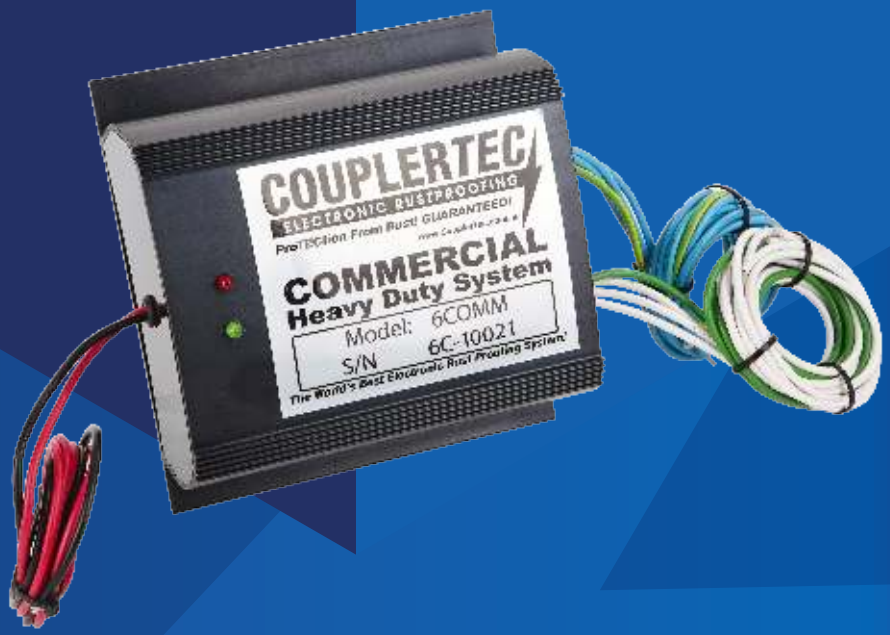
COUPLERTEC™
ELECTRONIC RUSTPROOFING
The World's Best PROTECTION From RUST!

FAULT
FINDING GUIDE



MODELS: 4COMM, 6COMM, 8COMM, 10COMM, 12COMM

HOW TO USE THIS GUIDE

Refer to the table below to identify the description of the fault. Proceed to the corresponding page for instructions on identifying the possible cause of the fault and how to resolve it.

For technical and warranty support please contact one of our Couplertec Technical Service Representatives during the following times: Monday – Friday 8.30am – 4.30pm EST. Australia

Calling From Within Australia: 1800 66 78 78 | International Calls: +61 7 5522 0200

Red LED Flashing Continuously

Fault Type: **Dead Short on Channel A - White Capacitive Coupler Wires.**

Possible Causes:

- **A damaged Capacitive Coupler Wire (White Wire) coming into direct contact with a metal surface.**
- **Damaged Capacitive Coupler coming into direct contact with a metal surface.** *HINT: Mainly caused during installation when a Capacitive Coupler has been fitted to a rough surface (eg. welding slag) which has punctured the Capacitive Coupler.*
- **Water coming into contact with an unsealed Coupler Wire connection (White Wire) .** *HINT:This fault will ONLY show after the vehicle has been in contact with water e.g Washing the vehicle or driving through water.*
- **Dead short within the Module on Channel A**

Follow the Fault Finding Flow Chart on page 5. Cut the White Capacitive Coupler Wires one at a time until the faulty circuit is found.

Red LED Flashing Continuously with the Green LED illuminated constantly

Fault Type: **Dead Short on Channel B - Blue Capacitive Coupler Wires.**

Possible Causes:

- **A damaged Capacitive Coupler Wire (Blue Wire) coming into direct contact with a metal surface.**
- **Damaged Capacitive Coupler coming into direct contact with a metal surface.** *HINT: Mainly caused during installation when a Capacitive Coupler has been fitted to a rough surface (eg. welding slag) which has punctured the Capacitive Coupler.*
- **Water coming into contact with an unsealed Coupler Wire connection (Blue Wire) .** *HINT:This fault will ONLY show after the vehicle has been in contact with water e.g Washing the vehicle or driving through water.*
- **Dead short within the Module on Channel B**

Follow the Fault Finding Flow Chart on page 5. Cut the Blue Capacitive Coupler Wires one at a time until the faulty circuit is found.

Red & Green LED's flashing 10 times every 50 seconds

Fault Type: **Low Battery**

Cause: **Low Battery**

Carry out the following checks to diagnose the cause of the fault:

1. Ensure that the CouplerTec System is connected to the main start battery. If possible, start the vehicle and reset the CouplerTec System (pull the fuse out, wait 20 seconds and then re-insert the fuse).
2. Check the battery output with a multimeter. CouplerTec Systems require a minimum input of 11.3V to operate. Recharge or replace the battery if necessary.

No Green LED

Possible Causes:

- **Blown Fuse**
- **Disconnected Power Supply**
- **Dead Battery**
- **Bad Earth**
- **Failed LED**

Carry out the following checks to diagnose the cause of the fault:

1. Check the fuse and replace if necessary (Maximum: 2Amp Fuse). Check the conections to the
2. Battery, clean and tighten if necessary.
3. Check the battery output. CouplerTec Systems require a minimum input of 11.3V to operate.
4. Check that the Green Wire is grounded to the body of the vehicle.

If the fault is still present after completing the above checks, conduct the test procedure for module output. If the module has output, this confirm that the system is still working but the GreenLED has failed.

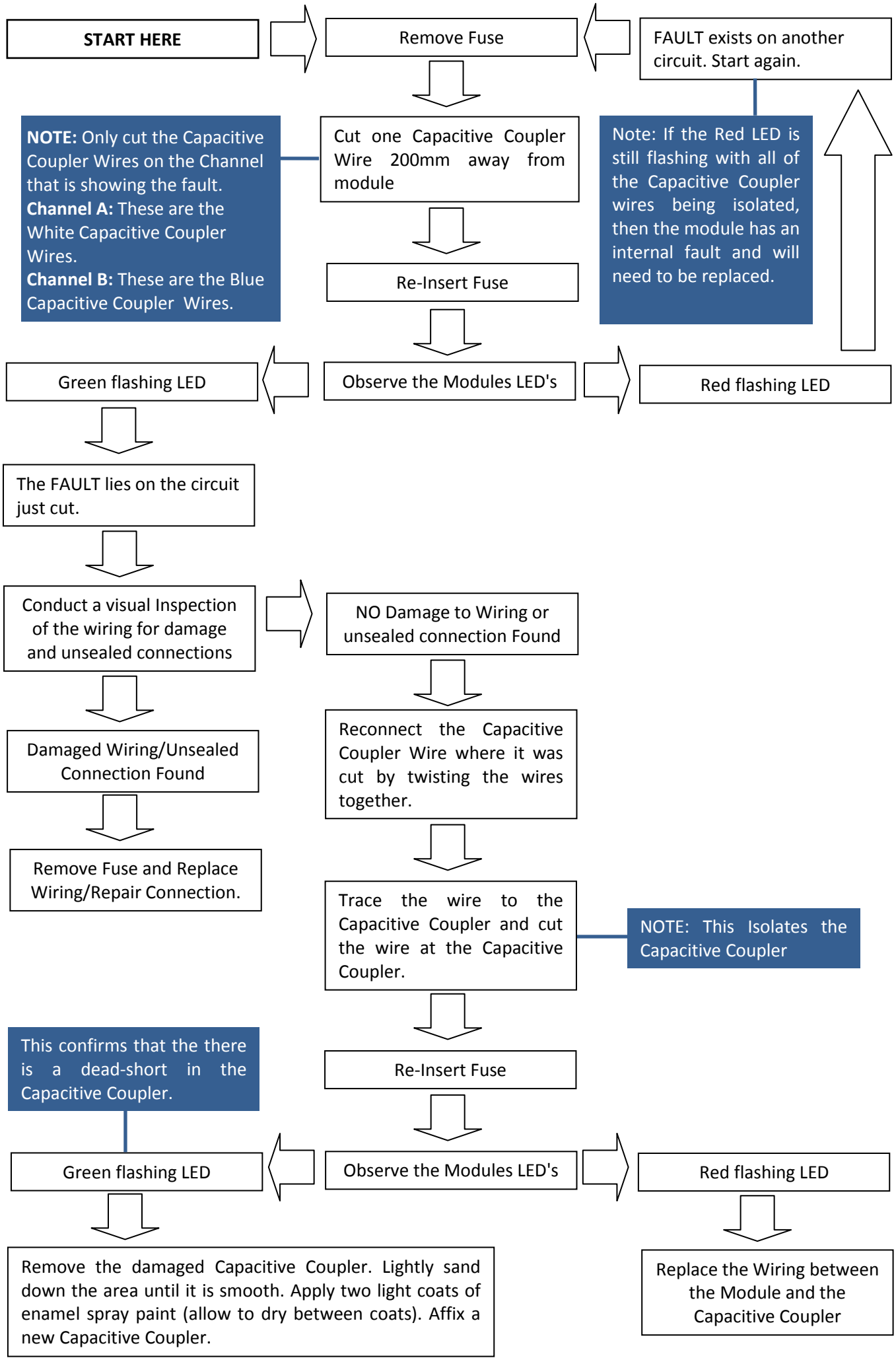
Module Blowing Fuses

Possible Causes:

- **Dead Short in Capacitive Coupler Wiring**
- **Dead Short in Capacitive Coupler**
- **Dead Short within the module**

Follow the Fault Finding Flow Chart on page 2 to diagnose the cause of the DEAD SHORT.

Fault Finding Flow Chart for DEAD SHORT



TESTING PROCEDURE FOR MODULE OUTPUT

When conducting this test, do not hold the probe to earth any longer than 5 seconds at any one time.

Step 1: **Set Multimeter to 500 DCV or higher**

Step 2: **Insert the multi-meters Red probe into the Modules Blue Capacitive Coupler Wire.**

Step 3: **Place the Multi-meters BLACK probe to body ground (earth) on vehicle.**

Step 4: **Read the Voltage on the meter.**

NOTE: The output will read between 200 -300 DCV depending on the meter quality and vehicle battery voltage.

MODES OF OPERATION

The CouplerTec Electronic Rustproofing Module has two LEDs (Red & Green) which indicate the systems current mode of operation. **The Module has three modes of operation, which are:**

1.Start-up Mode
When the system is connected to a **12V Power Supply:** After inserting the fuse, the modules Green LED will illuminate for 30 seconds whilst the system configures itself.

When the system is connected to a **24V Power Supply:** After inserting the fuse, the modules Green LED will illuminate for 10 seconds followed by the Red LED illuminating for 30 seconds whilst the system configures itself.

2.Normal Operation Mode

The modules Green LED will flash continuously confirming that the system is functioning correctly.

3.Fault Mode
The modules Red LED will flash upon the detection of a fault. The fault indicators are:

- **Red LED flashing continuously:** This indicates that the module has detected a **Dead Short** on Channel A - White Capacitive Coupler Wiring. In this instance Channel A will be shut down, but Channel B will continue to function.
- **Red LED flashing continuously with the Green LED illuminated constantly:** This indicates that the module has detected a **Dead Short** on Channel B - Blue Capacitive Coupler Wiring. In this instance Channel B will be shut down, but Channel A will continue to function.
- **Red & Green LEDs flashing together 10 times every 50 seconds:** This indicates **Low Battery**, meaning that the vehicles battery level has dropped below the minimum input requirement and the module has shut itself down to protect the battery.