

Installation & Operating Instructions

Multiplex Control and Wiring Harness Installation

⚠ IMPORTANT

Read and fully understand the entire Installation and Operator's Manual before installing and operating this spreader. This system is a wire only connection system, no connections to truck's frame, body or spreader components is allowed.

⚠ WARNING

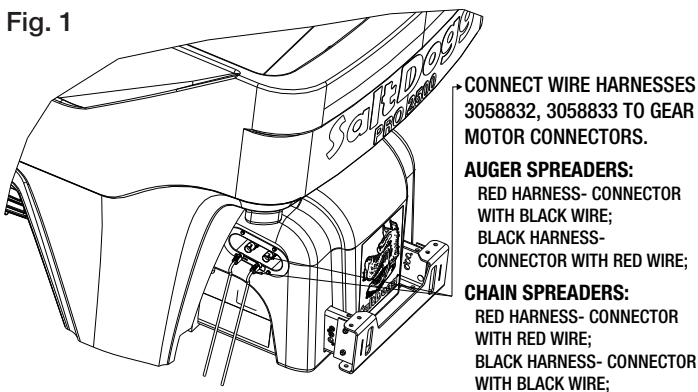
Do not drill holes into fuel tanks, fuel lines, through electrical wiring, etc that may be damaged by drilling. To insure good performance of your spreader, check the condition of truck's electrical system. Using digital voltmeter, check alternator and battery voltage. With engine running and head lights and heater fan ON good voltage reading should fall between 13.0 and 15.3 volts. If voltage reading falls out of this range, check and adjust your electric system

Note: Always disconnect battery before attempting to install electrical components on your vehicle

For a PRO1500, PRO2000, PRO2500 Series Spreader, install the power module using the following steps. (For Stainless Steel V-Box Spreaders, skip to the section below)

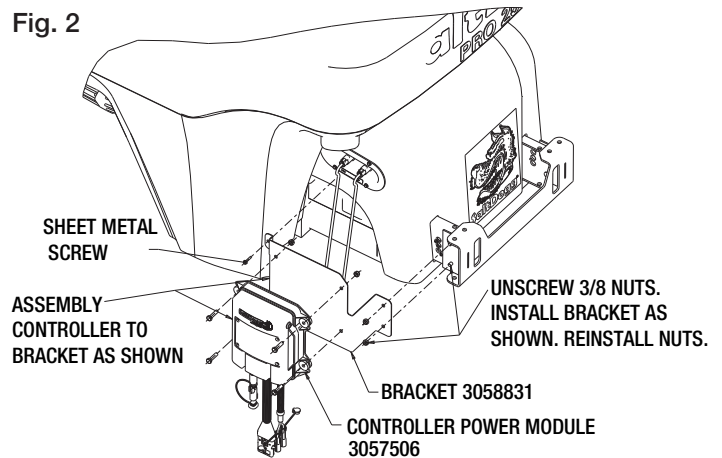
1. Connect wire harnesses 3058832 and 3058833 as shown below (Fig 1).

Fig. 1



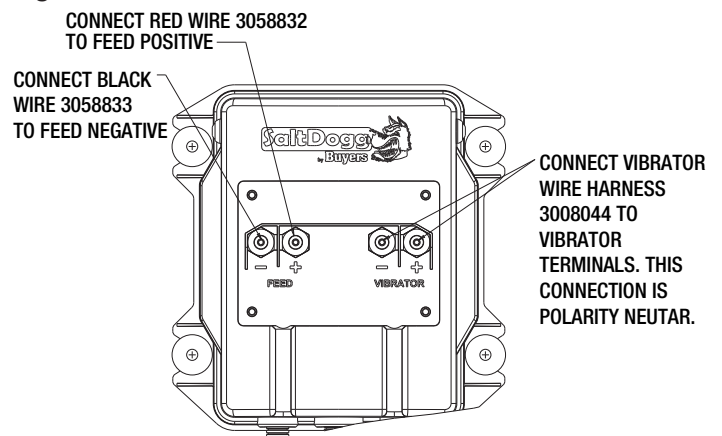
2. Install bracket 3058831 and controller power module 3057506 as shown below (Fig 2).

Fig. 2



3. Remove power module cover to expose FEED and VIBRATOR terminals.

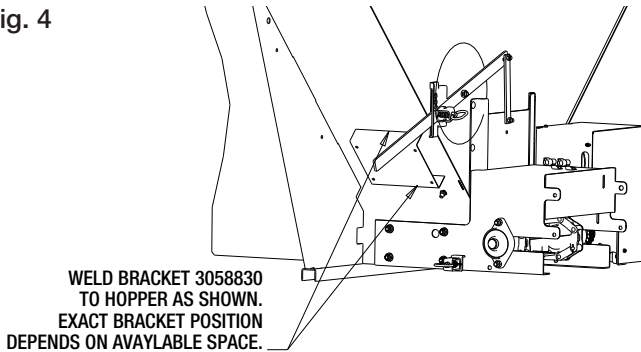
Fig. 3



- 4.** Trim wire harnesses 3058832 and 3058833 to desired length.
- 5.** Strip wires and crimp on ring terminal 3058834.
- 6.** Attach the red wire to FEED positive terminal.
- 7.** Attach the black wire to FEED negative terminal.
- 8.** Apply dielectric grease or equivalent protector over FEED terminals.
- 9.** Connect vibrator wire harness 3008044 to spreader vibrator.
- 10.** Trim wire harness 3008044 to necessary length. Strip wire ends and crimp on ring terminals 3010632.
- 11.** Attach the two ring terminals to VIBRATOR connectors. Vibrator is polarity neutral device.

12. Apply dielectric grease or equivalent protector over VIBRATOR terminals
13. Reinstall Power Module cover.

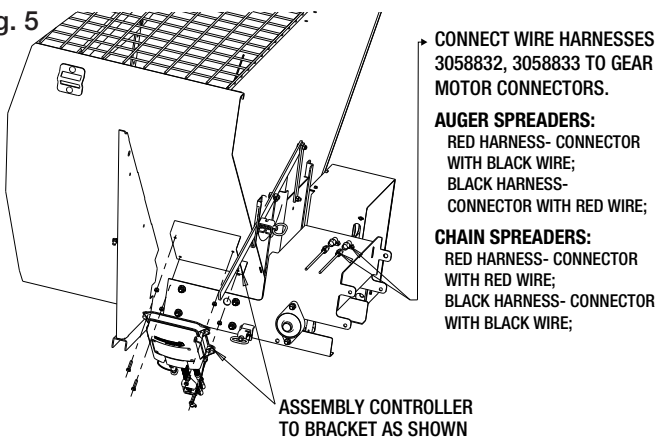
Fig. 4



For Stainless Steel V-Box Spreaders, install the power module using the following steps. (For other electric type spreaders, the Power Module location is per installer's discretion. The Power Module must be always elevated from the truck's floor to avoid water contact)

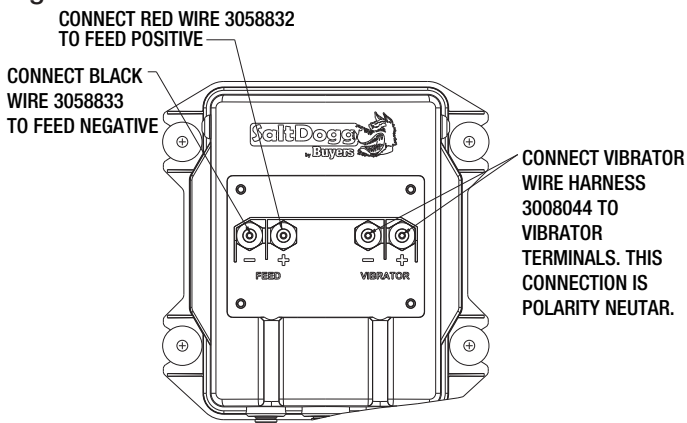
1. Weld bracket 3058830 to spreader as shown below (Fig. 5).

Fig. 5



2. Assembly Power Module as shown below (Fig 6). Connect Wire Harnesses 3058832 and 3058833 as shown below (Fig 6).

Fig. 6



3. Remove power module cover to expose FEED and VIBRATOR terminals.
4. Trim wire harnesses 3058832 and 3058833 to desired length.
5. Strip wires and crimp on ring terminals 3058834.
6. Attach the red wire to FEED positive terminal.
7. Attach the black wire to FEED negative terminal.
8. Apply dielectric grease or equivalent protector over FEED terminals. If the spreader is equipped with vibrator, follow the steps below. Otherwise skip to step 13.
9. Connect vibrator wire harness 3008044 to spreader vibrator.
10. Trim wire harness to necessary length. Strip wire ends and crimp on ring terminals 3010632.
11. Attach the two ring terminals to VIBRATOR connectors. Vibrator is polarity neutral device.
12. Apply dielectric grease or equivalent protector over terminals.
13. Reinstall Power Module cover.

Wire Harness, Multiplex installation.

Follow picture and steps outlined below.

1. If you are updating an existing spreader to a Multiplex controller, remove the in-cab controller, main harness and power cable. Leave circuit breaker and cable wire 3001379 in place. If this is a new installation, install circuit breaker and cable wire 3001379 as described in standard controller installation.

WARNING

Do mount controller in the way of air bag deployment

2. Install in-cab controller 3057505 using (2) re-closable "Velcro strip" fasteners 3059102.
3. Route the in-cab portion of wire harness 3056198 into the truck's cab. Ensure no wires are nicked or damaged during installation. Add grommets where necessary. Connect harness to cab control. Secure harness inside the truck's cab.
4. Route the wire harness in the engine compartment and under the truck's frame (see Fig 7).
5. Lay out path for wire harness to the rear of the vehicle. Stay clear of the exhaust system. Excess heat can damage the wire harnesses. Use quick ties to secure harness to underbody. If necessary, coil and secure excess wire harness under truck's frame.
6. The 6 pin main connector can be attached to bracket 3058829 as shown below (see Fig 8) . This bracket can be attached to truck in desired location. Make sure that Power Module harness with mating connector can reach main harness connector (see Fig. 8).
7. Connect spinner connectors (See Fig 7).
8. Various lights with maximum current draw of 5 AMP can be connected to Power Module auxiliary harness.

The Auxiliary harness has 2 pairs of terminals to operate 2 circuits:

- Terminal 1 +
- Terminal 3 -
- Terminal 2 +
- Terminal 4 -

In-Cab Controller Operating Instructions

- 1.** To start the in-cab controller/spreader, be sure that truck's engine is running to prevent battery from discharging. Press the POWER button to turn controller ON. The Controller's keypad and display will illuminate.
- 2.** To adjust feed and spinner speeds, press FEED and SPIN buttons until the desired speed is achieved. The Speed is shown on the display in numbers 0-9.
- 3.** To activate vibrator momentary, press and release VIB button. To activate vibrator for an extended period, press and hold VIB button for 2 sec. The display screen will show that the vibrator is ON.
- 4.** Pressing the PAUSE button will pause all spreader functions. Pressing the PAUSE button again will restore all functions in same settings as before PAUSE.
- 5.** To turn controller OFF, press the POWER button again. The Spreader/Controller can be stopped by the POWER button at any time.
- 6.** There are two Preset setting buttons (1 and 2). These preset buttons will allow you to preset the FEED and SPIN speeds to two different presets. To create preset 1, press button 1. The Display will show PRESET 1 and speed numbers. Adjust the FEED and SPIN speeds to the desired number, then press and hold button 1 until you hear a beep. The Controller will switch to these speeds and remember this setting. Use this same procedure to create PRESET 2.
- 7.** To activate PRESET 1, press button 1 twice. The PRESET speeds will be activated. Use the same procedure to activate preset 2.
- 8.** Auxiliary lights must be connected to the auxiliary harness located on POWER MODULE. To activate the auxiliary lights, press the AUX button.

WARNING

Do not connect axillary lights ground wire to trucks body or spreader!

CONTROLLER DIAGNOSTICS

WARNING

Shut off vehicle before servicing, adjusting, or cleaning. Do not unclog material jams without shutting off the vehicle and disconnecting the hydraulics and/or power to the spreader.

This controller is programmed to detect several issues. If an issue is present, the controller will give a warning on display and sound signal.

FEED NC, SPIN NC, VIBR NC – The feed, spinner or vibrator motor are not connected. Inspect and connect motors.

FEED JAM – The feed motor is jammed or overloaded. Clear the jam, and potentially adjust the inverted vee inside hopper to reduce motor load.

SPIN JAM – The spinner motor jammed or overloaded. Reduce amount of material to spinner, clear spinner before starting spreader, and/or make sure that spinner not rubbing against anything.

FEED SHORT, SPIN SHORT, VIBR SHORT – There's a short circuit in the electrical system. Find and eliminate the short circuit.

OVER TEMP – The controller internal temperature too high. Turn off the controller to reduce temperature. Lower speeds to reduce controller load.

HIGH VOLT – A voltage higher than 16 VDC is detected. Turn the controller off. Correct truck electrical system to have the proper voltage.

LOW VOLT – A voltage near or below 10 VDC is detected. Turn the controller off. Correct truck electrical system to have the proper voltage.

SERV VIBR – This is a vibrator diagnostic. To use the vibrator diagnostics properly, follow the below steps:

- 1.** Make sure that the spreader is secured in the truck's bed. Inspect and tighten spreader tie downs.
- 2.** Inspect and retighten vibrator mounting hardware that mount the vibrator to the hopper.
- 3.** With an empty spreader, turn on the controller and turn VIBR on.
- 4.** Hold the AUX button down for 5 seconds until the display shows "V-LEARN". Release the AUX button. Press the VIBE button until the "V-LEARN" message disappears.
- 5.** Your Controller is now re-calibrated. If the vibrator becomes loose or the electric current rises above the normal range, SERV VIBR will appear on the in-cab controller screen. If this message appears again, retighten the vibrator mounting hardware, and inspect/replace the vibrator connectors.

WARRANTY

Buyers Products Co. warrants all truck/trailer hardware manufactured or distributed by it, to be free from defects in material and workmanship for a period of one year from date of shipment. Parts must be properly installed and used under normal conditions. Any product which has been altered, including modification, misuse, accident or lack of maintenance will not be considered under warranty. Normal wear is excluded. The sole responsibility of Buyers Products Co. under this warranty is limited to repairing or replacing any part or parts which are returned, prepaid, and are found to be defective by Buyers Products Co. Authorization from Buyers Products Co. must be obtained before returning any part. No charges for transportation or labor performed on Buyers' products will be allowed under this warranty.

Fig. 7 - Harness Connection

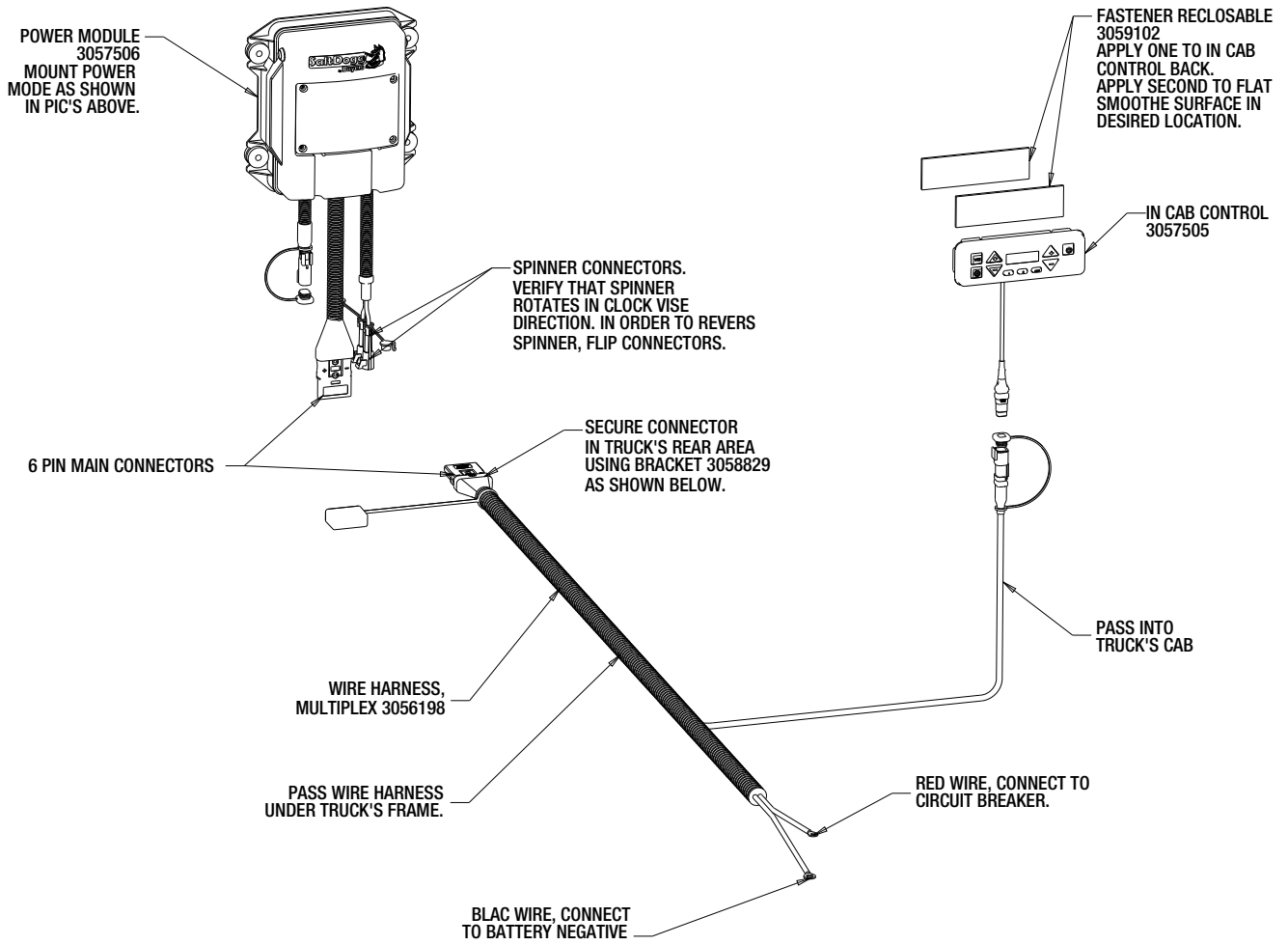


Fig. 8 - Harness Bracket

