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Qwik Tech Tips

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FEATURED PRODUCT

WEATHER-TITE™ PERMAPLUG™

- Blue WEATHER-TITE™ seal blocks all contaminants from entering the electrical system, creating a corrosion free connection.
- 360° cable compression and TPR sleeve for a solid cable grip and tight seal
- Floating brass pins for secure installation in misaligned sockets
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Copper and Water – A Bad Combination for Your Electrical System

Part 1 of 2

How fast do you think water and contaminants can travel through your electrical wiring system? When is too late, really too late?

The truth is, once moisture penetrates to the copper wiring, you're pretty much done. When given a gateway into your electrical system the copper wiring soaks up moisture and contaminants like a dry sponge. On a truck, wiring heats up and cools down on a constant basis. When the wiring heats up, it expands, and when it cools down, it shrinks, sucking the moisture in.

Below are photos of an experiment we conducted called "wire wicking". This experiment shows you just how quickly moisture and contaminants can creep into you electrical system. We took a 7 inch piece of 12 gage copper wire and stripped about a half inch on either end. We stuck one end in approximately half a cup of regular tap water mixed with a generous teaspoon of salt and left it to sit overnight…the results were very surprising.

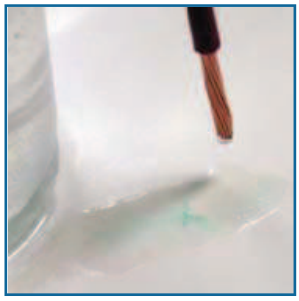
While in some cases, this may be an exaggerated example, you can see how quickly the copper soaked up the salt water.

After sitting for approximately twenty-four hours, the salt water had already made its' way through the wire, and approximately 40 hours later, corrosion was visible in the pool formed below the wire outside the cup. When you take into consideration that there was no drastic fluctuation in temperature within the wire, as there is on a truck, more water could have possibly been cycled through faster.

In less than 24 hours the damaging process of corrosion on the electrical system has already begun. This is why it is so important to maintain your vehicle and take any and all preventative measures you can to keep corrosion out, ensuring that your electrical system lasts longer. In general, the best thing you can do is to make sure all open connections are resealed properly. However, in next month's article we will go into more detail about multiple preventative steps that can be taken.

Start of Experiment

Approx. 24 hours later



Approx. 40 hours later

Part 2 of article in the September issue.

- Water and contaminants can travel through your electrical system faster than you think.
- Wire Wicking shows that it can take less than 24 hours for a considerable amount of salt water to pass through a 7 inch piece of 12 gage copper wiring.
- Copper wiring acts as a sponge for water and contaminants. As the wiring heats up and cools down it sucks the moisture in.