Mounted Brake Controller - Troubleshooting Guide

Tools

- Test light or a 12V filament bulb ***(NOT an LED)***
- Power source 12-24Vdc capable of 8-16A (alternatively use tow vehicle)
- Basic wiring tools

Step 1.

Connect a test light into the controllers Brake output wire.

BS3578 - Yellow wire.

BS3579 - Blue wire.

Step 2.

Check if the orange wire is connected with the red wire to brake or to a separate power supply.

Red & Orange wires are connected to same source - Connect your power source to the brake circuit at the trailer plug. Alternatively use the tow vehicle and have someone engage brakes to test.

Red & Orange wires are NOT connected to same source - Identify then connect both wires to your power source. Alternately connect to tow vehicle and confirm power is present.

Step 3.

Set brake controllers for testing.

BS3578 - set brake controller to 'TEST' mode.

BS3579 - set brake controller to 50%

Step 4.

Activate the trailer brakes via tow vehicle or alternate power source.

Ensure orange wire is receiving power too (refer to Step 2)

Test Light should now have a dim glow

Step 5.

Test the controller output is changing correctly.

BS3578 - Set the brake controller to approx. 80% - 100%

- Loosen the controller or remove from trailer so the controller can be tilted up to 45 degrees.
- Hold the controller flat (mount position) and activate the brake circuit.
- Once brake is active, tilt the controller forward, towards the vehicles travel direction.
- The test light should be off when sitting flat then gradually light up to full brightness as the controller is tilted forward.

BS3579 - The test light intensity should change with the adjustment of the control knob.

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Posible Faults

No Output detected from controller:

- Confirm the controller is still receiving voltage from the power supply under load. Expect a voltage drop (controller will operate down to approx. 8V)
- Confirm the magnets or wiring on the controller are not shorted out.
- If the above issues have been eliminated by disconnecting or bypassing or testing, it is assumed the controllers output driver is damaged. Controller is broken.

Controller at full output regardless of controller setting:

- This usually indicts the controllers output driver is damaged. Controller is broken.

Notes:

- Use a test light to confirm the output of the brake controller. The output is pulsed DC and the voltmeter will give an odd reading as it is designed to measure constant DC not pulsing DC.
- A filament bulb of any type will usually work best as an output indicator as it shows the average value of the output as an easy to see visual indicator of output levels.
- A multimeter with a duty cycle setting (often displayed as % on the meter selection dial) can be used to measure the output level of the brake controller.
- Check the incoming voltages of red and orange before powering the brake controller and while under load of the brake controller. There may be a high resistance joint causing excessive voltage drop under load.

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