Troubleshooting Guide For DownEaster Speed Controller SPE144

DownEaster Speed Controller

SPE144

The Status LEDs:

① Power switch (red)
② Vibrate switch (red)
③ Blast indicate (yellow)
④ Overload indicate (red)
⑤ Dial illumination (green)

Controller Symptom	Problem and Resolution
Controller is turned on but no LEDs on the front panel light up.	If, when the POWER switch is turned on, activating the BLAST switch or VIBRATOR switch does not turn on their respective LEDs on the front panel, then the input power to the controller may not be present or may be reversed in polarity. Check the two red wires and one black wire which provide power input to the 3452B controller. The two red wires should be connected to 12 volt positive (+), and the black wire should be connected to the battery 12 volt negative (–) terminal. If, when the POWER switch is turned on, the BLAST switch and VIBRATOR switch turn on their respective LEDs, but the POWER switch LED and the Green dial illumination LED do not turn on, then the internal 40A fuse on the controller PC board is blown.
The VIBRATOR switch is turned on but the VIBRATOR motor does not vibrate.	If the VIBRATOR switch LED is on when the VIBRATOR switch is in the "ON" position, then power is being provided to the vibrator motor through the 4-pin motor output connector on the controller. A possible open circuit may exist between the controller 4-pin connector and the VIBRATOR motor. If the VIBRATOR switch LED is off when the VIBRATOR switch is in the "ON" position, then the internal 10A ATO fuse may be blown on the controller PC board. Replace this fuse by removing the top cover of the controller. The fuse is located directly behind the vibrator switch on the front panel.
The BLAST switch is turned on, but the spreader motor does not go to its maximum speed.	When the BLAST switch is activated, the YELLOW LED below the BLAST switch should light up. When the YELLOW LED is on, the spreader motor will go to its maximum speed only limited by a maximum of 40 Amps current. If the YELLOW LED is off when the BLAST switch is activated, the BLAST switch is not making electrical contact when depressed and should be replaced.
The OVERLOAD LED comes on intermittently.	This may be normal when spreading material and indicates that the spreader motor is trying to draw more than 40 Amps of current at whatever speed it is presently moving material. The controller PC board is always monitoring how much current the motor is using and automatically limits it to a maximum of 40 Amps when this motor is running.
The OVERLOAD LED is continuously on.	This indicates that the spreader motor may be stuck, as the controller is outputting 40 Amps of current continuously to the motor. When this happens, you may turn the controller off through the POWER switch and then back on again. This will cause the controller to automatically output a maximum of 60 Amps of current to the spreader motor for 2 seconds to try to un-jam the motor. After this 2 second hard start, the current limit of the motor is reduced to 40 Amps and the control of the motor speed reverts to the front panel dial. If, after this hard start procedure, the OVERLOAD LED is still on continuously, manual intervention for the spreader motor may be required. Turn off the controller and manually un-jam the spreader motor. Then turn the controller on and check to see whether or not the motor is still jammed by observing whether or not the OVERLOAD LED is still on. If it is still on, further manual intervention for the spreader motor may be required.