

Electrical Testing Hints & Tips

We get calls all the time from customers who have run into questions while they are installing electrical parts. (Often those are for other company's parts but that's what we get for being experts in the industry.) These calls have some common themes, issues and problems, regardless of what the electrical product might be. So we would like to share some of them with you so that you might be able to avoid the same pitfalls. Read through these tips and, if you still have questions, give us a call.

This @#\$%^&* thing doesn't work and the @#\$%^&* won't @#\$%^&* and @#\$%^&* and @#\$%^&*.

Frustration seems to be all too common when doing electrical work. Some of that comes from not being able to see those pesky little electrons, some from not doing electrical work every day (experience) and some is because not many people really understand how it works. And that's OK. But it's important to honestly know your limitations and to stop and get help BEFORE you reach the boiling point. Once a person gets completely frustrated nothing can or will help, no answer will be "right", no remedy will work until they calm down and start thinking rationally. Listen to what you are told and follow directions.

TIP: Call *before* you get all wound up. Realize the true extent of your electrical knowledge and proceed accordingly. Get help when you need it.

It doesn't work. What is the loose white wire for?

Instructions? We don't need no stinkin' instructions!

It amazes us how many people don't read, use, follow or can even find their instructions. There are too many companies who don't provide instructions, others that give you the bare-bones instructions. But if you get instructions, please read them and use them. They have been provided for a reason.

TIP: Instructions are your friends.

I've set up your product on the bench and it doesn't work.

Our usual question is "Why are you bench testing it?" to which the person replies, "I wanted to make sure that it worked." For whatever reason, their mindset is already that it won't work... and they proved themselves right (not the product, but themselves).

TIP: Unless you're experienced, don't bench test, just install the product.

TIP: Don't trust a battery charger to give you accurate results. Depending upon the battery charger and the settings that you have it on, it will give you too little amperage for some parts, or too much voltage (or too little) and you will think something is wrong when it isn't. Even worse, you may damage electrical parts.

TIP: Please don't call if you haven't started the car. An idle car will not perform the same as one that is running. The battery may be weak and there are circuits that react differently in a running car. If you're doing a new build and the car isn't to the point that you can start it and have the charging system operable, don't trust your tests to be true results.

My left taillight isn't as bright as my right taillight.

What's wrong with it?

The common conclusion is that there's something wrong with the left light, but that's seldom correct. The two most common problems are: 1) bad ground on the light, 2) lower voltage going to the light.

TIP: Bad grounds are the number one problem with parts that don't work, work inconsistently or stop working altogether. Test lights have their place but a Volt-Ohm Meter (VOM) is a great tool to have. You can get pretty good units these days at very reasonable prices. Learn to use it and it will help with a lot of these issues.

My taillights don't flash right.

There are possible issues if you have changed to LED lights from incandescents (we will cover that subject elsewhere) but again check grounds.

TIP: Your ground connection on EVERY circuit is equally important to every other connection in that circuit. All of the current must flow through that ground. Even a little resistance will drop the circuit voltage and cause problems.

TIP: A good ground must have NO paint, dirt, grease, etc. to prevent full electrical flow. Once you have clean surfaces, a little bit of dielectric grease put on the surfaces before making the connection will prevent corrosion and help that ground last a long time.

It worked fine before and now it doesn't.

Before what? Often the reply is, "Before it went to paint (or upholstery, or alignment, or...)." One of the best first questions when diagnosing a new problem is, "What has changed? What has happened between then and now?" I know of one case where the painter removed most of the ground wires, painted, and then put them back on top of his fresh paint - very bad for conductivity. In another case, an upholsterer cut through a bundle of wires because they were in the way and didn't bother to tell the owner. Unfortunately, some people who don't understand electricity can mess you up.

TIP: Look for other, seemingly unrelated, possible causes for system that have stopped working right.

GENERAL ELECTRICAL TIP: If you don't feel comfortable doing electrical work, find someone who is or learn yourself. Our *Basic Auto Electrical Book* was written specifically to help people who need to start from the bottom up.