STANDARDS UPDATE NOTICE (SUN)
ISSUED: April 17, 2026

STANDARD INFORMATION

Standard: UL 60335-2-40 / CSA C22.2 No. 60335-2-40
Standard ID:
Household and Similar Electrical Appliances - Safety - Part 2 - 40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners, and Dehumidifiers [UL 60335-2-40:2022 Ed.4+R:31Oct2025]
Household and Similar Electrical Appliances - Safety - Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers [CSA C22.2#60335-2-40:2022 Ed.4+U1]
Previous Standard ID:
Household and Similar Electrical Appliances - Safety - Part 2 - 40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners, and Dehumidifiers [UL 60335-2-40:2022 Ed.4]
Household and Similar Electrical Appliances - Safety - Part 2-40: Particular Requirements for Electrical Heat Pumps, Air-Conditioners and Dehumidifiers [CSA C22.2#60335-2-40:2022 Ed.4]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **November 1, 2027**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard. Reports not updated to this version by the effective date above will be withdrawn.

Overview of Changes:

- Limiting A2L refrigerants to those of a molar mass of more than or equal to 42 kg/kmol
- Added requirement for pre-charge pipe sets, detection systems, ventilation and the resulting charge
- Added requirements for UV-C systems
- Added requirements for transcritical refrigerating systems
- Coverage of allowable opening of relays and similar components to prevent ignition of A2L refrigerants
- New coverage of test method for hot surface ignition temperature for A2L
- New coverage of refrigerant detection systems for A2L Refrigerants
- New coverage of refrigerant sensor location confirmation test
- Revised Operating Condition for input test

Intertek Engineering Decisions: Intertek has identified clauses in the referenced standards above which require clarification or modification to meet the intent of the safety requirements. See page 26.

Specific details of new/revised requirements and Intertek Engineering Decisions are found in the tables below.

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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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.

STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		Additions to existing requirements are underlined and deletions are shown ~~lined out~~ below.
1	Info	**Scope**
1DV.1		This part of CSA C22.2 No. 60335-2-40/UL 60335-2-40 deals with the safety of • electric HEAT PUMPS, including HOT WATER HEAT PUMPS, • AIR CONDITIONERS, • DEHUMIDIFIERS incorporating motor-compressors as well as without motor-compressors, • HYDRONIC FAN COILS UNITS, and • CENTRAL WARM AIR FURNACES and ADD-ON ELECTRIC HEAT KITS, their maximum rated voltages being not more than 300 V for single phase appliances and 15 000 V for all other appliances. Partial units are within the scope of this Standard.
1DV.2		This standard does not take into account refrigerants other than refrigerant safety groups as defined by ISO 817 or ANSI/ASHRAE 34 as follows: a) A1; and b) B1, ~~B2L, B2, B3~~ [(for use in appliances installed in machinery rooms as defined in accordance with ANSI/ASHRAE 15 (USA) or CSA B52 (Canada), or outdoors only)]; and c) A2L, A2, and A3, refrigerants with a molar mass not less than 42 kg/kmol based on nominal composition.
1DV.5		NOTE 104 This standard does not apply to • humidifiers intended for use with heating and cooling equipment (IEC 60335-2-88); ~~• appliances designed exclusively for industrial processing;~~ • appliances designed for cooling a product, process, or equipment; • appliances intended to be used in locations where special conditions prevail, such as the presence of a corrosive or explosive atmosphere (dust, vapour or gas).
1DV.6		***New clause added;*** All references to supplementary heaters in this Part 2 also apply to CENTRAL WARM AIR FURNACES and ADD-ON ELECTRIC HEAT KITs. NOTE 105DV This standard does not apply to electric duct heaters, which are covered by UL 1996 and CSA C22.2 No. 155.
3	Info	

CLAUSE	VERDICT	COMMENT
3.142DV	Info	***New definition to replace previous;*** **LOWER FLAMMABILITY LIMIT** minimum concentration of the refrigerant that is capable of propagating a flame through a homogeneous mixture of the refrigerant and air Note 1 to entry: Data are listed in Annex BB. [SOURCE: ISO 817:2014, 3.1.24, modified – "under the specified test conditions at 23,0 ° C and 101,3 kPa" and Notes to entry deleted]
3.164DV	Info	***New note added;*** Note 1 to entry: Examples of automatically controlled valves are electrically operated isolation valves, one-way valves, etc., that limit the release of refrigerant.
3.191	Info	**NON-FIXED FACTORY SEALED SINGLE PACKAGE UNIT** a FACTORY SEALED SINGLE PACKAGE UNIT that is not intended to be used while fastened to a support or while secured in a specific location. This does not include units which have: • reverse cycle operation with compressor cut-in and cut-out temperatures below minus 8°C (17°F), • a RATED VOLTAGE of 200 V or higher, or • a wall sleeve that is directly secured to the building.
3.211DV	Info	***New definition;*** **REFRIGERANT SENSOR LIFE** the length of time the REFRIGERANT SENSOR can operate as declared by the sensor manufacturer
3.212DV	Info	***New definition;*** **CLEAN AIR** atmospheric air (ambient or compressed) that does not include refrigerant, solid particulates, or other gases in significant quantities which would artificially influence REFRIGERANT SENSOR performance
3.213DV	Info	***New definition;*** **DRIFT (REFRIGERANT SENSOR DRIFT)** a change in the REFRIGERANT SENSOR that will permanently alter the REFRIGERANT SENSOR to be less or more sensitive over time due to various reasons, e.g., aging, dust, poisoning

CLAUSE	VERDICT	COMMENT
3.214DV	Info	***New definition;*** **SHIFT (REFRIGERANT SENSOR SHIFT)** an uncompensated change in the REFRIGERANT SENSOR that will temporarily alter the REFRIGERANT SENSOR to be less or more sensitive in response to an environmental change or other stimuli
3.215DV	Info	***New definition;*** **OPERATING STATE** an intended function that the appliance is in at a specific time Note 1 to entry: Examples include standby, cooling mode, heating mode, and defrosting.
3.216DV	Info	***New definition;*** **OCCUPIABLE SPACE** an enclosed space intended for human activities excluding machinery rooms in accordance with ANSI/ASHRAE 15 (USA) and CSA B52 (Canada) NOTE 1 to entry: Storage areas are included as OCCUPIABLE SPACE.
3.217DV	Info	***New definition;*** **PREMISES** a tract of land and the buildings thereon where the appliance is installed
3.218DV	Info	***New definition;*** **MACHINERY ROOM** a designated space meeting the requirements of ANSI/ASHRAE 15 and CSA B52
3.219DV	Info	***New definition;*** **MAXIMUM OPERATING CURRENT (MOC)** the current resulting when a motor, other than a hermetic refrigerant motor-compressor, and an ELECTRONIC CIRCUIT are operated under any conditions such as maximum speed/maximum load, maximum speed/minimum load, minimum speed/minimum load, and minimum speed/maximum load, including locked-rotor, such that current to the motor and ELECTRONIC CIRCUIT is at a maximum. The MOC is the current at the input of the ELECTRONIC CIRCUIT controlling device

CLAUSE	VERDICT	COMMENT
3.220DV	Info	***New definition;*** **PERMANENT CONNECTION** welding, brazing, soldering, mechanical press fittings, mechanical joints, and adhesive bonding. In these processes, a permanent joint between the parts is formed and cannot be separated easily without a tool
4	Info	**General requirement**
4DV.1	Info	[…] Unless otherwise specified, all references to *LFL* in this standard shall be taken as *LFL* at sea level, unadjusted for altitude Note 1DV: When determining minimum floor area or minimum room volume for installation manuals per Annex DD, the *LFL* value is adjusted for altitude using the method in ANSI/ASHRAE 34. ***[SEE INTERTEK ENGINEERING DECISION]*** […] Unless otherwise stated, all references to "appliance" shall apply to everything covered by the scope of this Part 2. Components and subassemblies evaluated to the following annexes of this Part 2 are not an appliance: · Annex LL · Annex 101.DVJ · Annex 101.DVK Note 3DV: PARTIAL UNITS, EVAPORATORS, and CONDENSERS are examples of subassemblies and components which are evaluated as an appliance when a clause of this Part 2 references "appliance".
5	Info	**General conditions for the tests**
5.10DV		The line length shall be not less than 5 m but may be greater than 7,5 m unless otherwise stated in the installation instructions. Where the installation instructions specify a maximum pipe length of less than 5 m, the length of pipe shall be the maximum length specified in the installation instructions. Where the installation instructions specify a minimum pipe length of more than 7,5 m, the length of pipe shall be the minimum length specified in the installation instructions.
6	Info	**Classification**
6.102DV		***New clause added;*** ENHANCED TIGHTNESS REFRIGERATING SYSTEMS (ETRS) shall be declared by the manufacturer.

CLAUSE	VERDICT	COMMENT
		Appliances restricted for use in industrial occupancies shall be declared by the manufacturer. Appliances restricted for use in a machinery room shall be declared by the manufacturer. ITE COOLING APPLIANCES shall be declared by the manufacturer.
7	Info	**Marking and instructions**
7.1DV.1A		***New clause added;*** – REFRIGERANT CHARGE shall be marked as follows: • For each REFRIGERATING SYSTEM of a FACTORY SEALED SINGLE PACKAGE UNIT, the total charge shall be marked. • For REFRIGERATING SYSTEMS charged at the point of installation, the APPLIANCE shall be marked with a "Maximum allowed charge" or be provided with a label that allows the installer to note the resulting total REFRIGERANT CHARGE for each REFRIGERATING SYSTEM. • For FLAMMABLE REFRIGERANTS, the label shall be provided in accordance with 7.108 and 7.108DV.
7.1DV.2		Addition: – manufacturing date or date code and location if the product is produced in more than one location; – units with hot water coils shall be marked with the maximum inlet water temperature; – units with steam coils shall be marked with the MAXIMUM ALLOWABLE PRESSURE at which the steam coil is intended to be used;
7.1DV.3		Refrigerant(s) as designated under ISO 817. All refrigerants marked as approved for use on the nameplate of an appliance shall be of the same ISO 817 safety classification. The marking of approved refrigerant(s) shall be applied by the manufacturer and shall be visible when viewing the appliance after it has been installed, or behind a detachable part that has to be detached before maintenance or repair work. NOTE See also Clauses 7.1DV.6 and 22.135DV.
7.1DV.6		A PARTIAL UNIT or auxiliary devices that cannot be marked or provided with a nameplate, ~~such as uncased coils~~, shall be provided with a distinctive model, part number, or type designation or the equivalent legibly marked on a tag attached to the partial unit or device. PARTIAL UNITS for use with flammable refrigerants shall be provided with a tag or plate that contains all required markings of Clause 7 and Annex 101.DVF. This tag or plate shall comply with Clause 7.1DV.4 so that it is visible after installation.

CLAUSE	VERDICT	COMMENT
7.1DV.10		Appliances using flammable refrigerants shall also comply with Annex 101.DVF. For REFRIGERATING SYSTEMS charged at the point of installation, the required minimum room area dimension of Warning letter I of Table 101.DVF.1 shall be provided on the label from the manufacturer, or the appliance shall be provided with a label that allows the installer to note the resulting minimum room area based on the resulting REFRIGERANT CHARGE in accordance with Annex GG.
7.1DV.21		***New clause added;*** For equipment using flammable refrigerant restricted for use in industrial occupancies or machinery rooms, as defined by ANSI/ASHRAE 15 and CSA B52, the appliance shall be labeled with one of the following: – "For installation in industrial occupancies only"; – "For installation in machinery room only"; or – "For installation in industrial occupancies or machinery room only". Note 104DV: The equipment may also be labeled "For outdoor use".
7.6DV		Replace symbol ISO 7010-W021 with the UN GHS (Globally Harmonized System of Classification and Labeling of Chemicals) flame symbol or a combination of the modified ISO 7010-W021 and the UN GHS flame symbols as shown below: The refrigerant safety group shall be listed in alphanumeric form, as designated in ISO 817. Note 1DV: The UN GHS flame symbol is a red bordered diamond symbol, and the ISO 7010-W021 symbol is the yellow triangle. The safety group shall be in text not less than ~~1/3 the height of the symbol~~ 3.2 mm in height. The size of the UN GHS and the ISO flame symbols shall be a minimum of ~~15~~ 10 mm in height.
7.12.8DV		For APPLIANCES NOT ACCESSIBLE TO THE GENERAL PUBLIC, the classification according to 6.101 shall be included. For appliances using FLAMMABLE REFRIGERANTS, an installation, service and operation manual, either separate or combined manuals, shall be provided and include the information given in Annex DD. – for equipment that requires connection to a water supply, the manufacturer's installation instructions shall specify the quality of water that is required for this operation. Additionally, the instructions shall specify that if a potable water source

CLAUSE	VERDICT	COMMENT
		is used for the equipment's water supply, the source water supply shall be protected against back siphonage by the equipment.
11	Info	**Heating**
11.2.3DV	Info	[…] NOTE 102DV: For PARTIAL UNITS, it may not be necessary to operate the refrigeration system during the test of Clauses 10 and 11 if all of the following apply: - the motor-compressor is in compliance with UL 60335-2-34, - the motor-compressor RLA marked on the appliance is not less than 64 % of the motor-compressor MCC or the paired testing per UL 60335-2-34, Annex AA or Annex 101.DVM, and - the control box is externally loaded at not less than the marked compressor RLA or MRC and the marked motor rated current or MOC.
11.4DV		Cord-connected appliances are operated under NORMAL OPERATION at a supply voltage between 0,94 times the lowest RATED VOLTAGE and 1,06 times the highest RATED VOLTAGE, the voltage chosen being that which gives the most unfavorable result. ~~Single-phase equipment with a rating of 240 V / 60 Hz are allowed to be tested at +6 % and –5 %.~~ Unless otherwise specified, all other appliances shall be tested at the appropriate potential indicated in Table 11.4DV. ***[SEE INTERTEK ENGINEERING DECISION]***
11.5DV.0		***New clause added;*** Single-phase MOTOR-OPERATED APPLIANCES rated up to 300 V are operated under NORMAL OPERATION at a supply voltage between 0,94 times the lowest RATED VOLTAGE and 1,06 times the highest RATED VOLTAGE, the voltage chosen being that which gives the most unfavorable result. Single-phase equipment with a rating of 240 V / 60 Hz are allowed to be tested at +6 % and –5 %. Unless otherwise specified, all other appliances shall be tested at the appropriate potential indicated in Table 11.4DV. ***[SEE INTERTEK ENGINEERING DECISION]***
11.6DV.0		***New clause added;*** Single-phase COMBINED APPLIANCES rated up to 300 V are operated under NORMAL OPERATION at a supply voltage between 0,94 times the lowest RATED VOLTAGE and 1,06 times the highest RATED VOLTAGE, the voltage chosen being that which gives the most unfavorable result. Single-phase equipment with a rating of 240 V / 60 Hz are allowed to be tested at +6 % and –5 %. ***[SEE INTERTEK ENGINEERING DECISION]***

CLAUSE	VERDICT	COMMENT
11.8		During the test, the temperatures are monitored continuously and shall not exceed the values shown in Table 3, PROTECTIVE DEVICES shall not operate and sealing compound shall not flow out. The temperature of the air in the outlet duct shall not exceed ~~90~~ 121 °C. The value of the temperature of a winding shall be calculated from the formula:
15	Info	**Moisture resistance**
15.1DV.3		***New clause added;*** Compliance is checked by the tests of 15.2, followed immediately by the overflow test of 15.3; and this is followed by the defrost test of 11.6.
15.1DV.4		***New clause added;*** The appliance's external enclosure shall be carefully wiped to remove any surplus water, and an inspection shall show that there is no trace of water on insulation which could result in a reduction of CLEARANCES or CREEPAGE DISTANCES below the values specified in Clause 29.
19	Info	**Abnormal operation**
19.1DV.1		***New section added;*** If not evaluated in accordance with Clause 19.1, motors shall comply with one of the following types of protection: See standard for details. ***[SEE INTERTEK ENGINEERING DECISION]***
19.7DV		[…] If the motors have been previously tested with their protection method in accordance with the one of the following standards, or the standards in Clause 19.1DV.1.1, the tests of Clause 19.7 are not required: […] For an adjustable speed drive evaluated to UL 61800-5-1 or CSA C22.2 No. 274 for motor overload protection, it shall be utilized on a motor that is within the ratings of the adjustable speed drive; and the protection utilized shall limit the current for the motor in accordance with Table 19.7DV. […] See standard for details.
19.8		Three phase motors other than motor compressors are operated under the conditions of Clause 11 at RATED VOLTAGE or at the upper limit of the RATED VOLTAGE RANGE with one phase disconnected, until steady conditions are obtained or the PROTECTIVE DEVICE operates.

CLAUSE	VERDICT	COMMENT
		Note 1DV: The test is not applicable to three-phase motors previously evaluated in accordance with the relevant component standard under single-phase failure conditions. ***[SEE INTERTEK ENGINEERING DECISION]***
19.104DV.2		*To test limit cut-out conditions, the airflow conditions specified are established, the indoor airflow is reduced by restricting the inlet air opening to a rate resulting in not more than 1 K/min outlet air temperature rise until a self-resetting thermal cut-out device operates for the first time as a result of slowly restricting the free area of the inlet.* *The outlet air temperature, measured by means of the thermocouple grid shall not exceed 121°C.*
19.107DV	Info	***Clause moved to new clause number, previously clause 105DV.1;***
20	Info	**Stability and mechanical hazards**
20.1DV		***New clause added;*** Fixed APPLIANCES that are only fixed into the position by water piping, refrigerant piping, or other piping are also subjected to this test. Such pipes are not connected to the appliance during this test. ***[SEE INTERTEK ENGINEERING DECISION]***
20.2DV		***New clause added;*** Test probe 18 and test probe 19 of IEC 61032 shall be applied with a force not exceeding 1 N when the product is a) A portable appliance; b) A cord-connected appliance which may be periodically or seasonally relocated (excluding servicing) by the end user; or c) A NON-FIXED FACTORY SEALED SINGLE PACKAGE UNIT. Through openings, the test probe is applied to any depth that the probe will permit and is rotated or angled before, during, and after insertion to any position.
20.2DV.1		***New clause added;*** Compliance is checked by inspection, by the test of Clause 21.1, and by applying a force not exceeding 5 N by means of one of the following test probes: – test probe of Figure 107DV in this Part 2 for FIXED APPLIANCES; or – articulated probe of Figure 13DV in the Part 1 for all other appliances.

CLAUSE	VERDICT	COMMENT
		New clause added;
20.2DV.2		Equipment marked as required by Clause 7.112DV of this Part 2 need not be provided with guarding at points mounted above 2,5 m (8,2 ft) to prevent the test probes from touching a moving part.
21	Info	**Mechanical strength**
21.2DV		NON-FIXED FACTORY SEALED SINGLE PACKAGED UNIT appliances using FLAMMABLE REFRIGERANTS shall withstand the effects of vibration during transport. In accordance with Clause 6.102DV, the appliance manufacturer shall declare the intended mode or modes of transport for which the appliance and final packaging have been designed. The appliance in its final packaging for transport shall be subjected to one of the following tests: – fixed to a vibration table and subjected to random vibration for 180 min according to ASTM D4728, using a power spectral density profile selected in accordance with the declared mode or modes of transport (see Appendix X1 and Appendix X2 of ASTM D4728 for test profiles). If multiple transport modes were declared, then repeat the test for each mode with a unique power spectral density profile; or – transported by the declared mode or modes over representative routes, the manufacturer shall provide evidence suitable to the testing agency that any unit intended to be shipped by one or more transport modes during its normal use has been subjected to equivalent actual conditions. A highway road transport test shall consist of 160 km or longer at a speed of 80 km/h or greater. Compliance is checked by the following: – after the above transport test, a leak test shall reveal no refrigerant leaks when using detection equipment having an equivalent sensitivity of 3 g/year of refrigerant; and – damage of parts other than the refrigerating circuit is allowed. Alternatively, the manufacturer shall provide evidence, by means of a test report with a clear test set-up and PSD levels shown, to the testing agency that any unit intended to be transported over a highway during its normal use has been subjected to actual road test conditions.
22	Info	**Construction**
22.48DV		***New clause added;*** Appliances intended to be connected to the water mains shall be constructed to prevent back siphonage of non-potable water into the water mains, or instructions shall be provided by the manufacturer in accordance with Clause 7.12.8DV of this

CLAUSE	VERDICT	COMMENT
		Part 2. Devices to prevent back siphonage include an air gap and a backflow preventer. Note 1DV: This requirement is not applicable to hot water storage tanks evaluated to the requirements of CSA C22.2 No. 110 or CSA B51, as applicable, and UL 174 or UL 1453. Compliance is checked by the relevant tests of IEC 61770.
22.54DV		***New clause added;*** The battery compartment of an appliance or any accessory, such as a wireless control, incorporating one or more coin cell batteries shall comply with UL 4200A if the appliance or any accessory is intended for use with one or more single cell batteries having a diameter of 32 mm (1.25 in) maximum with a diameter greater than its height. This does not apply to battery compartments within an appliance that are classified as NOT ACCESSIBLE TO THE GENERAL PUBLIC.
22.103DV		The sensing and switching elements of electromechanical non-self-resetting cut-outs shall be independent of self-resetting cut-outs and other control devices. If the switching element of a non-self-resetting cut-out is operating a relay or contactor, ~~the relay or contactor shall not be operated by other control devices. other control devices~~ shall not bypass the non-self-resetting cut-out to activate the relay or contactor when the cut-out has activated. Protective electronic circuits are covered by Clause 19. Compliance is checked by inspection.
22.112DV.3		If the equipment includes pressure vessels having an inside diameter over 152 mm (6 in), and having an internal or external design pressure greater than 15 psig (103.4 kPa gauge), the pressure vessel shall comply with CSA B51, shall be designed and tested in accordance with the ASME BPVC.VIII Boiler and Pressure Vessel Code, Section VIII Rules for Construction of Pressure Vessels, or shall comply with the applicable local or national pressure vessel regulations for a pressure no less than the MAXIMUM ALLOWABLE PRESSURE as determined in Annex EE.
22.112DV.4		Water-side components, regardless of inside diameter or length, containing water under pressure, including those containing air the compression of which only serves as a cushion, with a design pressure greater than 2 MPa (300 psi) or a design temperature greater than 99 °C (210 °F), shall comply with CSA B51 or shall be designed tested in accordance with the ASME BPVC.VIII Boiler and Pressure Vessel Code, Section VIII Rules for Construction of Pressure Vessels. The water may contain additives, provided that the flash point of the aqueous solution at atmospheric pressure is 85 °C (185 °F) or higher. The flash point shall be

CLAUSE	VERDICT	COMMENT
		determined by the methods specified in ASTM D93 or in ASTM D56, whichever is appropriate.
22.112DV.7		A pressure vessel having an inside diameter greater than 76 mm but not exceeding 152 mm (6 in) and having a gross internal volume not exceeding 0,085 m3 (3 ft3) shall be protected by a pressure-relief device(s) if it can contain liquid refrigerant. The minimum discharge capacity of such devices shall meet the requirements of the applicable mechanical refrigeration codes.
22.112DV.11		Requirements for the pressure relief device(s) indicated in Clauses 22.112DV.7 through 22.112DV.9 are a) a rupture member or pressure relief valve that will relieve the pressure at not more than ~~40~~ 120 % of the h~~ighest pressure defined in Annex EE~~ MAXIMUM ALLOWABLE PRESSURE; or b) a fusible plug, provided that the critical pressure of the refrigerant used does not exceed the relieving pressure specified above, and that the saturation pressure of the refrigerant used, at the temperature marked on the plug, does not exceed the relieving pressure specified above. When FLAMMABLE REFRIGERANT is used, pressure relief devices or fusible plugs located in the ~~occupied~~ indoor space shall have provision to be connected to piping that is vented to the outdoors. The provision's discharge capacity shall meet the requirements of ANSI/ASHRAE 15 and CSA B52.
22.112DV.20		Compliance with ISO 5149-2 shall not be necessary if tubing wall thickness complies with Item a). Refrigerant-containing components shall comply with UL 207 or ~~CSA C22.2 No. 140.3~~ ISO 14903, or they shall comply with the following: […] See standard for details.
22.116DV.6		For the purpose of determining the maximum quenching diameter (dq) in Annex JJ and the maximum switched inductive electrical load (Le) (see Clause 22.116DV.4), the effect of humidity on burn velocity (Su) shall be taken into consideration. The burning velocity (Su) shall be the highest value – as specified in ISO 817; or – as measured in humid air at 27 °C ± 0,5 °C dew point at 101,3 kPa containing 21,0 % ± 0,1 % O2 excluding water vapor, determined at the nominal composition as specified in ISO 817. NOTE The 27 °C dew point equates to an absolute humidity of 0,022 7 kg water vapor per 1 kg dry air.

CLAUSE	VERDICT	COMMENT
		At the manufacturer's option, using 10 cm/s as the value of burning velocity is permissible for A2L REFRIGERANTS, provided that the refrigerant does not contain any more than 1,5 % of any individual refrigerant blend component with a flammability classification of Class 2 or Class 3 in accordance with ASHRAE 34 or ISO 817.
22.117.2DV	Info	***Removed an equation that is no longer used in the standard and clarified that the airflow that must be met is an average air velocity.*** See standard for details.
22.122DV		For REFRIGERANT DETECTION SYSTEMS that are required by this standard for FLAMMABLE REFRIGERANTS the output signal of the REFRIGERANT DETECTION SYSTEM shall activate the actions required to comply with Annex GG or Annex 101.DVN in the event of a leak. If a REFRIGERANT DETECTION SYSTEM can provide notification to the user that replacement of the REFRIGERANT SENSOR is required, then resetting this notification shall only be possible when the cover of the casing is removed or opened to enable the replacement of the REFRIGERANT SENSOR. REFRIGERANT DETECTION SYSTEMS shall comply with Annex LL. Compliance is checked by inspection and tests according to Annex LL. Refrigerant sensors shall be accessible for inspection and replacement. Refrigerant sensors for replacement shall be specified by the appliance manufacturer. Compliance is checked by inspection.
22.125DV	Info	[…] c) REFRIGERATING SYSTEMS shall use only permanent joints indoors except for site-made joints directly connecting the indoor unit to the refrigerant piping, or factory-made mechanical tubing/piping joints in compliance with ISO 14903 or UL 207 including Annex A, […] See standard for details.
22.127		***New clause added that removes the "occupied space" limitation and makes it applicable to all areas outside the appliance.*** The appliance enclosure, UV-C LAMPS, and UV-C BARRIERS shall be located in such a manner that the UV-C SPECTRAL IRRADIANCE is not emitted outside the unit at a level exceeding the irradiance limit specified in Clause 32.101.1. Compliance is checked by inspection and test per Clause 32.101. The appliance indoor airflow inlet and outlet shall be considered as possible radiation paths. The unit filters are not considered UV-C BARRIERS.

CLAUSE	VERDICT	COMMENT
22.132DV.5		Appliances with heat exchangers for the purpose of heating sanitary water shall be designed to prevent contamination of the sanitary water by refrigerant or oil. Such designs may include the use of double -wall heat exchangers with a vented interface evaluated in accordance with ~~Clause 22.107~~ UL 207. ***[SEE INTERTEK ENGINEERING DECISION]***
22.133DV		SAFETY SHUT-OFF VALVES for FLAMMABLE REFRIGERANTS for the purposes of limiting the releasable charge. SAFETY SHUT-OFF VALVES shall be designed to close when the appliance is de-energized for any reason other than failure of the supply mains. NOTE 1 If the appliance is powered through a supply cord fitted with a plug, then disconnecting this plug is not considered a failure of the supply mains. NOTE 2 Backup power can be utilized to close motor driven valves (e.g., capacitors or batteries). SAFETY SHUT-OFF VALVES that are activated by a leak detection system shall either – have manual operation for resetting that requires the aid of a tool, or – automatically reset when the LEAK DETECTION SYSTEM resets when a leak is no longer detected or for a period not less than 2 h, NOTE 3 SAFETY SHUT-OFF VALVES can consist of electrically operated valves that comply with the UL 429 and CSA C22.2 No. 139 leak requirements.
23	Info	**Internal wiring**
23.104DV.1 to 23.104DV.12		***New section added for segregation of circuits;*** Unless having insulation suitable for the highest voltage involved, insulated conductors of different circuits (internal wiring, including wires in a junction box or compartment) shall be separated by barriers, or shall be segregated, and shall, in any case, be separated or segregated from uninsulated live parts connected to different circuits. Segregation of insulated conductors may be accomplished by clamping, routing, or equivalent means that ensures permanent separation from insulated or uninsulated live parts of a different circuit. See standard for details.
24	Info	**Components**
24.1DV.1		Components shall comply with any relevant component requirements within this standard. In addition, components shall comply with the safety requirements as far as they reasonably apply, as follows:

CLAUSE	VERDICT	COMMENT
		e) components connected to either an input circuit compliant with ANSI/NFPA 70, Article 725 (NEC) or CSA C22.1, Class 2, or the output of a power supply compliant with Clause 17DV (b) or (d) are considered to comply, provided that they are not part of a PROTECTIVE ELECTRONIC CIRCUIT and are compliant with the separation of circuits requirements of Clause 23.104DV.
24.1DV.3		Unless the component complies with Clause 24.1DV.1 a), or b), or e) for parts other than those where their deterioration could cause the appliance to fail to comply with the separation of circuits requirements of Clause 23.104DV, parts of non-metallic material in components, including parts of non-metallic material supporting current-carrying connections inside components shall comply with one of the following: a) Clauses 30.1 and 30.2; or b) the relevant requirements in UL 746C for parts used as nonmetallic enclosures or for parts used to support live current-carrying connections.
24.1DV.4		Motor-compressors shall – comply with IEC 60335-2-34 (including its Annex AA); – comply with IEC 60335-2-34 (without Annex AA) and comply with Clauses 11 and 19 of this standard, with the appliance operated under NORMAL OPERATION at a supply voltage between 0,94 times the lowest RATED VOLTAGE and 1,06 times the highest RATED VOLTAGE, the voltage chosen being that which gives the most unfavorable result. In addition, motor-compressors shall comply with Clause 22.9 in CSA-C22.2 No. 60335-2-34 and UL 60335-2-34; or – comply with UL 60335-2-34 or CAN/CSA-C22.2 No. 60335-2-34, Annex 101.DVH.
24.1DV.4.1		***New clause added;*** Motors shall – comply with the relevant national safety component standard; or – comply with Clauses 11 and 19 of this standard, with the appliance operated under NORMAL OPERATION at a supply voltage between 0,94 times the lowest RATED VOLTAGE and 1,06 times the highest RATED VOLTAGE, the voltage chosen being that which gives the most unfavorable result.
25	Info	**Supply connection and external flexible cords**
25.101DV		***New section added;*** Room air conditioners include packaged terminal air conditioners. They are factory-made encased assemblies designed as a unit primarily to provide free delivery of conditioned air to an enclosed space, room, or zone. This equipment is intended for installation in a window, through a wall, or as a console located in or adjacent to the room, zone, or space to be conditioned. These units employ hermetic refrigerant motor-compressors with factory-charged refrigeration

CLAUSE	VERDICT	COMMENT
		systems and include means for circulating air. They may also have provision for heating and ventilation. See standard for details.
32	Info	**Radiation, toxicity and similar hazards**
32.101.1DV		***New clause added;*** For the space outside the unit, a test shall be performed to determine the UV-C SPECTRAL IRRADIANCE. The emissions from the equipment shall not exceed a UV-C SPECTRAL IRRADIANCE limit of 0,2 µW/cm2.
32.101.3DV		***New clause added;*** UV-C IRRADIANCE shall be measured at the location in Table 101DV.
Annex DD	Info	**Requirements for operation, service and installation manuals of appliances using flammable refrigerants**
DD.3.1DV		The following information shall be specified in the manual where the information is needed for the function of the manual and as applicable to the appliance: - instructions using either minimum room area (Amin or TAmin) or minimum room volume (VED) shall be based on altitude of the installation location; instructions shall include either: • how to correct the minimum values for locations above sea level; or • enumerated minimum values versus altitude, with LFL adjusted for altitude in accordance with ANSI/ASHRAE 34 when using the equations of either Annex GG or ANSI/ASHRAE 15, as applicable. ***[SEE INTERTEK ENGINEERING DECISION]*** If an appliance has labels or markings required by Clause 7 or Annex 101.DVF that are to be visible in the as-installed state, the installation manual shall have language that instructs the installer to not cover the labels or markings and shall give clear indication as to which labels or markings this applies to.
Annex EE	Info	**Pressure tests**
EE.3DV	Info	**Strength pressure test**
EE.3DV.1		***New clause added;*** All refrigerant-containing parts of each unit shall be tested and proved tight at no less than the MAXIMUM ALLOWABLE PRESSURE. ***[SEE INTERTEK ENGINEERING DECISION]***
EE.3DV.2		***New clause added;*** The leakage test on the complete unit shall be conducted at the marked lowside MAXIMUM ALLOWABLE PRESSURE if final assembly of the unit is completed with

CLAUSE	VERDICT	COMMENT
		flare-type fittings or telescoped tubing joints that are sealed with silver solder, brazing, welding, or equivalent means. Any components located on higher-pressure sections of the system shall be individually tested by either the unit manufacturer or the manufacturer of the part at no less than the marked design pressure in which those components are used. The pressure test shall be carried out on three samples of each component. The test samples are filled with a liquid, such as water, to exclude air and are connected in a hydraulic pump system. The pressure is raised gradually until the required test pressure is reached. The pressure is maintained for at least 1 min. ***[SEE INTERTEK ENGINEERING DECISION]***
Annex FF	Info	
FF.1DV	Info	***New addition to the clause for clarification;*** *Field applied joints that are exposed in the OCCUPIABLE SPACE are not considered POTENTIAL LEAK POINTS if such joints are one of the following:* *- Mechanical joints in compliance with ISO 14903 or UL 207,* *- Welded joints,* *- Brazed joints,* *- Joints in enclosures that vent to the unit or to the outside.* *Compliance is checked by inspection.*
Annex GG	Info	**Charge limits, ventilation requirements and requirements for secondary circuits**
GG.1.1DV.3	Info	***New addition to the note;*** NOTE 4DV: The refrigerant charge limit determined in accordance with ANSI/ASHRAE 15, ANSI/ASHRAE 15.2, and CSA B52 accounts for the flammability, toxicity, and oxygen depriving properties of the refrigerant, and adjusts the refrigerant-concentration limit (*RCL*) for altitude in accordance with ANSI/ASHRAE 34. ***[SEE INTERTEK ENGINEERING DECISION]***
GG.1.1DV.5	Info	***New note;*** NOTE 5DV: The value of *LFL* to be used for calculation of minimum room area (*A*min or *TA*min) or minimum room volume, for use in manuals in accordance with Clause DD.3.1DV, is revised from the sea level values of Annex BB using the *RCL* adjustment for altitude method of ANSI/ASHRAE 34. ***[SEE INTERTEK ENGINEERING DECISION]***
GG.2.1DV		The REFRIGERANT CHARGE (mc) in each REFRIGERATING SYSTEM employing A2 and A3 REFRIGERANTS shall not exceed m1, except as follows: For appliances installed in industrial occupancies or machinery rooms as defined in ANSI/ASHRAE 15 (USA) or CSA B52 (Canada), with a refrigerant charge of mc > m1, the requirements of ANSI/ASHRAE 15 (USA) or CSA B52 (Canada) shall apply. The subsequent Clauses GG.2.1.1DV through GG.13 shall not apply. The appliance

CLAUSE	VERDICT	COMMENT
		must be classified per 6.102DV and marked per 7.1DV.21. All other requirements of this standard shall apply. The REFRIGERANT CHARGE (mc) in each REFRIGERATING SYSTEM employing A2L refrigerants shall not exceed m3 except as follows: For appliances installed in machinery rooms as defined in ANSI/ASHRAE 15 (USA) or CSA B52 (Canada) with a refrigerant charge of mc > m3, the requirements of ANSI/ASHRAE 15 (USA) or CSA B52 (Canada) shall apply. The subsequent Clauses GG.2.1.1DV through GG.13 shall not apply. The appliance must be classified per 6.102DV and marked per 7.1DV.21. All other requirements of this standard shall apply.
Annex KK	Info	**Test method for hot surface ignition temperature for A2L**
KK.1DV		***New clause added;*** The test is performed per ASTM D8211.
Annex LL	Info	**Refrigerant detection systems for A2L refrigerants**
LL.1.3DV		***New clause added;*** The tests of this Annex are conducted using the number of samples specified below for each clause: a) For Clause LL.2.5DV and LL.13DV, a minimum of one sample is required. b) For Clauses LL.5DV and LL.6DV, three separate samples for each clause (six total) are required. c) Three samples are required with tests sequentially conducted in the following order: Clauses LL.4DV, LL.8DV, LL.9DV, LL.10DV, LL.11DV, LL.12DV and LL.3DV. NOTE Following completion of the sequentially conducted tests, the tests of Clauses LL.4DV, LL.8DV, LL.9DV, LL.10DV, LL.11DV, LL.12DV and LL.3DV may be conducted separately using three additional samples, as agreed between the manufacturer and test organization, to evaluate variations of the product design such as alternate mounting configurations where the variation would only have an effect on specific tests related to the variation. d) For Clause LL.7.2DV (Method 1): a minimum of two modified samples is required. e) For Clause LL.14.2DV, a minimum of one sample modified to be just at the end of its REFRIGERANT SENSOR LIFE is required. f) For Clause LL.7.3.3.2DV, as applicable: – a minimum of 15 samples for the baseline environmental conditions is required; and – a minimum of 15 samples for each applied stress is required.

CLAUSE	VERDICT	COMMENT
LL.2.1DV		Unless otherwise specified, the tests of Annex LL are carried out for each refrigerant declared by the REFRIGERANT SENSOR manufacturer, and carried out using air and test gases • of constant temperature ± 2 °C within the range 15 °C to 25 °C throughout the duration of each test;
LL.2.5DV		***New clause added;*** WARM-UP TIME shall be verified by the following test: a) The REFRIGERANT SENSOR is de-energized and placed in clean air for 24 h. b) The REFRIGERANT SENSOR is energized and exposed to a refrigerant gas concentration of 25% of LFL within 5 s of energizing the REFRIGERANT SENSOR. c) WARM-UP TIME shall be determined as the time from energizing the REFRIGERANT SENSOR until the REFRIGERANT DETECTION SYSTEM initiates a SYSTEM RESPONSE at the 25% of LFL gas concentration. d) WARM-UP TIME shall be the lower of the manufacturer's declared WARM-UP TIME, 1 h, or as declared by the appliance standard. Compliance shall be determined by test.
Table LL.1DV		***The test gas concentration table was updated to include the tolerances for warm-up time and sensor drift tests;*** See standard for details.
LL.3.1DV		The DETECTION THRESHOLD LIMIT VALUE (DTLV) of the REFRIGERANT DETECTION SYSTEM shall be declared by the appliance manufacturer. Worst case combined effects of SHIFT and DRIFT shall be considered over the condition ranges of the appliance as declared per Clause LL.1.1DV. DRIFT shall be evaluated in accordance with the requirements specified in Clause LL.7DV.
LL.3.2DV	Info	***New note added;*** […] NOTE Control and operation of a SYSTEM RESPONSE is not required to be a PROTECTIVE ELECTRONIC CIRCUIT. See standard for details.
LL.6.1DV		***New clause added;*** The REFRIGERANT DETECTION SYSTEM shall respond as intended per Clause LL.6.4DV following the release of the refrigerant(s) marked on the appliance and oil (if any) contained within the appliance.

CLAUSE	VERDICT	COMMENT
LL.6.2DV		The test set-up shall be as follows: e) The REFRIGERANT SENSOR shall be exposed either to a mixture of refrigerant and oil if the appliance contains oil in the refrigerant circuit, or to refrigerant only if the appliance refrigerant circuit is oil-free. REFRIGERANT SENSORS tested with refrigerant and oil do not require additional testing with oil-free refrigerant. The refrigerant shall be as marked on the appliance, repeating the test with new sensor samples for each refrigerant if multiple refrigerants are marked. Sensors protected against direct refrigerant oil spray or drips shall only be tested with each refrigerant and one oil. The oil shall be either the same used in the appliance, or an oil with similar miscibility characteristics in a temperature range of 10 °C to 30 °C, or the worst-case oil as agreed between the manufacturer and the test organization. and the oil concentration as mass fraction shall be either woil = 0,020 ± 0.,001 or a value determined to be representative of the appliance during NORMAL OPERATION. The refrigerant shall be taken from the liquid phase of the refrigerant cylinder. The tubing or piping between the refrigerant cylinder and the spray orifice shall be sized, and the height of the refrigerant cylinder above the spray orifice shall be selected, to avoid flashing in a sight glass upstream of the orifice during the liquid refrigerant release.
LL.6.4DV		**Compliance criteria** After the recovery time period, to confirm the DETECTION THRESHOLD LIMIT VALUE and response time, the REFRIGERANT DETECTION SYSTEM shall respond as intended when tested as follows: a) The REFRIGERANT SENSOR shall be exposed to the low ratio test gas specified in Table LL.1DV. The total time to inject the gas and reach the low ratio gas concentration shall not exceed 30 s. The REFRIGERANT DETECTION SYSTEM shall not initiate a SYSTEM RESPONSE while exposed to the test gas for 5 min from when the gas injection begins. If the REFRIGERANT DETECTION SYSTEM provides notification that replacement is required during the testing of Clause LL.6.3DV f), then verify for at least 90 min that the REFRIGERANT DETECTION SYSTEM continues to provide a SYSTEM RESPONSE indicating a refrigerant leak.
LL.7DV		***New tests;*** **DRIFT** Over the REFRIGERANT SENSOR LIFE, the REFRIGERANT DETECTION SYSTEM shall consistently initiate a SYSTEM RESPONSE within 60 s when the REFRIGERANT SENSOR is directly exposed to a refrigerant gas concentration of 25 % of LFL. See standard for details.

CLAUSE	VERDICT	COMMENT
LL.8DV		**Humidity test** To confirm the DETECTION THRESHOLD LIMIT VALUE (DTLV), the REFRIGERANT DETECTION SYSTEM shall respond as intended when tested as follows with the test gas conditioned to the same humidity and temperature: • The REFRIGERANT SENSOR shall be exposed to the low ratio test gas specified in Table LL.1DV. The total time to inject the gas and reach the low ratio gas concentration shall not exceed 30 s. The REFRIGERANT DETECTION SYSTEM shall not initiate a SYSTEM RESPONSE while exposed to the test gas for 5 min from when the gas injection begins. • The REFRIGERANT SENSOR shall be exposed to the high ratio test gas specified in Table LL.1DV for 5 min and the REFRIGERANT DETECTION SYSTEM shall initiate a SYSTEM RESPONSE within this time.
LL.9DV		**Temperature test** To confirm the DETECTION THRESHOLD LIMIT VALUE at each of the above mentioned temperatures, the REFRIGERANT DETECTION SYSTEM shall respond as intended when tested as follows with the test gas at the same temperature: • The REFRIGERANT SENSOR shall be exposed to the low ratio test gas specified in Table LL.1DV. The total time to inject the gas and reach the low ratio gas concentration shall not exceed 30 s. The REFRIGERANT DETECTION SYSTEM shall not initiate a SYSTEM RESPONSE within this while exposed to the test gas for 5 min from when the gas injection begins.
LL.10DV		**Pressure test** To confirm the DETECTION THRESHOLD LIMIT VALUE at each of the above mentioned pressures, the REFRIGERANT DETECTION SYSTEM shall respond as intended when tested as follows with the test gas at the same pressure: • The REFRIGERANT SENSOR shall be exposed to the low ratio test gas specified in Table LL.1DV. The total time to inject the gas and reach the low ratio gas concentration shall not exceed 30 s. and the REFRIGERANT DETECTION SYSTEM shall not initiate a SYSTEM RESPONSE within this while exposed to the test gas for 5 min from when the gas injection begins. • The REFRIGERANT SENSOR shall be exposed to the high ratio test gas specified in Table LL.1DV for 5 min and the REFRIGERANT DETECTION SYSTEM shall initiate a SYSTEM RESPONSE within this time.
LL.11.3DV		After the vibration test the REFRIGERANT DETECTION SYSTEM shall respond as intended when tested as follows: • The REFRIGERANT SENSOR shall be exposed to the low ratio test gas specified in Table LL.1DV. The total time to inject the gas and reach the low ratio gas

CLAUSE	VERDICT	COMMENT
		concentration shall not exceed 30 s. The REFRIGERANT DETECTION SYSTEM shall not initiate a SYSTEM RESPONSE while exposed to the test gas for 5 min from when the gas injection begins. • The REFRIGERANT SENSOR shall be exposed to the high ratio test gas specified in Table LL.1DV for 5 min. The REFRIGERANT DETECTION SYSTEM shall initiate a SYSTEM RESPONSE within this time. • A visual observation shall confirm that the REFRIGERANT SENSOR has not become detached from its mounting means.
LL.14.2DV		If the REFRIGERANT SENSOR is a LIMITED LIFE REFRIGERANT SENSOR and requires replacement after a given period, then the REFRIGERANT DETECTION SYSTEM shall initiate a SYSTEM RESPONSE in accordance with Clause 22 and either Annex GG or Annex 101.DVN at the end of the specified life, and it shall provide notification to the end user that replacement is required. Compliance is checked by test. The REFRIGERANT SENSOR of the REFRIGERANT DETECTION SYSTEM shall be tested at the REFRIGERANT SENSOR manufacturer-declared REFRIGERANT SENSOR LIFE. The sensor shall be set up and tested at the room ambient conditions in accordance with Clause LL.7.3.4.1DV c) i). The manufacturer may provide a sample that has been modified artificially or by aging, as agreed between the manufacturer and the test organization. The REFRIGERANT DETECTION SYSTEM shall respond as intended and output a notification signal that the REFRIGERANT SENSOR has reached the manufacturer-declared REFRIGERANT SENSOR LIFE.
LL.16DV		**Refrigerant sensor identification** The refrigerant sensors or the parts of the appliance containing refrigerant sensors shall be marked or tagged with the following: ~~• "service indicator; read technical manual" (symbol ISO 7000-1659 (2004-01));~~ • LIMITED LIFE REFRIGERANT SENSOR shall be marked with year and month of manufacturing using the numerical format YYYY-MM; • name, trademark or identification mark of the manufacturer or responsible vendor; • reference number or other means for identifying the REFRIGERANT SENSOR; and • "This refrigerant sensor shall only be replaced with manufacturer approved sensor". If the REFRIGERANT SENSOR is only replaceable as part of an assembly of parts, then the assembly shall be marked. The markings shall comply with Clauses 7.13 and 7.14 of the Part 1. Compliance is checked by inspection.

CLAUSE	VERDICT	COMMENT
MM.2.3DV		***New test setup requirement;*** […] For floor mounted units, the appliance shall be set up so *h*t is a minimum of 0.03 m (1 in). […] See standard for details.
Annex 101.DVA		**Clause 10 and Clause 11 Operating conditions**

Air and water conditions	Test Conditions – °C (°F)	
	Heating	Cooling
Air to outdoor heat exchanger (Clause 11)	21.1 (70) DB 14.7 (58.5) WB	40 (104) DB 26.7 (80) WB
Air to indoor heat exchanger (Clause 11)	26.7 (80)	26.7 (80) DB, 19.4 (67) WB
Air to outdoor heat exchanger (Clause 10) – ~~cord connected appliances only)~~	8.3 (47) DB 6.1 (43) WB	35 (95) DB, 23.9 (75) WB
Air to indoor heat exchanger (Clause 10) – ~~cord connected appliances only)~~	21.1 (70) DB	26.7 (80) DB 19.4 (67) WB

INTERTEK ENGINEERING DECISIONS

The following are decisions that Intertek has created to correct or provide better clarification of clauses within the standards UL 60335-2-40:2022 Ed.4+R:31Oct2025 and CSA C22.2#60335-2-40:2022 Ed.4+U1.

CLAUSE	COMMENT
4DV.1	A new note was added to reference ASHRAE 34 for determining altitude adjustment corrections for compliance with DD.3.1DV and GG.1.1DV. However, there is not a specific calculation within ASHRAE 34 that covers altitude correction based on LFL. The altitude correction is based on RCL and not specifically LFL and RCL. Since the note is only informative, Intertek will not use the reference to ASHRAE 34 until an equation, table, or new reference is provided in UL 60335-2-40 / CSA C22.2 No. 60335-2-40 specifically for LFL. See the Engineering Decision on DD.3.1DV below for more information.

CLAUSE	COMMENT
11.4DV	This deviation states that it only replaces the last sentence, however it was supposed to replace all of clause 11.4. To eliminate any confusion, Intertek will replace all of clause 11.4 with the deviation in 11.4DV. This change declares the test voltage for permanently connected appliances to be determined by Table 11.4DV unless otherwise specified in the standard. Cord connected appliances must be tested with over and under voltage between 0.94 and 1.06 times the rated voltage.
11.5DV.0	Intertek will not follow this new clause. It was added in error when the standard was published. UL 60335-2-40 completely replaces the part 1, section 11, so there should not be any references that modify the part 1. All test voltage requirements are already covered in clause 11.4DV.
11.6DV.0	Intertek will not follow this new clause. It was added in error when the standard was published. UL 60335-2-40 completely replaces the part 1, section 11, so there should not be any references that modify the part 1. All test voltage requirements are already covered in clause 11.4DV.
19.1DV.1	There is an error in the first paragraph of 19.1DV.1. This first paragraph is a repeat of the last paragraph of clause 19.1 and the second paragraph of 19.1DV.1. Intertek will ignore the first paragraph of clause 19.1DV.1 and only follow the second paragraph and the Note 101DV.
19.8DV	This revision added a note to clause 19.8 which is only informative, but Intertek will treat this as "normative" text. Three-phase motors compliant with a relevant component standard are not required to perform the phase disconnection tests of 19.8 if they were previously evaluated in the component standard for single-phase failure conditions.
20.1DV	Appliances that are not attached to walls, floor, ceilings, roofs, or other structures are required to perform these tests. Refrigerant piping and water piping are not considered structural mounting that exempts this required test. By the definition of 3.5.4DV, Note 101 water or refrigerant piping that is part of the building makes an appliance a "FIXED APPLIANCE". However, this new requirement in 20.1DV requires FIXED APPLIANCES that use water and refrigerant piping and do not have any other means of securement to comply with the stability test. Intertek will use Engineering Judgment to determine when this test is required based on the dimensions, mass, and possible securement means for an appliance. The use of rigid versus flex ducting per the manufacturer's installation instructions will also be considered. If it can clearly be shown that the center of mass will not exceed the base support at an angle of 10° from the center of mass in the vertical direction, then the test may be waived. The opening of cabinet doors and accessories must be considered when issuing this Engineering Judgment to waive the stability test.
22.132DV.5	Replaced Clause 22.107 with UL 207. Intertek will continue to allow the compliance of the heat exchanger in accordance with clause 22.107 (which references 22.104) or compliance with UL 207. UL 207 only applies to certification in the United States so compliance for Canada must meet 22.107 / 22.104, but UL 207 testing may be used to show compliance with 22.107 / 22.104.

CLAUSE	COMMENT
DD.3.1DV	The installation manual must now provide a method for correcting based on altitude in accordance with ANSI/ASHRAE 34. ASHRAE 34 does not contain equations specifically for correcting the LFL based on altitude or elevation. Until further notice, Intertek will only require that the manufacturer provide a description in the manual with instructions on handling calculations for altitude adjustment. Intertek will not evaluate correction values or calculations for elevation correction until one is provided in UL 60335-2-40 / CSA C22.2 No. 60335-2-40, or a direct reference to a calculation or table is provided.
EE.3DV.1 & EE.3DV.2	This amended deviation was supposed to be an alignment with the previous UL 1995 test procedure for strength testing the refrigeration system dependent on the components location in the refrigerant circuit. However, what was added is a production line test procedure performed at a lower pressure and not the strength test procedure for abnormal safety requirements. Intertek will either continue to follow the test procedures in EE.3DV as they were written in UL 60335-2-40 4th Ed., 2022, or the following test procedure. The test pressure for REFRIGERATING SYSTEM parts shall be at least three times the highest of the following: 1) The marked MAXIMUM ALLOWABLE PRESSURE per Clause 7.1 as determined by Clause EE.1DV. 2) For high-side (discharge) parts, in all possible operating modes, the MAXIMUM ALLOWABLE PRESSURE developed in the REFRIGERATING SYSTEM high-side during operation under Clause 11, Clause 19, and standstill. 3) For low-side (suction) parts, in all possible operating modes, the MAXIMUM ALLOWABLE PRESSURE developed in the REFRIGERATING SYSTEM low-side during operation under Clause 11, Clause 19, and standstill. When the marked MAXIMUM ALLLOWABLE PRESSURE per Clause 7.1 does not separate the high-side and low-side pressures, the marked pressure must be used for both the high-side and low-side parts of the REFRIGERATING SYSTEM. The pressures must be separated on the marking if the low-side parts in the REFRIGERATING SYSTEM are tested under clause EE.3DV at a pressure lower than the high-side MAXIMUM ALLOWABLE PRESSURE. The test is performed on three samples of each component. The samples are filled with a liquid (water) to purge all air and then connected to a hydraulic pump which gradually raises the pressure to the required test pressure. The pressure is maintained for 1 minute and must comply with EE.1DV.
GG.1.1DV.3	See DD.3.1DV new altitude correction changes
GG.1.1DV.5	See DD.3.1DV new altitude correction changes