Standards Update Notice (SUN)

Issued: February 24, 2017

Standard Information

Standard Number: CSA B140.4
Standard Name: Oil-fired warm air furnaces
Standard Edition and Issue Date: 3rd Edition Dated September 1, 2004
Date of Revision: July 1, 2007
Date of Previous Revision of Standard: 3rd Edition Dated February 1, 2006

Effective Date of New/Revised Requirements

Effective Date: **February 9, 2018**

Impact, Overview, and Action Required

Impact Statement: A review of all Listing Reports is necessary to determine which products comply with new/revised requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revised requirements.

Overview of Changes:

- Additional requirements for Normal tests
- New section added for Abnormal tests

Specific details of new/revised requirements are found in table below.

If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).

Client Action Required:

Information – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revised paragraphs noted in the attached or explain why these new/revised requirements do not apply to your product (s).

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.

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Description of New/Revised Technical Requirements

Clause	Verdict	Comment
7	Info	**Normal tests**
7.6	Info	**Operating temperatures**
7.6.3	Info	**Installation methods**
7.6.3.8		*New clause added;* When the vent connector (flue pipe) passes through an enclosure partition, a suitable insulation thimble shall be used as indicated in CSA B140.0.
7.6.3.9		*New clause added;* When inlet-air ducts and outlet-air ducts are used, they shall be extended to outside of the test enclosure. When the outlet-air ducts pass through an enclosure partition, a suitable clearance shall be provided. Such clearances shall be sealed with tape or insulating material.
7.6.3.10		*New clause added;* The appliance shall be levelled. Levelling means, if detachable, shall be removed. If the levelling means is not detachable, it shall be adjusted to provide the minimum clearance to the floor panel.
7.6.3.11		*New clause added;* The test methods used for determining the inlet-air and outlet-air temperatures shall be as specified in Clause 7.3 for forced-air furnaces.
7.6.4	Info	**Test procedures**
7.6.4.1		*New clause added;* The appliance shall be operated under the conditions specified for the rated output capacity test of Clause 7.3, except as stated herein. All temperature tests shall be carried out at the maximum permissible smoke (Shell-Bacharach smoke spot of No. 1 for fuel grades of No. 2 and lighter, and a No. 4 smoke spot for fuel grades of No. 4 and heavier).
7.6.4.2		*New clause added;* All limit controls shall be bypassed to permit continuous operation during the test.
7.6.4.3		*New clause added;* For appliances equipped with integral temperature limit controls, the air temperature rise shall be maintained during the test at that value corresponding to *TL* – 25 °C (*TL* – 77°F), where *TL* is the outlet-air temperature at which the temperature limit control functioned, as determined in the temperature limit control performance test of Clause 7.4 (see also Clause 7.6.4.4).
7.6.4.4		*New clause added;* If the value of *TL* – 25 °C (*TL* – 77°F) in Clause 7.6.4.3 is less than 47 °C (85°F), an air temperature rise of 47 °C (85°F) shall be used and shall be maintained during the test.

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7.6.4.5		*New clause added;* For appliances not equipped with integral temperature limit controls, such as an appliance when the control is field-mounted on the plenum or bonnet, the air temperature rise (based on a nominal inlet-air temperature of 25 °C (77°F)) shall be maintained during the test at (a) 96 °C (173°F) for an appliance equipped with a temperature limit control that does not permit an outlet-air temperature in excess of 121 °C (250°F); or (b) 68 °C (123°F) for an appliance equipped with a temperature limit control that does not permit an outlet-air temperature in excess of 93 °C (200°F).
7.6.4.6		*New clause added;* The air temperature rise shall be established by gradually restricting the circulating air flow, using the procedure specified in Clause 7.4.2.5, until the air temperature rise reaches the appropriate value specified in Clause 7.6.4.3, 7.6.4.4, or 7.6.4.5, ± 3 °C (5°F). The circulating air flow shall then be regulated to maintain the appropriate air temperature rise during the test. **Note:** *The above test may also be conducted by adjusting the speed or air delivery of the air circulating blower to produce the required outlet-air temperature.*
7.6.4.7		*New clause added;* For forced-air furnaces, the appropriate external static pressure specified in Table 3, to be measured at the supply plenum, shall be maintained throughout the test.
8.4		*New section added;* **Abnormal voltage**
8.4.1		The ignition and operation of appliances equipped with electrical features shall be safe and reliable at any voltage between 85 and 110% of rated voltage. Note: *See also Clause 9.*
8.4.2		For the purpose of this test, the rated voltage shall be 120 V for “rated” voltages of 110 to 120 V and 240 V for “rated” voltages of 220 to 240 V. Note: *The rated voltage referred to in quotation marks, i.e., “rated”, is the voltage specified on the nameplate(s) of the equipment or the components.*
8.5		*New section added;* **Flooded pot burn-off**
8.5.1		Appliances equipped with vaporizing type burners shall not create a hazard when the fuel in the burner pot is ignited after a flooded pot condition has been established.
8.5.2		The equipment shall be installed in the appropriate test enclosure described in Clause 7.6.2.
8.5.3		The test shall be conducted on the basis of the following procedure. The oil in the burner pot shall be ignited after a flooded pot condition has been established. The metering valve shall be left open at its maximum setting. All limit controls shall be operative. The test shall be continued until normal operating conditions have been re-established.

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8.5.4		There shall be no hazardous discharge of flame or products of combustion during the test, nor the creation of any phenomena that would lead to unsafe performance of the appliance. There shall be no deleterious effects to the materials and components of the equipment (e.g., the heat exchanger, the insulation, etc.), or to the adjacent combustible construction, as a result of the test.
8.6		*New section added;* **Power failure**
8.6.1		Appliances equipped with electrical features shall continue to operate safely, or shall shut down in the event of power failure, and shall operate safely upon the resumption of power.
8.6.2		The equipment shall be installed in the appropriate test enclosure described in Clause 7.6.2.
8.6.3		There shall be no deleterious effects on the materials and components of the equipment (e.g., the heat exchanger, the insulation, etc.), or on the adjacent combustible constructions, as a result of the test, nor the creation of any phenomena that would lead to unsafe operation of the appliance.
		CUSTOMERS PLEASE NOTE: This Table and column “Verdict” can be used in determining how your current or future production is or will be in compliance with new/revised requirements.