cable ties or frame clips along the frame and lighter duty cable ties everywhere else.
6. Connect the power leads to the battery: Red POSITIVE (+), Black NEGATIVE (-). Always connect to the primary battery if using a dual battery system. Secure any remaining loose loom to any other large or medium vehicle harness using medium-duty cable ties.

### Vehicle Control Harness Installation

1. Plug the vehicle harness into the vehicle cable assembly.
2. Lay out a path for routing the vehicle control harness from its attachment point on the vehicle battery cable into the cab of the UTV. Make sure that the path avoids any hot, sharp, or moving parts of the vehicle.

#### **⚠ CAUTION**

**Before drilling any holes, check both sides of the material for any wires, fuel lines, fuel tanks, etc., that may be damaged by drilling.**

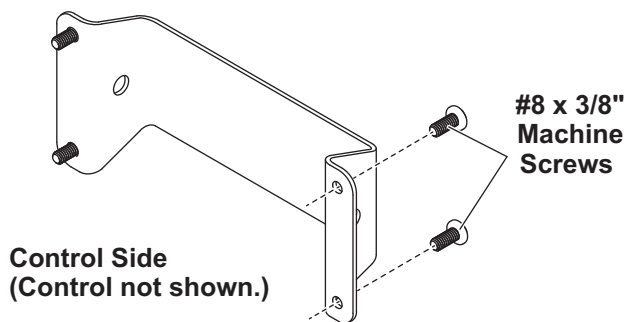
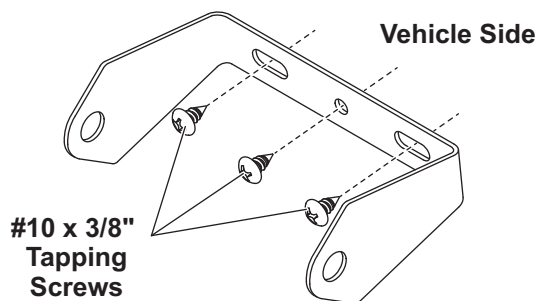
3. Drill a 5/8" hole in the fire wall so that the vehicle control harness can reach the desired cab control location.
4. Insert a rubber grommet into the hole.
5. Route the harness as laid out in Step 2.
6. Secure the vehicle control harness to the UTV.
7. Attach the red wire to a switched accessory circuit.

# WIRING AND HARNESS INSTRUCTIONS

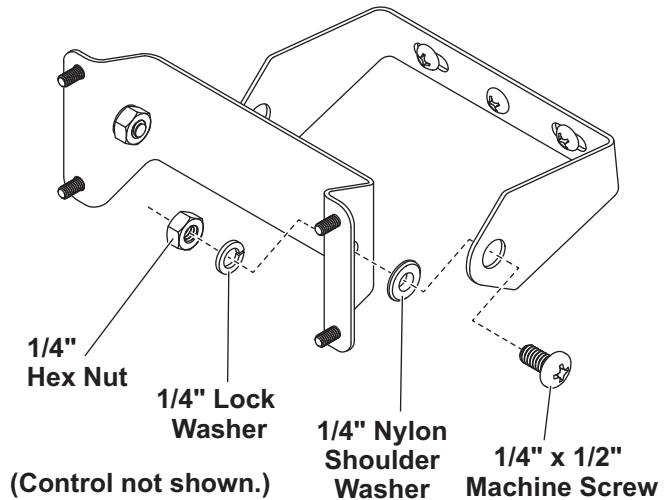
## Cab Control Installation

Choose a mounting location where the control will be within easy reach of the vehicle operator and will not restrict access to the vehicle controls or vehicle instrumentation. Do not mount the control in areas prohibited by the vehicle manufacturer for crash worthiness. See the vehicle's owner's manual or service manual for details.

1. Install the vehicle side of the control bracket at the selected mounting location using #10 x 3/8" tapping screws.
2. Attach the control side of the bracket to the control using four #8 x 3/8" Phillips head machine screws.



3. Install the control/bracket assembly to the vehicle-side bracket using 1/4" x 1/2" machine screws, 1/4" nylon shoulder washers, 1/4" lock washers, and 1/4" hex nuts.

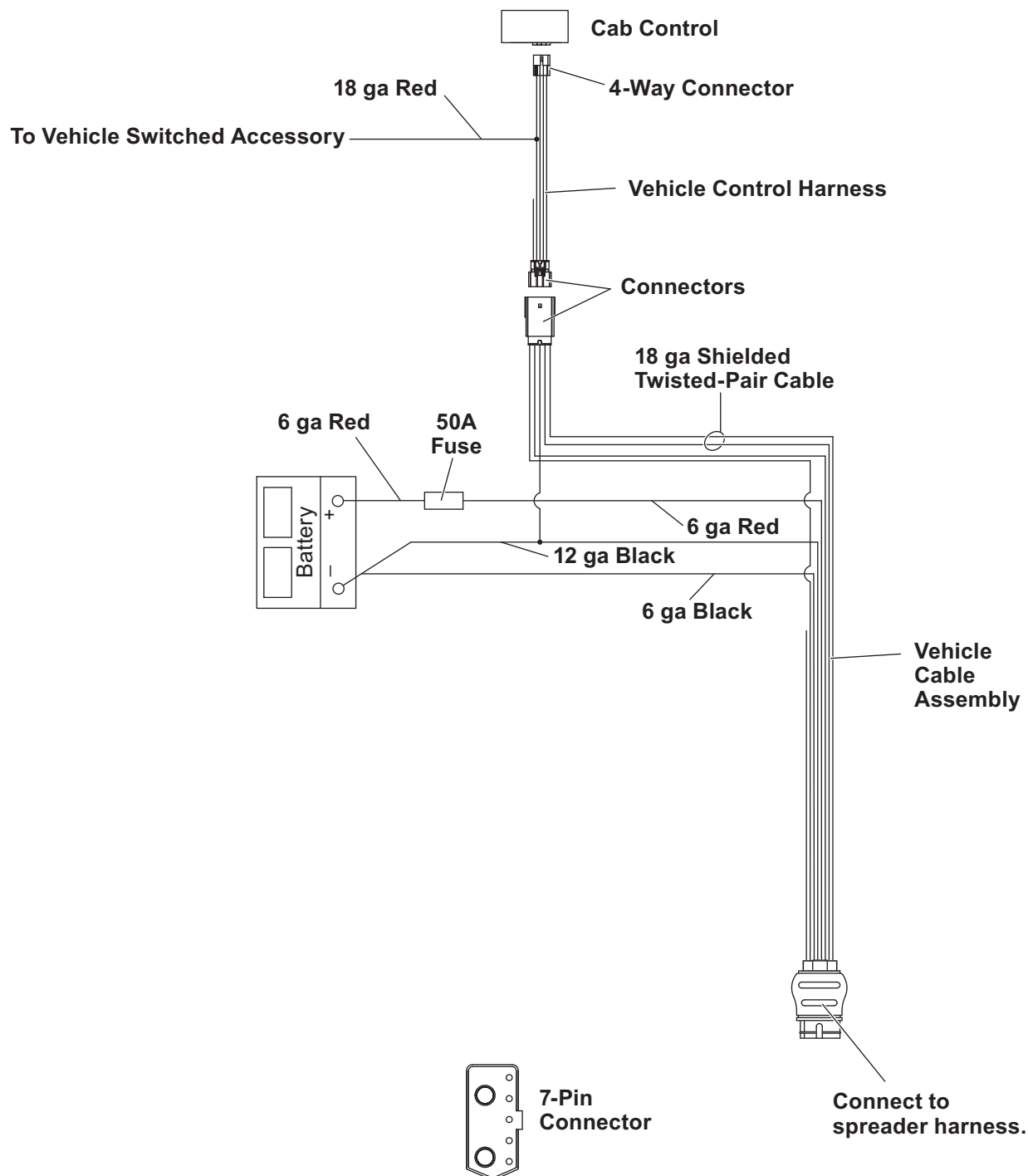


4. Plug the vehicle control harness into the cab control.

## FINAL CHECKLIST

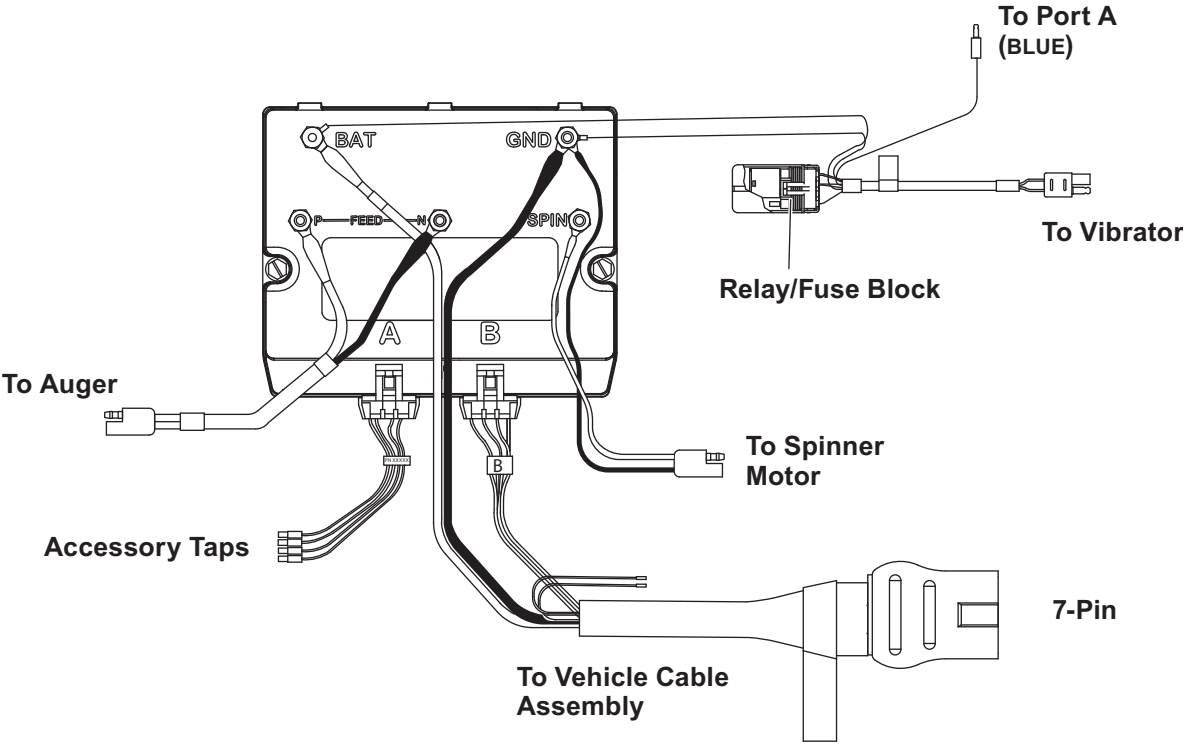
- ☐ Verify that dielectric grease is applied to all electrical connections.
- ☐ Reconnect vehicle battery cables.
- ☐ Verify that the wire harnesses and battery cables are properly secured away from hot or moving parts.
- ☐ Verify that the vehicle wiring harness has sufficient ground clearance when spreader is removed from the UTV.

# HARNESS WIRING DIAGRAM



# SPREADER MODULE & CABLES

## 5-POST SPREADER MODULE





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