

Know who you're hiring, or face the consequences

Posted: Tuesday, January 17, 2012

By Frank Bourlon

A newspaper production manager called me this past month for some advice.

One of the motor controllers at his newspaper's press was down so the press had to be operated at a reduced speed to make sure the remaining motor was not overloaded. Curiously, the manager asked me if the electrician that he had hired to repair his downed controller had made the correct diagnosis.

What the electrician said was this: The motor controller what shot and would have to be replaced.

I told the production manager that the only way I could give him an answer would be to discuss the problem with the electrician.

As I spoke to the electrician, I quickly discovered that his answers did not fit the questions that I was asking. And I found out that he was using an improper device to test the controller's silicon controlled rectifiers.

Additionally, the electrician informed me that he had removed three of the SCRs from the SCR bridge.

New opinion

As you might have imagined, I suggested to the production manager that he should hire someone else to investigate the controller; he agreed, asking me to drive to the plant to inspect it myself.

Once I arrived, I found out a few things right away: First, the electrician had mistakenly installed one of the SCRs backwards, which could have been disastrous. Then, after troubleshooting the electrical circuits, the symptom quickly identified itself: the stop circuit had enabled the stop relay, and the stop relay was causing a stop on the press.

A few minutes later, I identified the problem: the dampener relay was not energized.

An auxiliary set of contacts from the dampener was wired to the stop circuit, and whenever the power wasn't energizing the dampener circuit the press would stop to prevent newsprint waste.

Why no power? A plug fuse that supplies power to the dampener had vibrated loose over time.

Not trained

The back story is that the electrician did not have the experience necessary to repair the DC motor drive. He could have installed a new unit, but all that would have done is cost the newspaper money it didn't need to spend. The lesson? Don't use unqualified electricians or technicians to work on your press or any other mission-critical piece of equipment.

So, what is the right stuff? The right stuff is a person who has passed numerous electronic courses or seminars, as well as courses in electromechanical repair. He or she needs a thorough knowledge of gated, large-power semiconductors such as bridge rectifiers, Triacs - an electrical component that conducts current in either direction - and SCRs.

They are even better qualified if they have had courses in DC motor and inverter controls or at least had attended some motor controller seminars.

Not isolated

Most electricians do not have this expertise.

To protect yourself and your operation, ask the electrician you are evaluating what his qualifications are. And that doesn't mean how many years he has been an electrician.

By the way, be suspicious if they seem to keep making phone calls while they are working on your equipment.

The experience I had at the newspaper is not an isolated instance. I have had several newspapers call me and then pass the phone to their local electrician. Were they just inexperienced with that brand controller? No, in every case, I had to explain how the system worked and what to look for.

So be careful when you're hiring electricians to work on your press. The job you save may be your own.

Frank Bourlon is executive and training director at the Newspaper Production and Research Center. He can be reached at (405) 524-7774.