



Installation Instructions

Model: BALE MOVER

READ BEFORE INSTALLATION!

Instructions in this manual supersede all editions published at an earlier date.
Snowman Snowplow, Inc. reserves the right, under its continuing product improvement program, to change construction or design details, specifications and prices without notice or without incurring any obligation.

IMPORTANT!

This manual contains step-by-step instructions for proper installation of the SNOWMAN Bale Mover.

Please read manual carefully before assembling and follow recommendations given.



This is a safety alert symbol. It alerts an operator to information concerning personal safety.

Always observe and heed these symbols and instructions to prevent serious injury to yourself or others.

IF FURTHER ASSISTANCE IS NEEDED,
CALL 888-766-6267.



GENERAL INFORMATION:

CAUTION: Always disconnect the battery prior to installation.

Check the contents of the shipment against the parts list to determine that all are correct and included.



SAFETY PRECAUTIONS should be used when the power unit is in OPERATION and Bale Mover is in ANY POSITION.



Disconnect the controller from the power source when bale mover is not in use.

TOOLS NEEDED

WRENCHES:

3/8"

1/2"

9/16"

5/8"

11/16"

SIDE CUTTERS

3/16" ALLAN WRENCH

DRILL

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SNOWMAN BALE MOVER INSTALLATION INSTRUCTIONS

Bolts should be finger tight until instructed to tighten. Use standard methods and practices when attaching bale mover.

Installing Power Unit/Pump Harness:

1. Put lock tight on the 2 3/8" stud and tighten into the bottom of power unit. **Do not over tighten.**
2. Run power unit lengthwise with the mount, the reservoir to the front (closest to the truck cab), and the motor to the back.
3. Put the black ground wire on one of the 3/8" studs and tighten both studs with the 3/8" poly lock nuts.
4. Locate the red (+) cable on the 3 ft. pump harness. Connect the eyelet at the end of the red cable to the 3/8" post located on the top side of the power unit motor to supply power to the power unit.
5. Locate the small orange wire at the end of the pump harness. Connect it to the lead off the center lift coil on the pump. Disregard the remaining red and green wires at the end of the harness.
6. Attach two 9/16" boss O-ring swivels to the oil ports on the pump **being careful not to over tighten.**
7. Fill the reservoir 3/4 full (normal operating level) with ***John Deere Low Viscosity Hy-GUARD Hydraulic Oil.***

Installing Vehicle Harness:

1. Locate the cable ends of the harness that will connect to the battery and cab remote control. Tape the cables together with electrical tape for easier installation.
2. Beginning at the back of the vehicle, decide on where you want to start installing the harness (i.e. run it through a plug in the bumper, or between the bumper and the vehicle. **DO NOT RUN UNDER BUMPER**)
3. Using the cable ends that you taped together as the lead end, run the harness along the vehicle's frame channel from the back of the vehicle to the front, ending up at the battery. Untape the cables.



CAUTION: *Keep cable away from any wear points or heat source.*

4. Run the harness remote cord through an outlet in the firewall of the cab. Look for an outlet underneath the cab and towards the front. If there is no existing outlet, a hole can be drilled through the firewall. **CAUTION: Make sure there are no wires or hidden objects in the area that you will be drilling through.** Connect the remote cord to the remote control in the cab.
5. Run the fused wire to a spare fuse spade in the fuse panel so that it is connected live when the vehicle ignition is on. When the vehicle ignition is turned off, the remote should be dead.

IMPORTANT: *Regular cleaning, re-greasing (using dielectric grease) and sealing of all connections is necessary to maintain correct grounding and amp flow for optimum operating performance of the unit.*

Solenoid Installation:

1. Locate a metal area under the hood of the vehicle on the inside of the fender to mount the solenoid. The location must be within 2 feet of the positive post on the battery.
2. Drill two 5/16" holes at this location.

3. Using the two 1/4"x3/4" bolts and two 1/4" lock nuts provided, mount the solenoid in a vertical position with the solenoid cap pointing down.
4. Connect one end of the 2 ft. battery cable to the solenoid post located on the side of the solenoid that is pointing towards the front of the vehicle. **DO NOT CONNECT THE CABLE TO THE BATTERY AT THIS TIME.**
5. Connect the ground cable of the 25 ft. vehicle harness cables to the (-) negative post on the battery. Connect the red(+) positive to the solenoid post located on the side of the solenoid that is pointing towards the rear of the vehicle.
6. Locate the brown wire with a 3/8" eyelet on the end that splits out of the harness, and connect it to the small post on top of the solenoid.
7. Gather up excess vehicle harness cable length and secure it with cable ties at a location away from heat and wear points.
8. Plug the 3 ft. lead from the pump into the vehicle harness at the bumper.

Installing Cylinder and Hoses:



CAUTION: *To avoid possible damage to the cylinder, do not over tighten the nuts.*

1. With the adjustable end of the cylinder pointed to the back of the truck, fasten the front end of the cylinder to the gooseneck mount using one 1" pin.
2. Place the 3/4" standard swivel fitting provided, in the oil port located at end of the cylinder closest to the reservoir (front). (Note: fitting without an orifice restriction)
3. Place the 3/4" orifice swivel fitting provided, in the oil port located at the adjustable end of the cylinder. (Note: fitting with an orifice restriction)
4. Pull the adjustable end of the cylinder out and fasten it to the bale arm assembly using one 1" pin.
5. Attach the 9/16" fittings provided to each of the two ports on the pump. Attach one of the 36" hoses that are provided, to the left (driver side) port of the power unit.
6. Attach the hose to the orifice fitting (adjustable end) of the cylinder.
7. Attach the second 36" hose to the right fitting on the pump. Attach the other end of the hose to the second fitting located on the end of the cylinder.

System Check-out:

1. Tighten all bolts, hoses and fittings using standard methods and practices.
2. Connect the 2 ft. battery cable on the solenoid to the (+) positive post on the truck battery.

3. Check to see that all bystanders are a safe distance from the bale mover to avoid possible injury.
4. Raise the bale mover to its max height, then, lower until the cylinder ram is fully retracted.
5. Check oil level in reservoir. Oil may have to be added as air is removed. Reservoir level should be approximately 3/4 full with the bale mover raised to its maximum height, and 1/4 full when completely down.
6. Repeat step #4 until all air has been removed. Check oil level in reservoir each time step #4 is repeated.

VERY IMPORTANT!
DISCONNECT THE CONTROLLER FROM THE POWER SOURCE WHEN THE BALE MOVER IS NOT IN USE.

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSE	REMEDY
Bale mover will not raise (will not lower) No sound at motor	1) Disconnected harness cable 2) Corroded contacts at harness plug-in 3) Corroded eyelets at the pump 4) Corroded eyelets at the battery	1) Connect harness plug-in 2) Clean & apply dielectric grease 3) Clean & apply dielectric grease 4) Clean & apply dielectric grease
Bale mover will not raise (will not lower) Solenoid clicks	1) Corroded contacts at harness plug-in 2) Corroded eyelets at the pump 3) Corroded eyelets at the battery	1) Take apart, clean & apply dielectric grease 2) Take apart, clean & apply dielectric grease 3) Take apart, clean & apply dielectric grease
Bale mover descends in jerking motion	1) Oil weight is too light 2) Air in system 3) Possible internal bypassing in cylinder	1) Replace with <i>John Deere Low Viscosity HY-GUARD Hydraulic Oil</i> . (See pg. 3) 2) Remove air by raising the bale mover to its maximum height, then lower the bale mover until the cylinder ram is fully retracted; repeat until all air is removed 3) Replace cylinder
Bale mover descends too fast or slams down	1) Oil weight is too light 2) Air in system	1) Replace with <i>John Deere Low Viscosity HY-GUARD Hydraulic Oil</i> . (See pg. 3) 2) Remove air by raising the bale mover to its maximum height, then lower the bale mover until the cylinder ram is fully retracted; repeat until all air is removed
Bale mover lowers and/or raises too slow	2) Incorrect fluid being used 3) Fitting is restricted	2) Flush and replace with <i>John Deere Low Viscosity HY-GUARD Hydraulic Oil</i> . (See pg. 3) 3) Remove fitting, clean, replace & test; if necessary, repeat until system is flushed clean