

UNIT 6

DANGERS OF ELECTRICITY

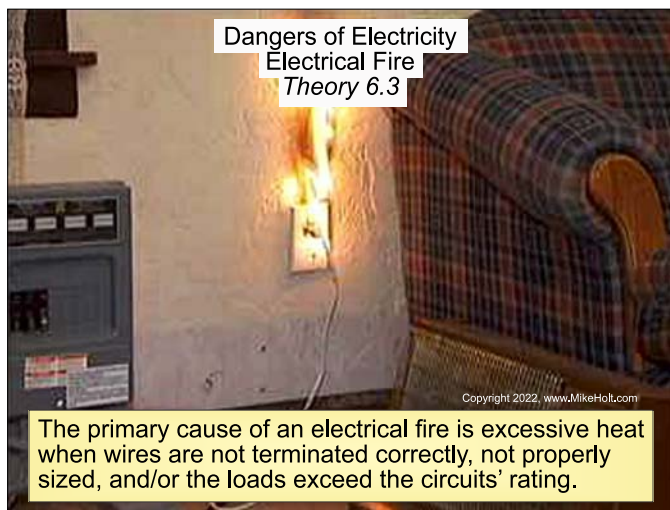
6.1 Introduction

People working in the electrical industry are responsible for ensuring that electrical installations are as safe as possible. In this unit you will learn:

- ▶ the purpose of the *National Electrical Code*
- ▶ how electrical fires are created
- ▶ what electric shock/electrocution are
- ▶ what arc flashes and arc blasts are

6.3 Electrical Fire

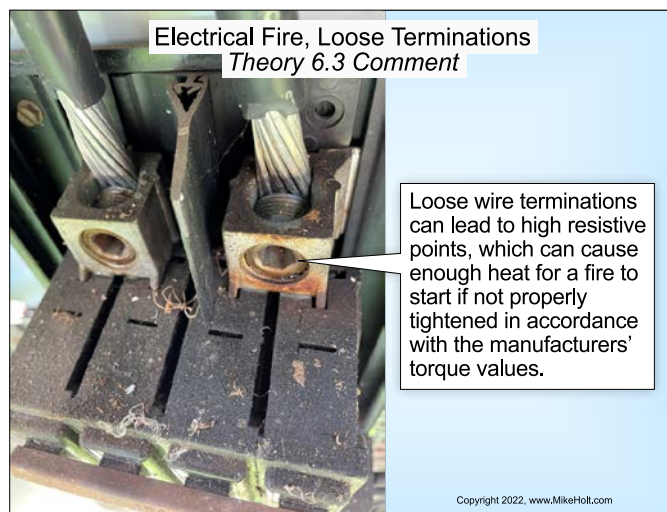
Each year, fires from electrical failures result in the loss of lives and billions of dollars in property damage. The primary cause of an electrical fire is excessive heat when wires are not terminated correctly, not properly sized, and/or the loads exceed the circuits' rating. ▶Figure 6-1



▶Figure 6-1

Author's Comment:

- ▶ Electrical installations typically fail at the terminations. Wire terminations must be properly tightened in accordance with the manufacturers' torque values. Loose wire terminations can lead to "glowing contacts" (a high resistive point between a wire and a wire terminal), which can cause enough heat for a fire to start. ▶Figure 6-2



▶Figure 6-2