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UL 2034 Short History - CO Alarms

ANSI/UL 2034 the Standard for Carbon Monoxide Alarms has been one of UL's more active Standards. Initial work on the Standard started in 1989. UL 2034 was originally published in 1992 based on requirements extracted from similar gas and smoke alarm standards and information from the gas appliance, emergency response, and medical communities. The Standard was revised in 1995 to address initial concerns regarding stability of the CO alarms. In 1998 the Standard was revised to address comments from the gas industry and others related to performance and stability of CO alarms.

Changes to UL 2034 with an effective date of October 1, 1998 required CO alarms to exhibit their ability to ignore 30 ppm CO for 30 days and 70 ppm CO for one hour. A new sequence test was added to exhibit the ability of a CO alarm to resist multiple exposures of CO without an appreciable change in the alarm's response. Finally, marking and user instructions direct the user of the product when indicating an alarm to 1)-Operate the silence button, 2)- Call their emergency service organization, and 3)- Move to a location which has fresh air. Repeated activation of the alarm in a 24-hour period requires the same basic three steps plus contacting a qualified technician to trouble shoot the problem.

In an effort to harmonize UL 2034 with CSA/CGA 6.19 and to update UL 2034 additional revisions were adopted in 2001 as follows:

Increased the number of gases in the Selectivity Test, Section 39,

Revised the requirements in the Effect of Shipping and Storage Test, Section 45.2,

Added a new Section 74A to address reliability requirements,

Added Appendix D (Sample Size Determination for Time-of-Manufacture Reliability Testing) for reference only.

UL has completed a survey program to monitor the aging of CO alarms. In March of 1999 UL purchased approximately 70 alarms from retail establishments. Initial sensitivity tests were performed, and the samples distributed to members of the staff to be installed in their homes. Periodically these devices were returned to UL to repeat sensitivity tests. Tests were performed 12 times over a four-year period, and the results were very encouraging. A vast majority of the units performed exactly as required by UL 2034. A few responded a little early, and a few a little late. But all of the devices provided signals that would allow a homeowner to respond to elevated level of CO in the appropriate manor. Two separate devices reported significant CO events, and three other samples indicated supervised trouble signals and were examined by their manufactures.

UL 2034 recently completed ANSI canvas as an American National Standard, and is now designated ANSI/UL 2034. As with any UL Standard the STP committee continues to look at opportunities to make CO alarms more effective.