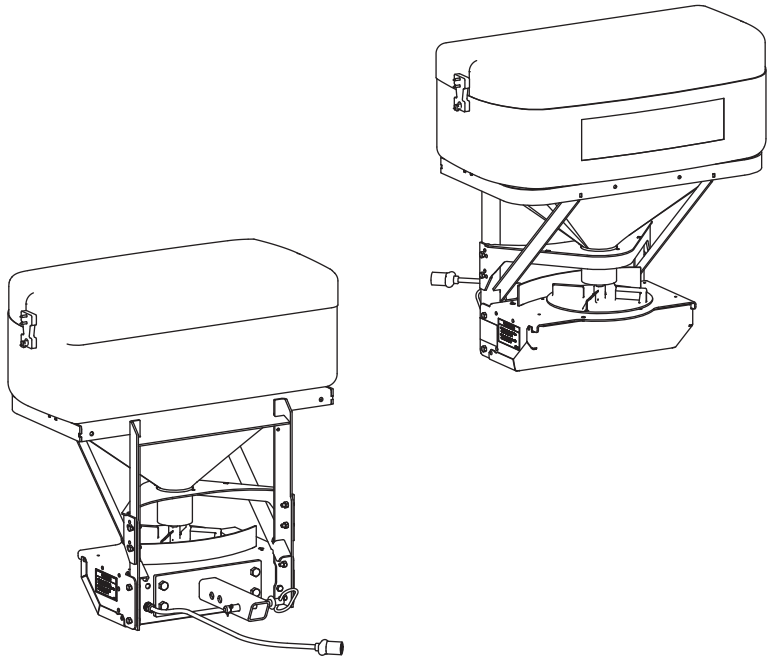
September 15, 2014
Lit. No. 43826, Rev. 01

SNOWEX®
LEADERS IN ICE CONTROL

SP-325, SP-575X and SP-1075X Tailgate Spreaders

Owner's Manual and Installation Instructions

Original Instructions



⚠ CAUTION

Read this manual before installing or operating the spreader.

This Parts List is for SnowEx single-stage tailgate spreaders with serial numbers 140502300135 and higher (Model SP-325), 140718300683 and higher (Model SP-575X) and 140722300276 and higher (Model SP-1075X).

This document supersedes all editions with an earlier date.

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This manual has been prepared to acquaint you with the safety information, operation and maintenance of your new tailgate spreader. Please read this manual carefully and follow all recommendations. This will help ensure profitable and trouble-free operation of your spreader. Keep this manual accessible. It is a handy reference in case minor service is required.

When service is necessary, bring your spreader to your distributor. They know your spreader best and are interested in your complete satisfaction.

NOTE: This spreader is designed to spread snow and ice control materials only. Do not use it for purposes other than those specified in this manual.

Warranty Registration

Follow the directions on the SnowEx Warranty Registration and Customer Survey form included in the spreader literature kit.

The registration form is also available online at ***www.snowexproducts.com.*** Under "Product Info" select "SnowEx Warranty" and click to download the form.

OWNER'S INFORMATION

Owner's Name: _____

Date Purchased: _____

Distributor Name: _____ Phone:_____

Distributor Address:_____

Vehicle Model:_____ Year: _____

Spreader Model: _____ Serial #:_____

Spreader Weight:_____lb/kg

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.

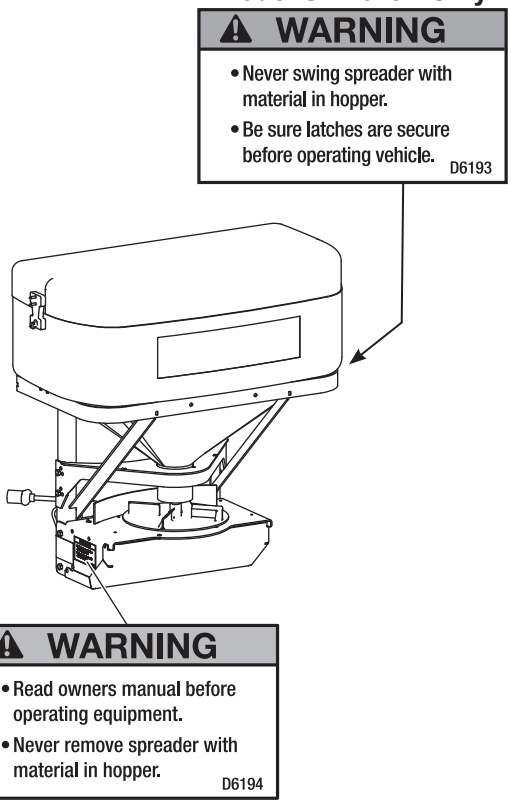
NOTE: Indicates a situation or action that can lead to damage to your spreader and vehicle or other property. Other useful information can also be described.

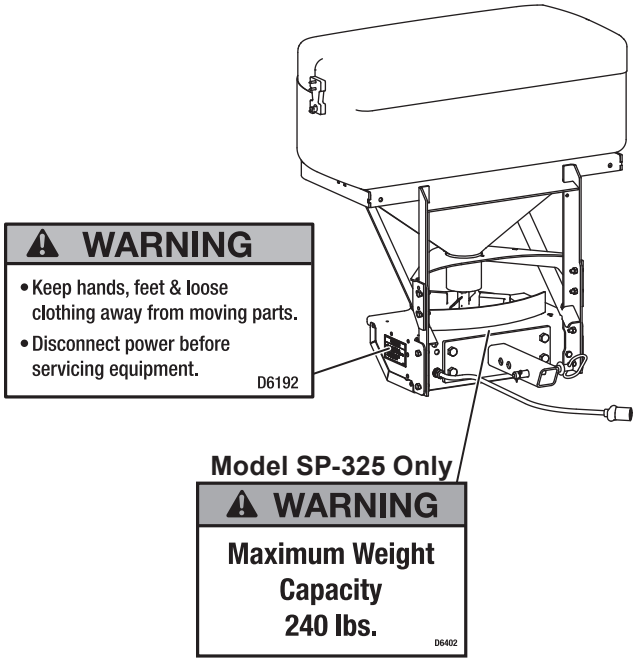
WARNING/CAUTION LABELS

Please become familiar with the Warning and Caution labels on the spreader.

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

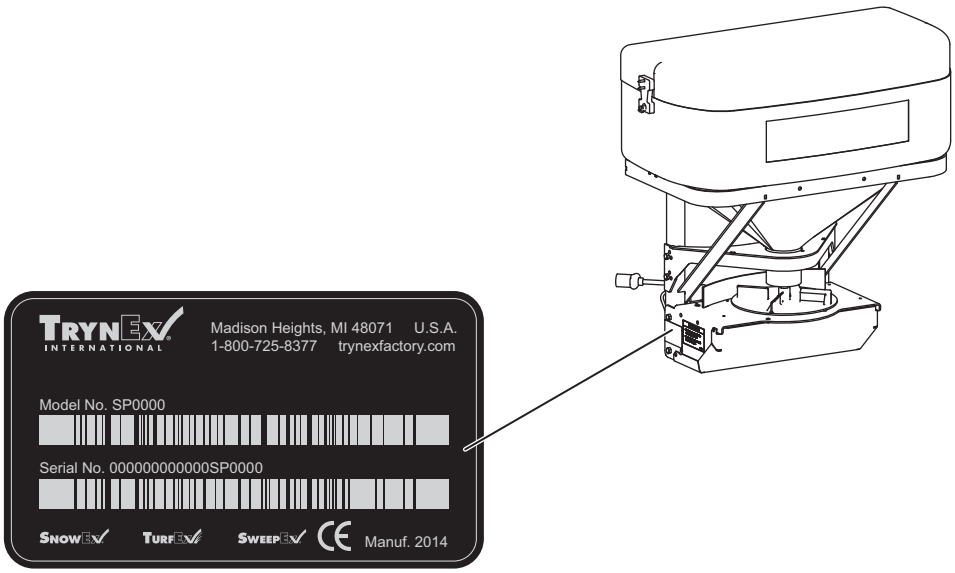
Model SP-1075X Only

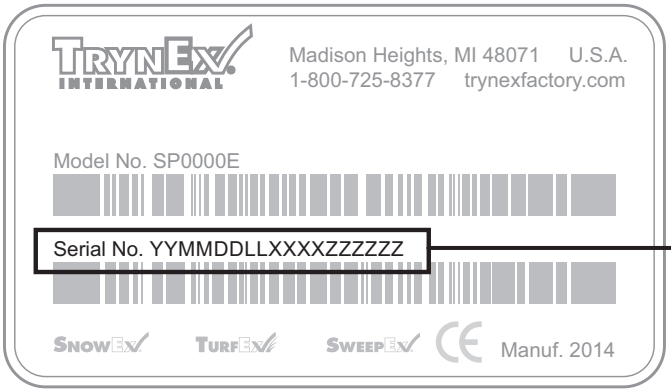




Model SP-325 Only

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	Assembly Part Number

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 all safety guards are in place.**
- **Before servicing the spreader, wait for 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 or GAWR ratings as found on the driver-side door cornerpost of the vehicle. See Loading Section to determine maximum volumes of spreading material.

⚠ WARNING

Do not install the control for this product in the deployment path of an air bag. Refer to vehicle manufacturer's manual for air bag deployment area(s).

⚠ CAUTION

During the hopper spreader installation we recommend the addition of an OSHA compliant Backup Alarm. This alarm is required for OSHA governed employers.

⚠ 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.**
- **While operating the spreader, use auxiliary warning lights, except when prohibited by law.**

⚠ 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.

PERSONAL SAFETY

- Remove 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 torque chart. Use standard methods and practices when attaching spreader including proper personal protective safety equipment.

Recommended Fastener Torque Chart (ft-lb)

Size	Torque		
	SAE Grade 2	SAE Grade 5	SAE Grade 8
1/4-20	6	9	13
5/16-18	11	18	28
3/8-16	19	31	46
3/8-24	24	46	68
7/16-14	30	50	75
1/2-13	45	75	115
9/16-12	66	110	165
5/8-11	93	150	225
3/4-10	150	250	370
7/8-9	150	378	591
1-8	220	583	893

Metric Grade 8.8 (ft-lb)

Size	Torque	Size	Torque
M 6	7	M 12	60
M 8	17	M 14	95
M 10	35	M 16	155

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

This Manual covers vehicles which 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 or GAWR as found on the driver-side cornerpost of vehicle.

MATERIAL WEIGHTS

⚠ CAUTION



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

CERTIFICATION

⚠ WARNING

New untitled vehicle installation of a spreader requires National Highway Traffic Safety Administration altered vehicle certification labeling. Installer to verify that struck load of snow or ice control material does not exceed GVWR or GAWR rating label and complies with FMVSS.

DETERMINING VEHICLE PAYLOAD

⚠ WARNING

Overloading could result in an accident or damage. Do not exceed GVWR or GAWR ratings as found on the driver-side door cornerpost 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 (step bumper, trailer hitch, snowplows, etc.). Fill gas tanks.

3. Obtain the Gross Vehicle Weight Rating (GVWR), Front Gross Axle Weight Rating (FGAWR) and Rear Gross Axle Weight Rating (RGAWR) from the certification label located inside the driver-side door jamb or door.

4. With the occupants in the truck 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 yard (lb/cu ft) of the desired material. Divide the weight into the payload to determine the maximum volume of material that can be carried.

7. Compare the maximum volume to determine the maximum height of the material in the hopper spreader.

8. Fill the hopper with the material to the calculated height. Reweigh the vehicle with occupants and verify the GVW, Front Gross Axle Weight and Rear Gross Axle Weight are less than the vehicle's ratings.

9. Repeat Steps 7 and 8 for each type of material.

⚠ WARNING

Do not overload vehicle. Use chart below to calculate weight of material. Weights of material are an average for dry materials.

⚠ 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	Density (lb/ft^3)
Rock Salt – Dry	80–90
Sand/Salt Mix – Dry	95–120
A 1:1 ratio is recommended for salt/sand mix to prevent material from freezing.	

Weight of spreader and mount must be added to struck material weight to determine total spreader weight.

⚠ 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

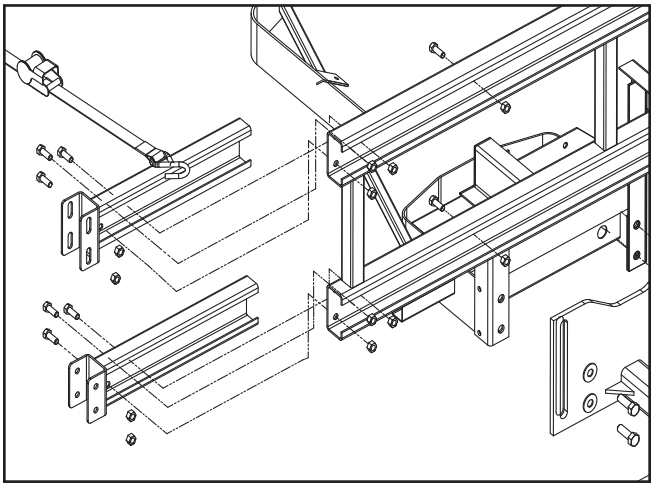
Before lifting, verify hopper is empty of material. The lifting device must be able to support the spreader's weight as shown in the spreader specifications table.

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

RECEIVER HITCH MOUNT INSTALLATION

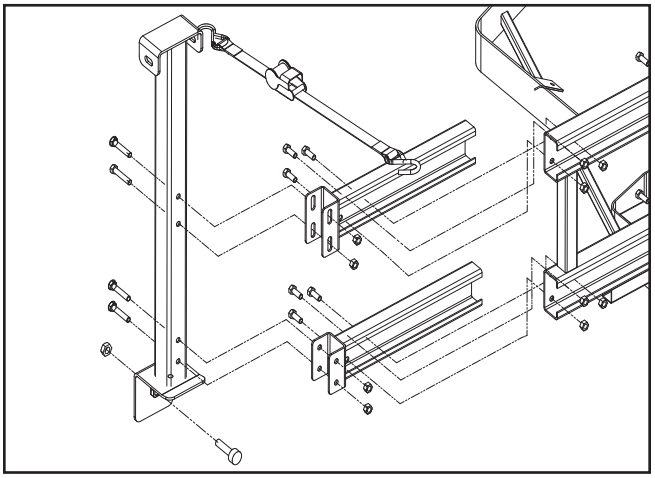
1. Insert the upper and lower channels into both ends of the mount rails. Assemble each rail to the frame using three supplied 3/8" x 1" cap screws and 3/8" locknuts.

2. Adding a fourth fastener will increase the strength of the mount. Using the fourth hole near the open end of each rail as a template, drill through the mount frame and install additional 3/8" fasteners.

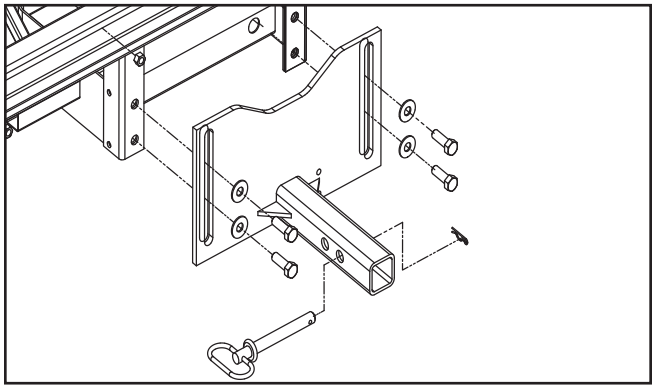


3. Insert the 2" receiver plate into the vehicle hitch and install pin.

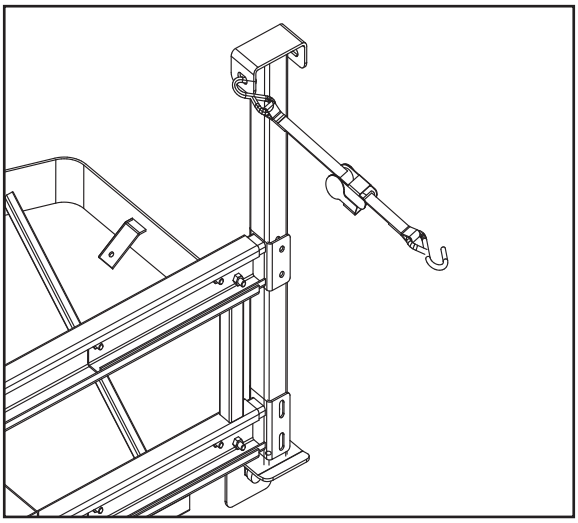
4. Install the vertical rail supports to the spreader frame channels using 3/8" x 3" fasteners.



5. Attach the spreader frame to the receiver plate using the supplied 1/2" x 1-1/2" cap screws. Tighten the receiver plate fasteners according to the torque chart.



6. On both sides of the spreader, install ratchet straps from the vertical frame support to an in-bed tie-down point.

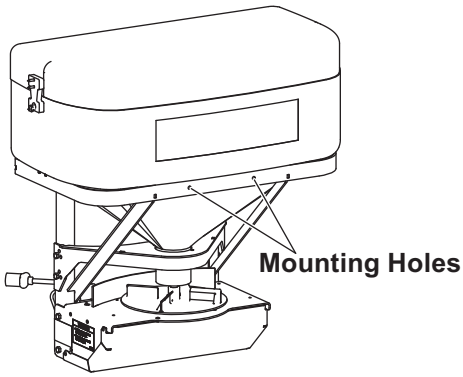


7. After first use, retighten all fasteners on the mount and spreader.

8. Connect the spreader power plug to the bumper power plug.

LICENSE PLATE INSTALLATION (IF REQUIRED)

Using two 1/4" x 1/2" machine screws and locking nuts fasten the license plate to the mounting holes in the hopper apron as shown.



MODEL SP-325 ONLY

1. Route the vehicle harness along the vehicle frame. Keep the harness away from high temperature components and moving parts.

   Attach the harness to frame holes and frame supports. Do not attach to fuel or brake lines. Use heavy-duty cable ties or frame clips to fasten the harness along the frame, and lighter-duty cable ties everywhere else.

2. Mount the rear plug on the vehicle bumper using the supplied fasteners. Make sure the plug cover leash is attached to one of the fasteners.Locate the plug toward the center of the bumper, away from the path of debris thrown by the tires.

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

3. Lay out the control power cable along the fire wall and fender well. Do not connect the power leads to the battery yet.

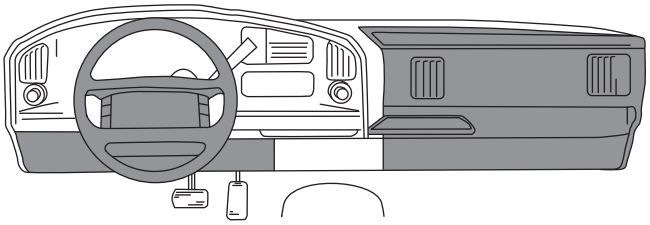
⚠ CAUTION

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

4. Route the control power cable and harness using an existing access hole or drill a new 3/4" hole through the firewall into the vehicle cab.
   Check the area on the other side of the fire wall to make sure you will not be drilling into the vehicle harness or a control module. Generally, either side of the steering wheel offers a good location.

⚠ CAUTION

Do not alter, modify or install additional components in shaded areas shown below. Failure to comply may interfere with airbag deployment or cause injury to operator in an accident.



5. Connect the harness and the control power cable to the back of the control and mount the control in a suitable location within easy reach of the vehicle operator without restricting access to the vehicle controls and instrumentation.

   Do not mount the control close to any heater vents or in areas prohibited by the vehicle manufacturer for crashworthiness. See the vehicle's body builder's book, owner's manual or service manual for details.

NOTE: You may want to contact the customer before mounting the control. Some prefer not to have holes drilled into the dashboard

6. Connect the power cable leads to the battery: Red POSITIVE (+), Black NEGATIVE (–). If using a dual battery system, always connect to the primary battery.

7. Secure loose loom to any other large or medium vehicle harness using medium-duty cable ties.

8. Toggle the control POWER switch ON and OFF to check for power. Once power has been confirmed, turn the control OFF.

- Read lead labels before attaching to power source or ground.
- No other devices may be spliced into the wiring harness.
- Any repairs to the wiring harness must be done with heat-shrink butt connectors.
- If adding an in-line fuse, use a 60-amp maxi fuse or circuit breaker.

NOTE: Use dielectric grease on all electrical connections.

NOTE: Do not modify harness length. Any modifications will void the warranty.

MODELS SP-575X AND SP-1075X ONLY

1. Mount the control module to the inner fender or the firewall. Be sure that the area around the control module is clear. Do not attach to fuel or brake lines.

2. Route the battery harness from the battery to the control module. Secure the harness with cable ties. Connect the harness to the battery.

   Keep the harness away from high temperature components and moving parts.

3. Connect the vehicle harness from the control module to the rear bumper.

4. Mount the rear plug on the vehicle bumper using the supplied fasteners. Make sure the plug cover leash is attached to one of the fasteners. Locate the plug toward the center of the bumper, away from the path of debris thrown by the tires.

⚠ CAUTION

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

5. Route the data cable from the control module into the cab through an existing access hole or drill a new 3/4" hole through the firewall into the vehicle cab. Secure with cable ties.

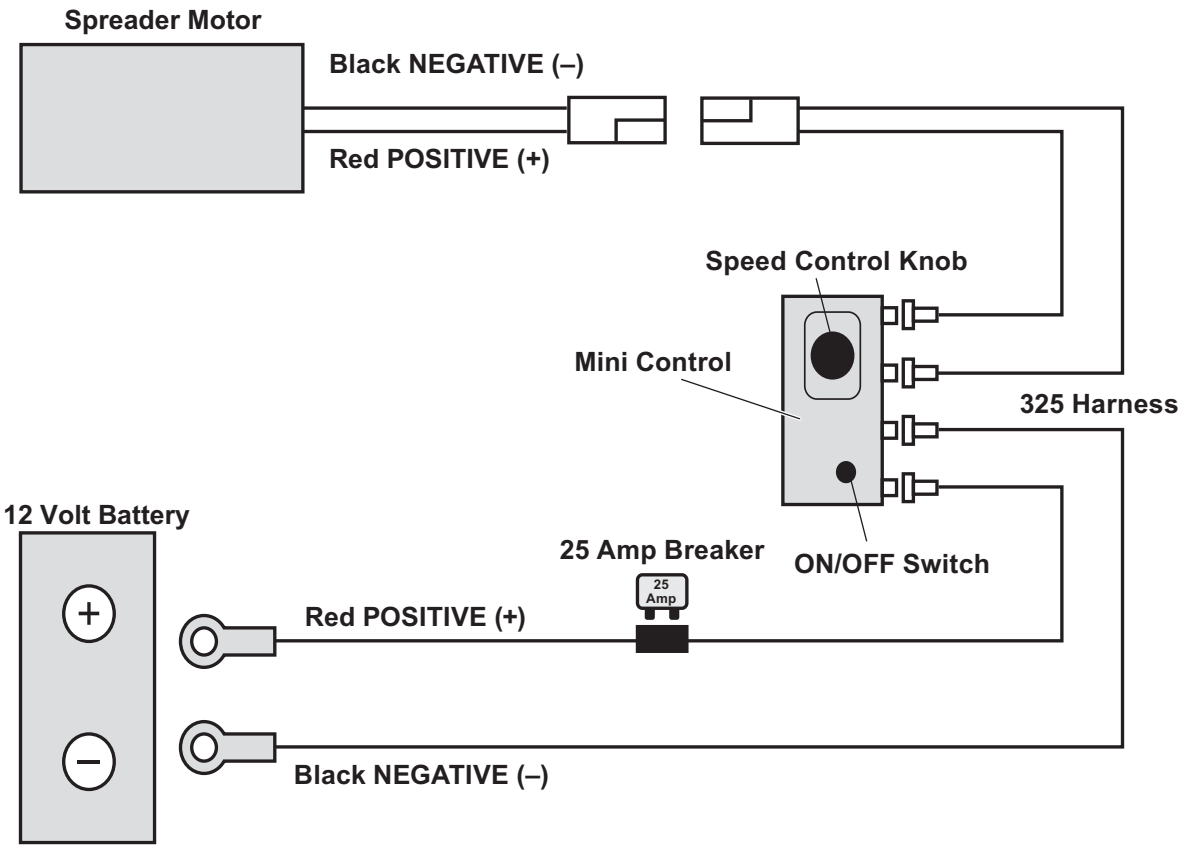
6. Connect the control pendant to the data cable. Store the pendant in a cool, dry place. High temperatures could damage the control pendant.

   If adding an inline fuse, use a 35 amp slow blow (time delay) or a 35 amp relay.

NOTE: Use dielectric grease on all electrical connections.

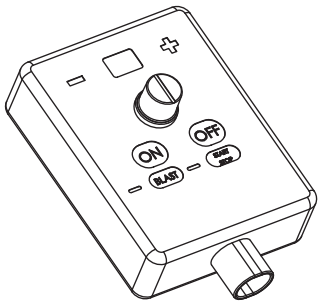
NOTE: Do not modify harness length. Any modifications will void the warranty.

SP-325 WIRING DIAGRAM

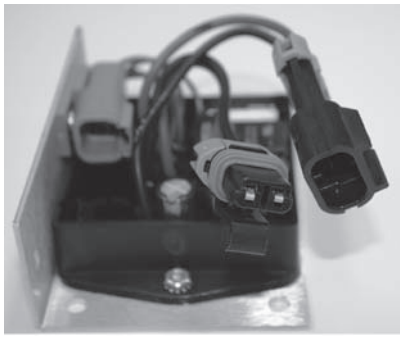


SP-575/SP-1075 WIRING DIAGRAM

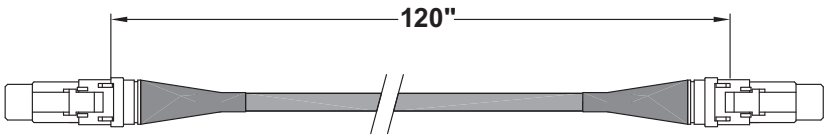
Control Pendant



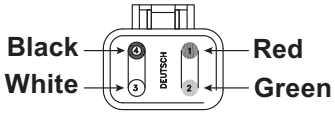
Control Module



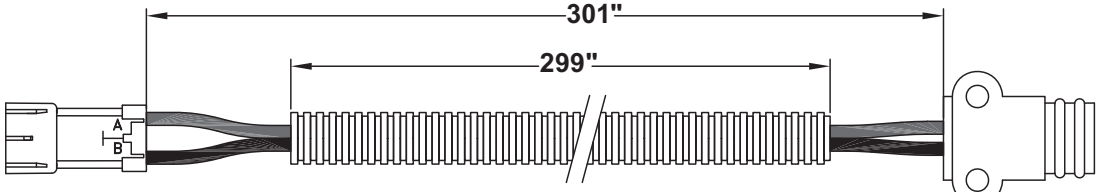
Data Cable



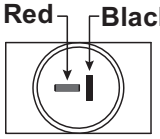
Load View



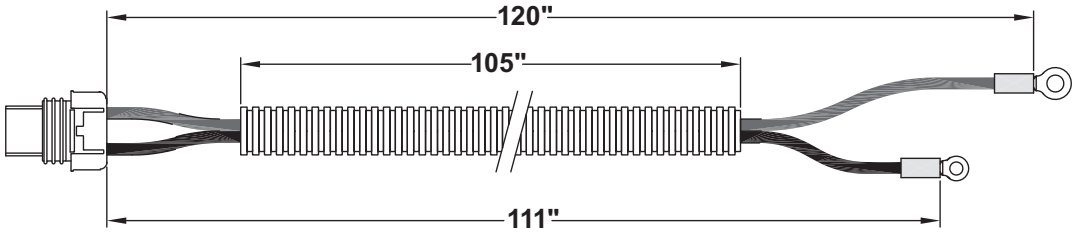
Vehicle Harness



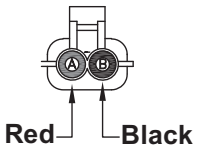
Load View



Battery Harness



Load View



⚠ WARNING

Never operate equipment when under the influence of alcohol, drugs, or medications that might alter your judgment and/or reaction time.

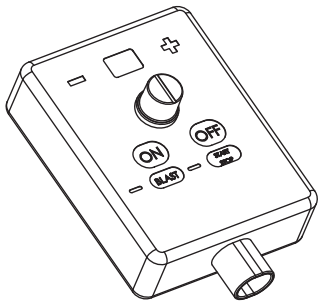
⚠ WARNING

Never exceed 45 mph (72 km/h) when loaded spreader is attached to vehicle. Braking distances may be increased and handling characteristics may be impaired at speeds above 45 mph (72 km/h).

⚠ WARNING

Never allow children to operate or climb on equipment.

CAB CONTROL



Starting and Stopping the Motor

⚠ WARNING

Before starting the spreader, the driver shall verify that all bystanders are a minimum of 25 feet away from operating spreader.

To start the spreader, press the ON button on the control.

Press the OFF button to stop the spreader.

NOTE: The truck ignition must be ON to start the spreader.

NOTE: If truck ignition is turned OFF while spreader is running, the motors will stop.

Adjusting Spinner Speed

Spinner speed can be adjusted to get desired spread distance.

1. Turn the speed dial clockwise to increase speed. When the POWER switch is set to the ON position, the spreader will accelerate to the speed set on the dial.

2. Turn the speed dial counterclockwise to decrease speed.

NOTE: The spinner motor is not designed for continuous duty. Allow the motor to cool between long cycle times.

⚠ CAUTION

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

Alarm Codes

If the control emits beeping sounds, check the display for problem codes and follow the instructions given in the Troubleshooting section of this manual.

Refer to the Troubleshooting section if any problems occur while operating the spreader.

SPREADING TIPS

- Spread ice melters with the storm to prevent unmanageable levels of ice.
- Never exceed 10 mph (16 km/h) when spreading.
- For a heavier pass, drive slower.
- Never operate spreader near pedestrians.
- Calculate spread pattern when near vegetation.

⚠ WARNING

Never remove the spreader with material in the hopper.

⚠ CAUTION

Disconnect electric power at spreader electrical wiring harness connection and tag out if required before servicing or performing maintenance.

⚠ CAUTION

- **When replacing parts use only original manufacturer's parts. Failure to do so will void warranty.**
- **The control is a solid-state electronic unit and is not serviceable. Any attempt to service will void warranty.**
- **There are no serviceable parts in the motor/ transmission assembly. Any attempt to service will void warranty.**
- **When pressure washing motor enclosure area, stay at least 36" away from motor enclosures.**

LUBRICATION

To keep your spreader running smoothly, observe the following recommendations:

- Lubricate bearings after every 20 hours of use.
- Apply a small amount of light oil to latches as needed.

AFTER EACH USE

⚠ 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.

- Wash out the hopper and rinse off all external surfaces.
- Apply dielectric grease on all electrical connections to prevent corrosion.

AT THE END OF EACH SEASON OR AFTER EXTENDED STORAGE

- Wash out the hopper and rinse off all external surfaces.
- Apply dielectric grease on all electrical connections to prevent corrosion.
- Lubricate all grease fittings with good quality multipurpose grease.
- Oil or paint all bare metal surfaces.
- If motor cover is removed for any reason, use silicone sealant to ensure weather proofing of enclosure.

STORAGE

Store the spreader in a clean, dry location and away from direct sunlight.

NOTE: In the off season, remove the control and put it in a cool, dry place. Vehicle interior summer temperatures could damage the circuit board and void the warranty.

TROUBLESHOOTING

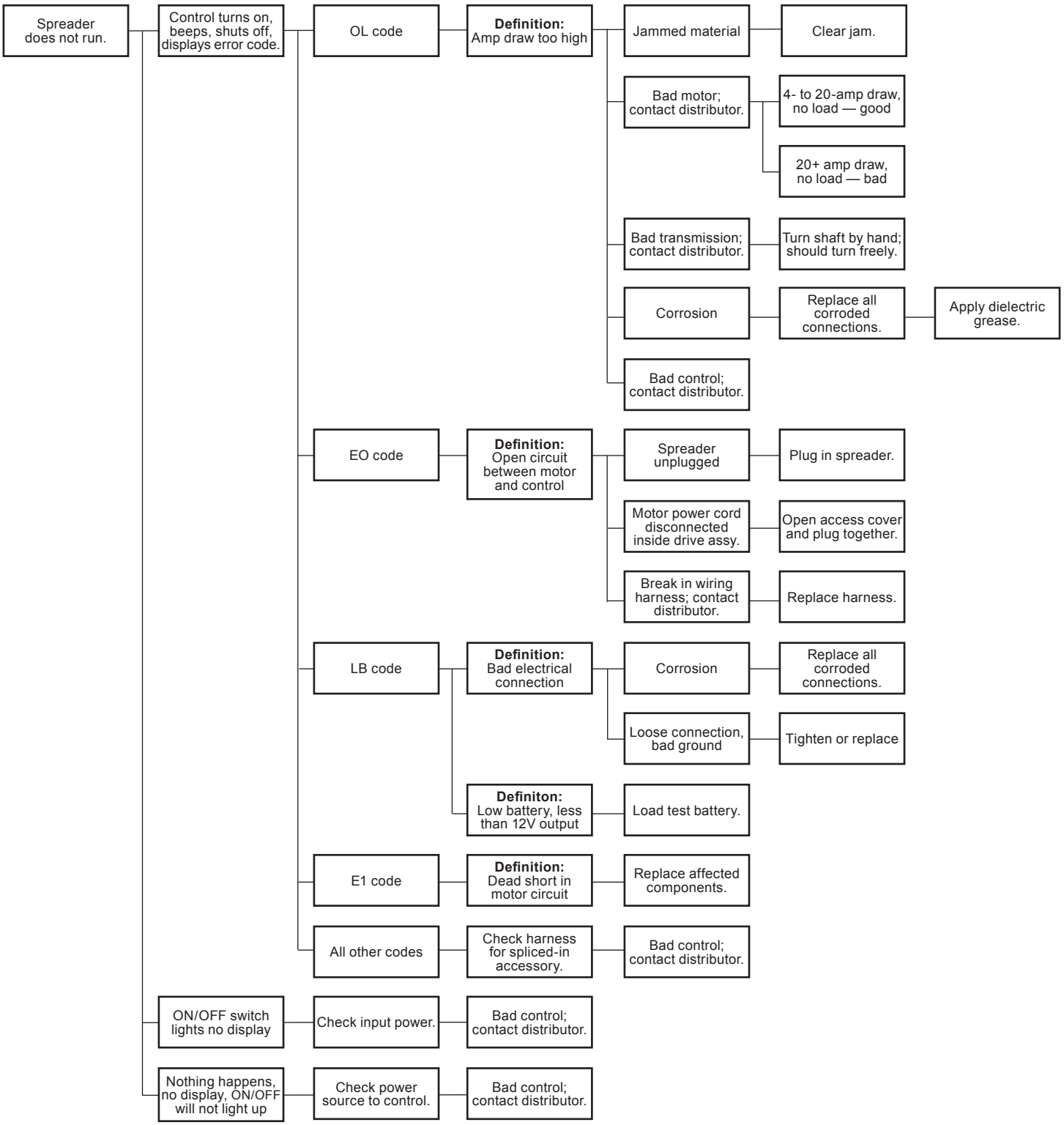
Please see your SnowEx distributor for service. The troubleshooting reference table below and the diagrams on the following pages may also guide you in diagnosing the issue.

Before servicing the spreader:

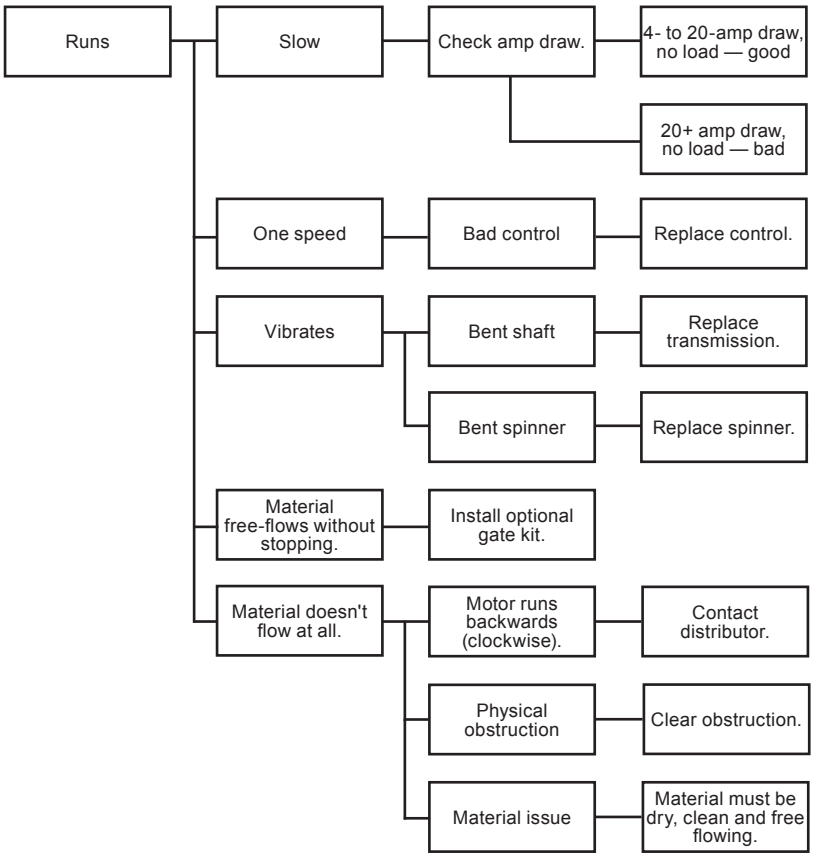
- Review all safety information.
- Confirm that all electrical connections are tight and clean.
- Confirm that nothing is jammed in the hopper.

ISSUE	POSSIBLE CAUSE	POSSIBLE SOLUTION
Motor doesn't run.	Loose electrical connections	Check all connections.
	Blown fuse	Replace fuse.
	Motor seized	Replace motor.
Control shuts down.	Jammed auger	Carefully clear jammed material.
	Poor electrical conditions	Clean or replace connectors. Apply dielectric grease.
	Electrical short	Check electrical connections. Check for bare wires.
	Control failure	Replace control.
Material does not flow from hopper.	Empty hopper	Fill hopper.
	Wet material	Replace with dry material.
	Frozen or coarse material	Replace material.
	Spinner not turning	Check drive assembly.
	Auger loose on shaft	Align auger with flat machined area on shaft and tighten locking bolt on side of auger.
	Vibrator not working	Check electrical connection; if connection is good, replace vibrator.
Alarm beeps, display shows "**OL**" or "**OH**."	Jammed auger, overload shutdown	Turn spreader OFF for 3 seconds, then restart. If alarm continues, turn spreader OFF and clear lumps and debris from around auger.
Alarm beeps, display shows "**E1**."	System short	Turn spreader OFF. Do not use spreader until problem is corrected.
Alarm beeps, display shows "**EO**."	No power to motor	Turn spreader OFF. Check all electrical connections.
Alarm beeps, display shows "**LB**."	Vehicle battery is extremely low or a poor connection exists.	Turn spreader OFF. Charge vehicle battery.

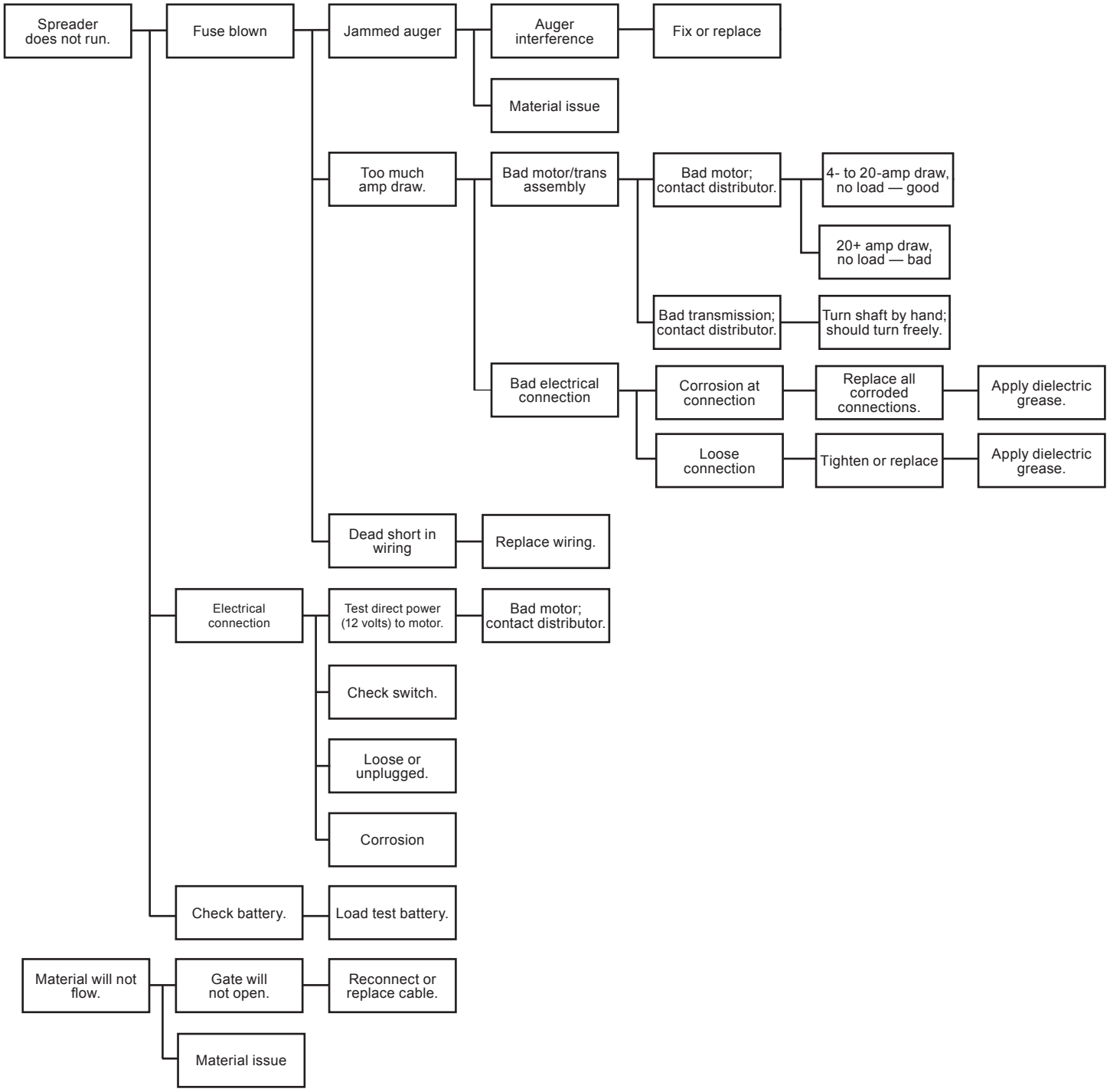
MODELS SP-575 AND SP-1075



MODELS SP-575 AND SP-1075 CONTINUED



MODEL SP-325


Spreader does not run.
Fuse blown
Jammed auger
Auger interference
Fix or replace
Material issue
Too much amp draw.
Bad motor/trans assembly
Bad motor; contact distributor.
4- to 20-amp draw, no load — good
20+ amp draw, no load — bad
Bad transmission; contact distributor.
Turn shaft by hand; should turn freely.
Bad electrical connection
Corrosion at connection
Replace all corroded connections.
Apply dielectric grease.
Loose connection
Tighten or replace
Apply dielectric grease.
Dead short in wiring
Replace wiring.
Electrical connection
Test direct power (12 volts) to motor.
Bad motor; contact distributor.
Check switch.
Loose or unplugged.
Corrosion
Check battery.
Load test battery.
Material will not flow.
Gate will not open.
Reconnect or replace cable.
Material issue

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