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Overview

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Timeline on E85 Dispensing Devices and UL Listing

October 5, 2006 --

UL announced an immediate suspension of all authorization to use the UL Listing Mark (or other UL Markings) on components for fuel dispensing devices that reference compatibility with E85 fuel.
(www.ul.com/gasandoil/ethanol.html)

UL 87, *Standard and Safety for Power-Operated Dispensing Devices for Petroleum Product*, “does not address safety requirements for using alternative fuels, such as E85, within those dispensers.”

October 16, 2007 --

UL press release, announcing UL’s establishment of safety requirements for E85 fuel dispensing equipment, and that UL is now accepting submittals for certification investigation. (www.ul.com/regulators/e85certificationrequirements.pdf)



November 5, 2007 --

UL announces publication of Subject 87A, *Outline of Investigation for Power-Operated Dispensing Devices for Gasoline/Ethanol Blends with Ethanol Content Greater than 15 percent*. Subject 87A provides minimum construction and test requirements for these products. (www.ul.com/regulators/e85certificationssummary.pdf)

Outline of Investigation – “A document that contains the construction, performance, and marking criteria used by UL to investigate a product when the product is not covered by the scope of an existing UL Standard for Safety. Outlines are not consensus documents and do not require review by an STP or other external group.”

The Scope of Subject 87A can be viewed at <http://ulstandardsinfont.net.ul.com/outscope/>

For more information, see “Information on E85 for authorities having jurisdiction” on UL’s website, www.ul.com/regulators/e85.cfm.



NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages

Section 6.3.2 “Dispensing devices for Class I and Class II liquids shall be listed.”

Section 3.2.5 defines “Listed” as follows:

“Equipment materials, or services included in a list published by an organization that is acceptable to the authority having jurisdiction and concerned with evaluation of products or services, that maintains periodic inspection of production of listed equipment or materials or periodic evaluation of services, and whose listing states that either the equipment, material, or service meets appropriate designated standards or has been tested and found suitable for a specified purpose.”



Section 3.2.4 defines “Labeled” as follows:

“Equipment or materials to which has been attached a label, symbol, or other identifying mark of an organization that is acceptable to the authority having jurisdiction and concerned with product evaluation, that maintains periodic inspection of production of labeled equipment or materials, and by whose labeling the manufacturer indicates compliance with appropriate standards or performance in a specified in manner.”



NFPA 30A Becomes “Law” By State Adoption (New Hampshire regulations below are an example)

NH Saf-C 6009.02 – Adoption of Automotive and Marine Service Station Code

- (a) “...the commissioner hereby adopts as a rule NFPA 30A, Code for Motor Fuel Dispensing Facilities and Repair Garages, 2000 edition, except as modified by Safe-C 6009.03.”
- (b) “All persons owning or operating automotive and marine service stations shall comply with the requirements of NFPA 30A except as modified by Saf-C 6009.03.”

(Note: Modifications in Saf-C 6009.03 apply to unattended self-service motor fuel dispensing facilities).



NH Saf-C 6005 – Exceptions and Variances

- Authority to Grant Variance – “The state fire marshal shall grant exceptions or variances to the state fire code to the extent that such action will provide a degree of safety substantially equivalent to that provided under the provisions from which the exception or variance is granted.” NH Saf-C 6005.01
- Request for Variance – Must include “a detailed explanation of how the exception or variance, if approved, will provide a degree of safety substantially equivalent to that required by the code or rule of provision involved.” NH Saf-C 6005.03(b)
- SFM Ruling on Request for Variance – NH Saf-C 6005.4

SFM to consider all applications, and render a decision on the request.



If GRANTED, the decision shall describe the extent of the variance and any limitations placed on the variance, state the effective date and/or termination date of the variance, and identify the structure involved.

If DENIED, the decision shall state the reason for denial, and contain other information as the SFM deems necessary.

Appeals – The denial of a variance may be appealed to the state building code review board, within 20 days following written notice of the decision. NH Saf-C 6005.04(d).



One State Attorney General's Advice to the SFM

- NFPA 30 and 30A have been adopted as law in the state.
- Since there are no listed E85 fuel dispensers available, E85 fuel cannot be dispensed in the state and still be in compliance with current state fire code (i.e., NFPA 30 and 30A).
- The SFM may (but need not) grant a waiver, and allow the use of E85 dispensing equipment that is not Listed for use with this fuel.
- The AG's advice: Our advice is to adopt the position of most states and wait at least until the end of the year (2007) before considering a variance program.



How About Compliance with OSHA?

- OSHA safety standards apply to U.S. workplaces, including motor fuel retailers.
- OSHA electrical standards (29 CFR 1910.303) apply to power-operated fuel dispensing equipment. 1910.303 states:

“The conductors and equipment required or permitted by this subpart shall be acceptable only if approved, as defined in 1910.399.”

“Approved” means acceptable to OSHA, and “accepted” means:

“An installation is *accepted* if it has been inspected and found by a nationally recognized testing laboratory [NRTL] to conform to



specified plans or procedures of applicable codes.” (29 CFR 1910.399).

- NRTL’s Recognized by OSHA

A list of the NRTL’s with OSHA recognition, along with the scope of recognition (the list of standards, sites and programs that OSHA has recognized for each) can be viewed at www.osha.gov/dts/otpca/nrtl/index.html/#nrtls.





INFORMATION FROM UNDERWRITERS LABORATORIES, INC.

NASFM Inquiry to UL Concerning Subject 87A, Outline of Investigation for Power – Operated Dispensing Devices for Gasoline/Ethanol Blends with Ethanol Content Greater than 15 Percent; and UL’s Response.

I see that UL has announced the publication of Subject 87A, *Outline of Investigation for Power-Operated Dispensing Devices for Gasoline/Ethanol Blends with Ethanol Content Greater Than 15 Percent.*

UL defines an Outline of Investigation as “a document that contains the construction, performance, and marking criteria used by UL to investigate a product when the product is not covered by the scope of an existing UL Standard for Safety. Outlines are not consensus documents and do not require review by an STP or other external group.”

My understanding is that a UL Outline of Investigation does not qualify as a UL Standard for Safety, is not a national consensus standard, and does not qualify as an American National Standard per ANSI requirements. Am I correct?

UL Response - An Outline of Investigation is not a standard. However, in the absence of a standard, it serves the same purpose as a standard in documenting the product used for testing and the evaluation of that product for a specified purpose.

I have a few other questions:

1. In the 10/16/07 press release UL says it is now accepting submittals of E85 fuel dispensing equipment for certification investigations. Will equipment that successfully completes UL’s investigation be UL Listed and contain the UL Listing Mark? As you know, on 10/5/06 UL announced an immediate suspension of all authorization to use the UL Listing Mark on fuel dispensing devices used to dispense E85 fuel.

UL Response - Yes.

2. Will equipment that successfully completes UL's investigation meet the requirements of NFPA 30A, Code for Motor Fuel Dispensing Facilities and Garages, section 6.3.2, which states that such equipment "shall be listed"?

UL Response - The application of Code requirements is performed by Authorities Having Jurisdiction. However, it is UL's position that UL Listed equipment is always listed in the context of Code definitions.

3. Given the title of Subject 87A, it would seem that dispensing equipment used to dispense biodiesel fuel will not be eligible for certification investigation by UL. Is this correct?

UL Response - Subject 87A applies to equipment dispensing ethanol/gasoline blends and does not apply to biodiesel. UL is presently developing requirements for biodiesel dispensing equipment.

4. Does UL intend to convert Subject 87A to a UL Standard for Safety and have ANSI recognize the document as an American National Standard?

UL Response - UL's intention is to move Subject 87A into the standards process.

5. If a fuel dispensing device previously Listed by UL to the UL 87 Standard has been or is converted to dispense E85 fuel, is the UL Listing thereby voided or otherwise terminated?

UL Response - An authorized use of the UL Mark is the manufacturer's declaration that the product was originally manufactured in accordance with the applicable requirements when it was shipped from the factory. When a UL Listed product is used for other purposes or is modified after it leaves the factory, UL has no way to determine if the product continues to comply with applicable safety requirements. UL can neither indicate that such uses "void" the UL Mark, nor that the product meets UL's safety requirements. Equipment UL Listed to UL 87 has been investigated only for gasoline service. Approval of such equipment being used for other purposes is at the discretion of the Authority Having Jurisdiction.

6. If a fuel dispensing device previously Listed by UL to the UL 87 Standard has been or is converted to dispense biodiesel fuel, is the UL Listing thereby voided or otherwise terminated?

UL Response - See #5.

UL's responses were sent on June 10, 2008 and prepared by Charles A. Rego, Senior Corporate Counsel – Litigation, for Underwriters Laboratories, Inc.

June 11, 2008

Other Useful Sites

- U.S. Department of Energy
Energy Efficiency and Renewable Energy
Alternative Fuel & Advanced Vehicle Data Center
www.eere.energy.gov/afdc/

UL E85 Fuel Dispenser Listing

www.eere.energy.gov/afdc/technology_bulletin_0307.html

NOTE: See next page for June 6, 2008 update
posted on the DOE/EERE website

- National Ethanol Vehicle Coalition
www.e85fuel.com
- Petroleum Equipment Institute
www.pei.org

PEI's Alternative Fuels Equipment Compatibility Guide
(based on information provided to PEI by the manufacturer)
www.pei.org/alt-fuels/guide.asp



Status Update on E85 Dispenser Listings

June 6, 2008

UL continues to test E85 dispensing equipment submitted by manufacturers and is working closely with manufacturers to move toward a dispenser listing. As of May 31, 2008, no dispensers have been listed (approved).

An unsubstantiated rumor recently implied that UL listing of E85 dispensing equipment has been delayed until at least the fourth quarter of 2008, reportedly due to “new or changing UL requirements that affect hoses, nozzles, and other hanging hardware.” This rumor is not true and has resulted in considerable confusion. The following points clarify the current status of UL E85 equipment testing and procedures.

1. UL has consistently stated that listings will be granted as soon as dispensing equipment is submitted to UL and demonstrated to comply with the published requirements.
2. For an E85 dispenser to be listed, all dispenser components and parts must be compatible and suitable for use with E85. A listed dispenser must include or specify all hoses, nozzles, and other hanging hardware for field configuration.
3. UL’s E85 dispenser requirements (UL Subject 87A) for specifying compatible equipment through the entire fuel path (including hanging hardware) have not changed since they were published in October 2007. This requirement was established to address galvanic compatibility of the materials and to promote proper selection of all components in the fuel path. This requirement is necessary due to the unique properties of high-percentage ethanol/gasoline fuel blends. Since October 2007, UL has been communicating with dispenser manufacturers on this topic. The responsibility for establishing a compatible E85 dispenser product lies fully with the dispenser manufacturers.
4. UL does not mandate manufacturers to participate in the certification process nor does it dictate when manufacturers should submit their equipment for evaluation. This is done at the discretion of the equipment manufacturer. UL cannot begin an equipment investigation until the manufacturer submits its products to UL and provides the necessary materials. UL has been accepting new submittals of E85 dispensing equipment since October 2007 when it published UL Subject 87A. Some manufacturers have just recently submitted their systems and components for evaluation.
5. UL understands the demand for E85 dispensers and places a high priority on requests it receives for E85 equipment certification. Accordingly, UL has acted responsibly and with a sense of urgency on submittals received to date.
6. UL Subject 87A requirements differ from those previously established for gasoline equipment. Since publishing UL Subject 87A in October 2007, the only changes UL has made pertain to providing additional compliance flexibility options in limited cases; UL has not established additional restrictions in its evaluation procedures or protocol.
7. Equipment may not always pass safety testing on the first attempt. If this is the case, manufacturers may need to modify their designs and resubmit their corrected parts or equipment for retesting. This takes additional time, so manufacturers should plan accordingly. UL has no control over whether the products it tests will pass or fail.

Source: http://www.eere.energy.gov/afdc/e85_dispenser_listings_0608.html