

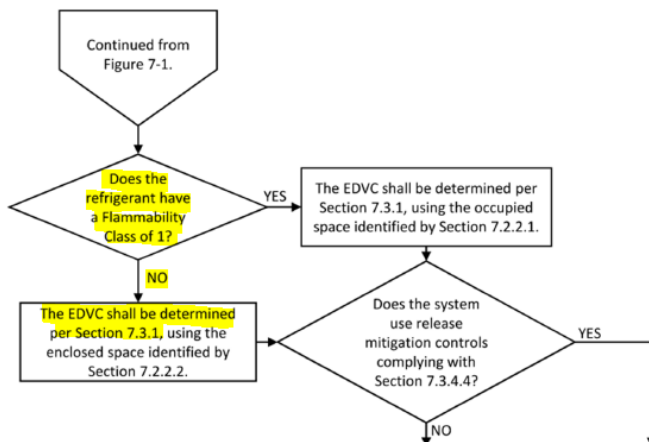
**INTERPRETATION IC 15-2022-2 OF
ANSI/ASHRAE STANDARD 15-2022
SAFETY STANDARD FOR REFRIGERATION SYSTEMS**

Date Approved: July 28, 2023

Request from: John Murphy, Trane Technologies, 2213 20th Street South, La Crosse, WI 54601.

Reference: This request for interpretation refers to the requirements presented in ANSI/ASHRAE Standard 15-2022, Section 7.6.1, regarding Equations 7-8 and 7-9.

Background: As currently written, Section 7.3 states that “All refrigeration systems shall follow the compliance path in Figure 7-1 and Figure 7-2” and Figure 7-2 states that if the refrigerant is of a Flammability Class other than 1 (which would include 2L), then the “EDVC shall be calculated per Section 7.3.1.”



Nowhere in Section 7.3 or Section 7.6 does it state that Section 7.3.1 does not apply if an A2L refrigerant is used. Rather, Section 7.6.4 explicitly mentions compliance with Section 7.3 in both the text (“When the refrigerant charge necessary to be removed by ventilation is known, in order to be compliant with Section 7.3,...”) and in the footnote under Table 7-4 (“[m_s – EDVC] is the amount of refrigerant charge that is removed by mechanical ventilation and is therefore not included in calculations to determine compliance with Section 7.3”).

If an A2L refrigerant is used in a high-probability system for human comfort, Section 7.6 states that the system must comply with this section. Equation 7-8 or 7-9 in Section 7.6.1 is to be used to determine “The maximum refrigerant charge of any independent circuit of each refrigeration system,” which is labelled “EDVC” in both equations.

My understanding is that the committee’s intent was that this EDVC determined per Section 7.6.1 was meant to harmonize Standard 15 with UL 60335-2-40, and that this EDVC should be used in place of the EDVC determined per Section 7.3.1 when an A2L refrigerant is used in a high-probability system for human comfort.

However, text in the current version does not make that clear, and in some cases contradicts this

interpretation.

Interpretation No.1: When an A2L refrigerant is used in a high-probability system for human comfort, the EDVC is the value determined per Section 7.6.1, and the value determined by Section 7.3.1 does not apply.

Question No.1: Is this Interpretation correct?

Answer No.1: Yes

Interpretation No.2: The highlighted text in Figure 7-2 (see above) reads “The EDVC shall be calculated per Section 7.3.1...” But if an A2L refrigerant is used in a high-probability system for human comfort, the EDVC shall be calculated per Section 7.6.1, and Section 7.3.1 does not apply.

Question No.2: Is this Interpretation correct?

Answer No.2: Yes

Interpretation No.3: The text in Section 7.6.4 reads “When the refrigerant charge necessary to be removed by ventilation is known, in order to be compliant with Section 7.3...” But if an A2L refrigerant is used in a high-probability system for human comfort, compliance with Section 7.6.1 is required, rather than with Section 7.3.1.

Question No.3: Is this Interpretation correct?

Answer No.3: Yes

Interpretation No.4: The footnote under Table 7-4 reads “...and is therefore not included in calculations to determine compliance with Section 7.3.” But if an A2L refrigerant is used in a high-probability system for human comfort, compliance with Section 7.6.1 is required, rather than with Section 7.3.1.

Question No.4: Is this Interpretation correct?

Answer No.4: Yes