

Alex-Tronix Service Bulletin No. 11, Rev 0, as of 04-30-2004

Controllers: All

Issue: Controller Care & Maintenance.

Tips for extending the life of your controller.

Today folks, we discuss controller longevity....

I have repaired many controllers for several years now. Often, customers call in frustration and ask why their controller only lasted 6 months. The majority of service repairs are due to poor care of the controller.

Folks, please realize, that our controllers are microprocessor driven devices, similar to a personal computer. Though well protected, they still can be damaged by all kinds of abuse.

Some of the problems I see daily -- Beginning from the most common to the least:

- Leaving the door open/unlocked.
- Mineral build-up (mostly calcium) from water spray damage because door was left open.
- Oxidized copper traces and pads across circuit board caused by liquid/vapor chemical attack.
- Severe soil and soot build up on circuit board, again from not keeping the door closed.
- Mud nests caused by insects, infestations, and yes especially.... insect poop.
- No conduit used for electrical wires -- or conduits were not properly sealed from water.
- Controller mounted on, or next to heavily vibrating machinery, such as pumps/diesel engines.
- Rodents nesting inside controller for warmth.
- Mounting controller next to or down wind of chemical containers -- ruining circuit board.
- Corroded electrical wiring, intermittent connections or tapped into high current lines.
- Vandalism- bullet holes, baseball batted chassis, etc.
- Electrical surge damage. (See "Surge Suppression Bulletin 1" for more info.)
- Spray lubricants such as WD-40, silicone spray, pesticides, or other oily substances.

Okay.... So now what?

Here are some suggestions...

VIBRATION: Don't mount a controller on surfaces that have high vibration.. I especially emphasize this for controllers mounted on mobile trailers with diesel engine pumps. To dampen vibration use rubber grommets or foam padding between the controller and mounting surface. You might have to get a little creative here, but the idea is to isolate the controller chassis from vibration sources *as much as possible*. Every little bit helps!

DIRT: If you don't remember anything else, remember this: **ALWAYS KEEP THE DOOR CLOSED!!!!** Keeping the door closed helps keep liquids, dirt, grime, soot, and chemicals out. Seal all openings including unused conduit punch-outs. Make sure electrical conduit does not fill



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up with water from sprinkler spray or rain, otherwise it will condense within the controller and cause erratic operation. Basically, keeping things clean makes a major difference for controller life span.

MAINTENANCE: Using spray lubricants to try “clean” contacts is a major NO NO. There are no moving parts, and it gums up everything inside, making it very difficult for servicing. *I rarely can repair controllers that have been sprayed with these type of substances.* Even if you are desperate to get the system running, resist the temptation.

Every once in awhile, swing open the panel and wipe any dust, dirt, and spider webs out from the controller. Periodically clean all peripherals such as PD gauge, battery pack, solar panel, etc., and check wire terminal connections for corrosion, oxidation, rust, etc.

Don'ts:

Don't pick off a mud nest with a screw driver on the circuit board.

Don't use chemical cleaners.

Don't wash circuit board with water.

Don't bang on controller box with a hammer.

Don't “over handle” the circuit board. It is static sensitive.

Don't send in controllers for repair in plastic bag-- The static generated can “zap” static sensitive components. Use a paper bag.

Don't send in controllers for repair ***without a note stating what the problem is.***

If any doubts, call in or send panel/controller in for service, with a detailed note that says *exactly* what the problem is. If there is no note, The problem may not become apparent to me, and I'll end up sending it back not completely repaired!

For additional information, see “Surge Suppression Bulletin 1”.

Questions??? Tech Support: Aram Tokatian 888-224-7630

