April 10, 2013

To: Standards Technical Panel (STP) for Power Conversion Equipment, STP 508C;
Subscribers to UL's Standards Service for UL 508C and UL 61800-5-1;
Subscribers to UL's Recognition, Listing, and Unlisted Component Services for Power Conversion Equipment under UL 508C and UL 61800-5-1;
Multiple and Alternate Listees of UL Listed and Recognized Component Power Conversion Equipment (for information only).

Subject: Implementation of Continuing Certification Program for Power Conversion Equipment

BACKGROUND

This Bulletin is to inform you that UL has introduced the Continuing Certification(1) approach to the Standards Technical Panel for UL 61800-5-1 and the STP has voted on the implementation of the changes in requirements. The result of this vote is that the change in requirements, transitioning from UL 508C to UL 61800-5-1, do not warrant all power conversion equipment certified to the present requirements to be recertified to the recently adopted requirements (refer to UL CSDS work areas opened 2012-09-06 and 2013-01-02). Consequently, UL will not conduct an Industry File Review on power conversion equipment currently certified to UL 508C.

CONTINUING CERTIFICATION APPROACH

Please refer to the following for specific details of this new approach.

- In three years, February 1st, 2016, new products will be required to be investigated to UL 61800-5-1. New products are defined as:
    - Any model or models that belong to a new series of drives (not previously Listed or Recognized to UL 508C)
    - Any new model to an existing series (currently Listed or Recognized to UL 508C) that requires an associated change to the ratings or construction details section of the UL descriptive report for that series
- In seven years, February 1st, 2020, UL 508C will be withdrawn. This is the implementation date.
- Existing certifications of power conversion equipment to UL 508C will be allowed to continue to be certified to the requirements in effect for the product, provided there are no changes to the design after the implementation date that require a certification decision in accordance with the latest published version of the Standard. For example, if changes to the design, ratings, or the use of alternate components requiring a certification decision are submitted after the implementation date, the device (in its entirety) will need to be evaluated to the new requirements of UL 61800-5-1(2). Additionally, new/revised requirements may require action to be taken in the future.
- After February 1st, 2020, only UL 61800-5-1(2) will be used for drive investigations.

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ADDITIONAL CERTIFICATION INFORMATION

- Drives certified to UL 61800-5-1[2)] are identified in UL's Online Certification Directory under UL Category Codes NMMS and NMMS2. Drives certified to UL 61800-5-1 and drives certified to UL 508C will be distinguishable by their heading on the manufacturer's Listing or Recognition card on UL's online certification directory at www.ul.com.

PRODUCTS WITH UL CERTIFICATION FOR USE IN CANADA

The transition from UL 508C to UL 61800-5-1 does not affect certification for use in Canada. CSA C22.2 No. 14-10 remains the standard for investigation for use in Canada.

The Summary of Requirements for UL 61800-5-1 that addresses the significant new and/or revised requirements is in the attached addendum. These requirements are applicable for investigation of products currently certified to UL 508C should they be transitioned to UL 61800-5-1 (due to manufacturer's request or change in design after the implementation date). The requirements in italics are new requirements that will be considered only when investigating to the requirements that are not in italics. This list is not an exhaustive list of the differences between UL 61800-5-1 and UL 508C, only a list of the most significant differences that will be considered when investigating a product currently investigated to UL 508C to UL 61800-5-1. Also, this list is not a certification document, the published standard is the document for certification.

Should you have any questions regarding this letter or the Continuing Certification approach, please contact Sal Porcillo at (631) 546-2620 or Salvatore.Porcillo@ul.com

[(1)] Visit the following link for additional information regarding the Continuing Certification approach
http://www.ul.com/global/documents/offerings/industries/powerandcontrols/resources/Continuing_Certification_Announcement_012913.pdf

[(2)] Latest version applies, current edition is First Edition, dated June 8th, 2012.

Respectfully,

WILLIAM R. CARNEY
Director, Global Chief Engineer
North American Certification Programs Office

ADDENDUM

Subject	Summary – UL 61800-5-1 Significant Differences
Clearance and Creepage Requirements	• UL 840 is no longer a standard referenced as a standard for investigating clearances and creepages. • Where protective separation is required, clearance and creepage requirements are greater than those required by UL 840 and UL 508C Tables 36.1 (columns B, C, and D), 36.3, and 36.4. • Surge protective devices cannot be used to reduce the overvoltage category (and thus the required clearance) for protective separation. When reducing the overvoltage category where basic insulation is required, the SPD's are required to be monitored and an indication of their status provided. UL 840 did not require surge protective devices to be monitored with a fault status indication to reduce clearance requirements and also allowed surge protective devices to reduce the required clearances between any considered circuits/parts. • Impulse test for reduced clearances is not allowed where protective separation is required and only allowed for basic and functional insulation if a homogeneous electrical field is present. UL 840 allowed for impulse test in lieu of clearances in any construction. • Investigation of clearances and creepages is required on inner layers of PWB's. Alternatively, the inner layers can be investigated to solid insulation requirements. UL 508C waived requirements on inner layers of PWB's. • *Note – where functional insulation is required the required clearances may be smaller*
Short Circuit Test	• All power outputs must be short circuit tested. UL 508C only required the motor output to be short circuit tested. • *Note - Cotton indicator is required for all short circuit tests. UL 508C allowed for cotton to not be used when conducting the tests with circuit breakers.* • *Note - Voltages of secondary circuits must be monitored and not exceed certain levels during the short circuit and breakdown of components tests, or the AC/DC voltage test must be conducted after the short circuit test. This was not part of UL 508C pass/fail criteria.*
Breakdown of Components Test	• The circuit used for the breakdown of components test must be capable of standard and high fault currents based on manufacturer's short circuit current rating; unless detailed analysis shows a different value is equivalent or more severe. UL 508C was not specific on the test circuit required for the breakdown of components test. • *Note - Voltages of secondary circuits must be monitored and not exceed certain levels during the breakdown of components tests, or the AC/DC voltage test must be conducted after the breakdown of component test. This was not part of UL 508C pass/fail criteria.* • *Note – Required branch circuit protection and other test set-up requirements are specified. These are the same as the short circuit test. UL 508C did not have test set-up specifics.*
Bonding Test	• Products with accessible conductive parts are required to comply with the protective bonding test. UL 508C did not require a test for bonding of accessible conductive parts. • *Note - kits provided for bonding of multiple conduit entries in polymeric enclosures require a "CAUTION" marking. UL 508C did not require a "CAUTION" marking for bonding kits.*