

## **K918 Electrical Systems – Essential Electric System Maintenance and Testing**

The generator or other alternate power source and associated equipment is capable of supplying service within 10 seconds. If the 10-second criterion is not met during the monthly test, a process shall be provided to annually confirm this capability for the life safety and critical branches. Maintenance and testing of the generator and transfer switches are performed in accordance with NFPA 110.

Generator sets are inspected weekly, exercised under load 30 minutes 12 times a year in 20-40 day intervals, and exercised once every 36 months for 4 continuous hours. Scheduled test under load conditions include a complete simulated cold start and automatic or manual transfer of all EES loads, and are conducted by competent personnel. Maintenance and testing of stored energy power sources (Type 3 EES) are in accordance with NFPA 111. Main and feeder circuit breakers are inspected annually, and a program for periodically exercising the components is established according to manufacturer requirements. Written records of maintenance and testing are maintained and readily available. EES electrical panels and circuits are marked, readily identifiable, and separate from normal power circuits. Minimizing the possibility of damage of the emergency power source is a design consideration for new installations.

6.4.4, 6.5.4, 6.6.4 (NFPA 99), NFPA 110, NFPA 111, 700.10 (NFPA 70)