

SHPE spreaders



SHPE0400

SHPE0750

SHPE1000

SHPE1500

SHPE2000

A. CONTROLLER

3014199

1 Error codes

A "H" CODE (Short circuit)

- 1 This will appear in either the auger or spinner panel of the controller.
- 2 Inspect the wires on the wire harness for a cut.
- 3 Verify that there is no corrosion or damaged terminals on the wire harness or controller.
- 4 If the wires look good and no short is found, put power directly to the pigtail of the motor with a secondary power source such as a battery and verify that the motor is not the issue.
The motor will run at the high speed. If the motor does not power up then there is a short within the motor.
- 5 If the motor runs, then make that same connection where the wire harness meets the controller in the cab. If the motor does not run then the short is in the wire harness.
- 6 If you are unable to find a short as the controller is indicating, then replace the controller.

B "J" CODE (Jam detected)

- 1 This will appear in either the auger or spinner panel of the controller.

A Auger jam

- 1 The auger will reverse itself three times to attempt to break loose the rock, stick or stone that is interfering with the auger.
- 2 The heaviest material that this spreader can use is a 50/50 of a sand/salt mixture. Any higher percent of sand than 50% will start to jam the spreader. Also if the material is damp or wet this will add to the weight of the material.
- 3 Ensure that the provided tarp is being used to keep the water out of the hopper. Without this, the moisture of the material will tend to bunch up and form into a mass.
- 4 Check for a physical jam in the auger. The material will have to be removed from the hopper in order to find the object or piece that is restricting the movement of the auger.
- 5 If no object was found jammed in the auger, then test the strength of the motor by putting power directly to the pigtail to ensure that the motor is still strong enough to move the material.
- 6 Remove the bearing to properly inspect.
- 7 Remove the motor / gearbox to inspect the issue.
- 8 With the spreader not having a jam and the motor is at full strength, the controller could be giving a false error code. You will need to replace the controller.

B Spinner jam

- 1 When the jam code comes up on the spinner it is usually material related, with the material being too heavy. The auger may be overpowering the spinner, and there is too much flow to the spinner.
- 2 The next step if the material is not too heavy would be to check the strength of the motor. Apply power directly to that and determine if that will spin at the high speed.
- 3 If you are unable to clear the jam code, try another controller. This may be a controller giving a false indicator.

C "P" CODE (Motor overload)

- 1 Ensure that the connection to the motor is good.
- 2 Verify that the pins are connected and not bent or corroded in the wire harness
- 3 Inspect the wires on the wire harness for a cut or corrosion.

- 4 If the wires look good and no short is found, put power directly to the pigtail of the motor with a secondary power source such as a battery and verify that the motor is not the issue. The motor will run at the high speed. If the motor does not power up then there is a short within the motor and the motor will need to be replaced.
- 5 If the motor runs, then make that same connection where the wire harness meets the controller in the cab. If the motor does not run then the short is in the wire harness.

D "F" CODE (Blown fuse)

- 1 The F code will appear on the controller display in the window for which the fuse is blown.
- 2 On the bottom of the controller are several screws. You want to loosen the four innermost screws to gain access to the inside of the box. Once inside, with the face of the controller closest to you, on the right side will be the auger fuse and on the left will be the spinner fuse. Replace the fuse that the controller is indicating that is blown. This is a regular 40 amp automotive fuse.

E "L" CODE (Low voltage)

- 1 If the truck is diesel, ensure that all connections for the spreader are made on the drivers side battery or the primary battery. The controller will send false signals or error codes if this is not on the primary battery.
- 2 Verify that the truck is providing the controller 12 volts.
- 3 Verify that the controller has 12 volts coming out of it.
- 4 Replace the controller if there are less than 12 volts coming out of the controller.

2 Repair parts

- A Round repair end: 3024188
- B Push button: 3055980
- C Rocker switch (older controllers): 3021616

3 Color codes

- A Brown: Light
- B Red: Auger positive
- C Green: Auger negative
- D White: Vibrator positive
- E Black: Vibrator negative
- F Yellow: Spinner positive
- G Blue: Spinner negative

B. AUGER

1 If the auger is not spinning

A Bearing

- 1 Rusted bearing: The auger bearing is located on the cab side of the hopper. This needs to be greased every 7-10 hours of operation. At the back of the spreader is a grease tube that runs the entire length of the hopper so you can grease the bearing from the back instead of reaching down into the bed to do this.
- 2 Set screw: Ensure that the set screw is tight and not allowing the auger to rotate within the bearing.

B Shear pin

- 1 There is a pin that attaches the auger gearbox to the auger. This will break to protect the gearbox from getting overloaded.

C Auger motor

- 1 Weak motor: Apply power directly to the pigtail of the motor with a secondary power source such as a battery and verify if the motor is weak.

D Material bogging

- 1 If too much material or if wet material is in the trough, the auger motor will feel that weight and may prematurely burn that motor out.

2 Addition auger issues

- A Auger rubbing:** If the auger is out of round, it may be rubbing or grinding on the trough wall. This auger would need to be replaced.

C. CHUTE

1 Spread pattern adjustment points

- A Diverter:** Inside of the chute is a material guide, which is intended to help locate the material so that it hits the center of the spinner and provides an even distribution of the salt when leaving the chute.
- B Chute assembly adjustment:** There are three holes on the side bracket of the chute. These holes are helped to assist in the location of the material to the center of the spinner. Here are the locations, and what their functions are:
- 1 Center set of holes: This is for #1 rock salt
 - 2 Holes closest to the cab: This is designed for use of lighter and dry material such as calcium chloride pellets.
 - 3 Holes closest to the tailgate: This setting would be for heavier material such as a 50/50 sand/salt mixture.
- C Spinner shield:** This can be rotated to control the direction of the spray pattern

D. MOTORS

1 Replacement motors

- A Auger: 3019085
B Spinner: 3012431

2 Motor specs

- A 3019085
- NORMAL LOAD
 - Power: 14 FT/LB
 - Current: 40 Amps
 - RPM: 146
- B 3012431
- NORMAL LOAD
 - Power: 308 W
 - Current: 26 Amps
 - RPM: 320

E. HOPPER

1 Adjustment points

A Deflectors: This is a two piece design at the bottom of the hopper. The two pieces are telescopic to help control the flow of the material. Each side of the deflector has a screw that you can loosen to adjust the openings. We recommend the following for each type of material:

- 1 Expose more of the auger on the rear: This would be for spreading heavier material such as a 50/50 mixture of sand/salt. This will allow the material to travel a shorter distance on the auger and thus keeping the pressure off of the auger motor.
- 2 Exposed more of the auger on the cab side: This would be for spreading lighter material such as #1 rock salt. This is considered a lighter material, so traveling the entire auger is what will happen here.

F. VIBRATOR

1 Function

A DO NOT RUN THE VIBRATOR CONSTANTLY because it will run the risk of compacting the material and making it difficult to feed through the auger or chain. Running this constantly also prematurely will wear the vibrator motor out. The best practice is a 2/1 ratio, such as two minutes on and one minute off.

2 Maintenance

A Check every ten hours of use to ensure that the bolts attaching the vibrator and the vibrator plate to the hopper are firmly secured. Without this being tight, you run the risk of punching a hole in the poly hopper.

G. MATERIAL

1 Types of material to use

A Bagged rock salt, bulk salt or a 50/50 of a sand/salt mixture. Straight sand or anything with a higher concentrate of sand will be a challenge to get that material to feed.

2 Material related issues

A Always use the provided tarp to cover the hopper and keep the moisture out of the hopper. This will reduce the risk of the material freezing while in the hopper.

1 Heavier material

A Materials such as a 50/50 sand/salt mixture or damp salt can overload the spreader. With this material being used, you would want to adjust the deflectors, which are telescopic, at the bottom of the hopper to accommodate this material. The deflectors should be set with a larger opening on the rear of the spreader to allow the material to not have to run the entire length of the auger or chain.

2 Size variation

A Larger material will bridge a lot easier. Running the vibrator would help keep this material moving.

3 Material not flowing

A If the spreader is "starving" for material the material could be sticking to the side wall and using the vibrator would allow this to flow better.

4 Low flow kit

- A An optional piece that we offer is a low flow kit. The part number is 3068202. This kit would be used in place of the deflector in the hopper.

5 Adjustable spinner

- A Buyers offers an adjustable spinner for those materials that are difficult to spread evenly. The fins are adjustable on the spinner to be positioned in any orientation that will allow you to get a spread that produces an even distribution. The part number of this spinner is 3053051.

H. WIRE HARNESS

1 Repair ends

- A Auger / Vibrator (4 pin): 3054939
- B Spinner (2 pin): 3054940
- C Controller (Round): 3024188

2 Replacement orange weather plugs

- A 2 pin: 3065438
- C 4 Pin: 3065437

3 Color codes

- A Brown: Light
- B Red: Auger positive
- C Green: Auger negative
- D White: Vibrator positive
- E Black: Vibrator negative
- F Yellow: Spinner positive
- G Blue: Spinner negative

I. Truck

1 Voltage

- A This spreader is a wire ground electrical system. There is no need for connections to the trucks frame or body. Always disconnect the battery before attempting to install the electrical components.
- B To insure good performance of your spreader, check the condition of the trucks electrical system. Using a digital voltmeter, check the alternator and battery voltage. The voltage reading should be between 13.5 and 15.3 volts with the engine running, headlights and heater fan turned on. If the voltage reading falls out of this range, check and adjust your electrical system.

2 Diesel trucks

- A For diesel trucks there are two batteries. All connections for the salt spreader should be connected to the primary battery.