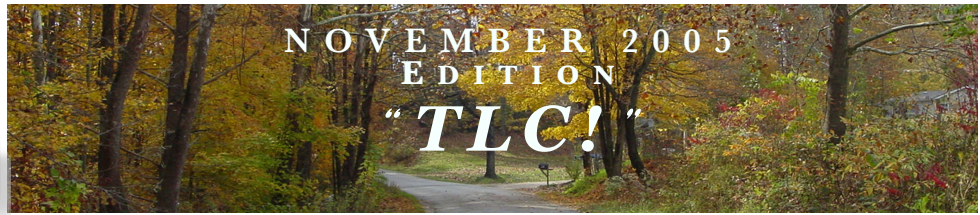


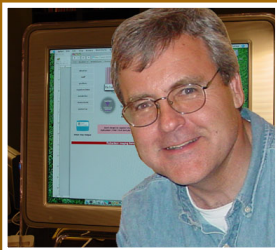


Richardson Imaging Services

The xray problem solvers



## *“A little love can go a long way!”*



*Recently, I have fielded several questions on what to look for in the area of x-ray equipment and processor inspection issues. With so many things going on in and out of the x-ray department that demand our time, we don't really want to think about preventive maintenance on our x-ray equipment. With this in mind, I thought I'd devote this newsletter to reviewing some of these inspection areas.*

### **Your Generator (Control Panel)**

*Inspect the control panel for any looseness or external damage to meters, select switches, kV adjusting knobs, and interconnecting wiring. The most common failure area comes in the major/minor kVp select switches. With usually 10 or 12 turn positions, we tend to use some of those positions more than others. Most “Tap*

*Switches” are made to last 5 years! Depending on the age of your machine, you may be overdue for part replacement. Common indicators of trouble are when the kVp meter drops off or acts erratic when adjusting kV. You could also be having having trouble with exposure reproducibility. Make sure your kV select switches seat firmly and that the indicator needle does not fluctuate.*

### **Your X-Ray Tube**

*Tubes fail for three reasons: 1) The filament can go out like a light bulb. We can do very little to prevent this, but by using correct exposure techniques and allowing for enough cool-down time between exposures we can extend the life of the tube. Most of us cannot shoot x-rays fast enough to encroach on excessive tube heat. A good way to check for cool-down is by touch. If your tube is too hot to hold on to, take a bit more time between shots. 2) Gas in the tube can cause the cathode ray stream to go to ground, thereby losing effective radiation emission. Tube gas shows up first in your higher kV shots. If they are becoming inconsistent, you could have a gassy tube. 3) Rotor coast failure may be the most common type of failure. When the anode slows down, or stops spinning, the tube is on its way out! Coast time after prep should be about a minute. The life of a tube has little to do with coast time. Some new tubes are less, with some older tubes going for over 3 minutes. If you notice your coast time getting shorter, or tube getting noisier, the tube bearings may be beginning to fail.*

### **Your Collimator**

*The two areas of concern here are the light field to x-ray field similarity and the bulb brightness. If the light field looks dimmer, start by cleaning the exit lens and check to see if the mirror is dirty. (You won't be able to clean the mirror. This requires taking the collimator apart!) If your lens and mirror is clean, then maybe it's time to replace the bulb. Lack of brightness can be an old bulb. If you are experiencing cut-off on some of your films, you may need your x-ray/light field adjusted.*

*We've only dealt with three areas of inspection, and of course, there are many more. If you think there is a need for a comprehensive checklist, let me know, and I'll create a PDF for our website that you can easily download. You can call us at 812.949.2422 or toll free at 800.234.1949. Our fax # is 812.949.0221. You can also contact me through our website @[www.risxray.com](http://www.risxray.com). Just click on the “Contact us” tab on the menu bar.*

*On behalf of all of us at Richardson Imaging Services and our families, we'd like to wish all of you and yours a very safe and happy Thanksgiving!*

*Glenn Richardson, President RIS*

**December 3rd and 4th will find us at the Kentucky Chiropractic Society Symposium. It will be held at the Hilton Garden Inn at 1530 Alliant Drive in Louisville. Come see us!**