



FIRE MARSHAL BULLETIN

2021-002

Testing of Fire Alarm Batteries

Purpose

It has come to the attention of the Calgary Fire Department that some service companies when testing a fire alarm battery during the verification or annual maintenance are placing the fire alarm on battery power for 24 hours as per CAN-ULC S537 or S536. However, an issue arises when the person performing the battery test leaves the building and the fire alarm system unattended during this 24 hour period. If the battery backup fails during the test, the building in question will be without fire alarm protection for an undetermined amount of time. This is not the intent of the test, nor is it acceptable to leave the system in a state of potential failure or cause a system to fail in this way.

If service companies choose to perform 24 hour battery checks, rather than the other options outlined in CAN-ULC S537 or S536, it is the expectation of the Calgary Fire Department that a qualified person will be in the building to check the status of the fire alarm throughout the test. This is to ensure that the building is not left without proper protection.

Code reference(s)

CAN-ULC S537-13 “Standard for Verification of Fire Alarm Systems” 5.4.4

- P) On a fully charged battery, perform battery *tests* demonstrating specified battery operation as follows, after which the battery voltage should not be less than 85% of its rating after the *tests*, otherwise replace batteries (Refer to Appendix D, Battery Tests.):
- i. Required supervisory load for 24 h followed by the required full load operation;
 - ii. A silent *test* by the load resistor method may be used for the full duration *test* (Refer to Appendix D1, Silent Test.); and
 - iii. Silent accelerated *tests*. (Refer to Appendix D2, Silent Accelerated Test.)

NOTE: Battery capacity meter *test* is not among the accepted methods for performing the battery tests.

CAN-ULC S536-13 “Standard for Inspection and Testing of Fire Alarm Systems 6.3.2

- P) Perform battery *tests* demonstrating specified battery operation as follows, after which the battery voltage should not be less than 85% of its rating after the *tests*, otherwise replace batteries (Refer to Appendix F, Battery Tests):
- i. Required supervisory load for 24 h followed by the required full load operation; or
 - ii. A silent *test* by using the load resistor method may be used for the full duration *test* (Refer to Appendix F1, Silent Test); or
 - iii. Silent accelerated *test*. (Refer to Appendix F2, Silent Accelerated Test); or
 - iv. A battery capacity meter *test*. (Refer to Appendix F3, Battery Capacity Meter Test); or
 - v. In lieu of the above battery *tests*, replace the battery with a new set having a current date code, amp-hour capacity, and of a type as recommended by the manufacturer of the fire alarm system.

NOTE: Ensure that the battery is within the charging capacity of the battery charger, as recommended by the manufacturer.

Referenced STANDATAs

This bulletin is subject to any STANDATAs released by Alberta Municipal Affairs.

Questions regarding this document may be forwarded to FireLegal@calgary.ca



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