

“KEEPING PACE” - #59

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BURNER CONTROL SHAFTS:



We have talked before about one telltale sign of a careless cooking fire, which is the pattern left on the bottom of a skillet or pan by the burner on the kitchen range (K.P. #30 and #55). Another telltale sign is to find the shaft for one burner knob rotated with respect to the other three shafts. The photograph above shows two gas range burner controls after the plastic knobs have been consumed by the fire. These burner controls are always manufactured with the notch or slot in the end of the metal shaft at a certain orientation, which is usually either down for a notch or vertical for a slot. The plastic knobs then slip onto the ends of these shafts, and the knobs rotate the shafts to control the burners.

In the photograph, the notch in the left shaft is in the 2 o'clock position. The notch in the other shaft, as well as the other two shafts on the range (not shown), are all at the 6 o'clock position. Because the subject shaft was mechanically frozen by the ensuing fire damage, there is no doubt that this gas burner was on “high” at the time the fire occurred.

The lady tenant admits that she left hamburgers and grease on top of this range, and that her two-year old son has turned these controls “on” at times previous to the fire. However, before I demonstrated this shaft position to her, she blamed the fire on numerous electrical problems she had been experiencing in her apartment.

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FLUORESCENT BALLAST BANK FIRE:



The photograph shows a ceiling which burned during a fire caused by an overheated fluorescent lamp ballast. This occurred at 3:00 a.m. in a bank near Lexington, Kentucky. All the electrical wiring in the ceiling was enclosed by conduit, and I could find no short circuit arcing melt anywhere. In 1977, the National Electrical Code™ began requiring a “thermal protector” to be installed in every ballast to turn it “off” if it ever overheated. However, this subject ballast was installed in 1974, and so it had no such protector.

Fluorescent ballast fires always were very rare occurrences. With thermal protectors, they have become virtually nonexistent.

Sincerely,

A handwritten signature in black ink that reads "Fred F. Franklin".

Frederick F. Franklin, P.E.
Forensic Engineer