The requirements for a suitable connection of a brake controller trigger wire are quite specific; it must provide battery voltage output while the vehicle brakes are applied / 0 volts output while the vehicle brakes are not applied. It must also accept battery voltage when the brake controller manual override is operated and illuminate at least the trailer’s brake lights.

Brake controllers should be powered directly from the battery via a circuit breaker. There are two reasons to avoid using a switched power supply; firstly – you want to retain trailer brakes even if the ignition cuts out unexpectedly. Secondly (on inertia controlled units) – removing power will clear the unit’s calibration. This would result in rough braking until the unit has recalibrated again.

Inadequate Wiring or Connectors

The final stumbling block is wiring gauge and/or poor connections. Under full braking force a trailer can draw as much as 25 Amps. Whilst your own trailer may only have a single axle, it’s best to think ahead and allow sufficient cable width for the boat with 3 Axle trailer you might borrow in the future.

Also remember that cheaper components such as blade fuses or crimp terminals are often not up to the task of currents of this magnitude (particularly after a year or so underneath your car).