

To our teachers:

You may delete this page from the document that follows after reading it.

At the bottom of this page we've reproduced the "human-readable summary" of the copyright we adopted from Creative Commons. Consult this summary if you intend to copy and redistribute our material in any medium or format, or adapt, remix, transform, or build upon it.

[Click here](#) to view and read the same plain, readable summary of the Creative Commons copyright license we've adopted online. The online version provides additional information on some of the terms in the summary.



Neither summary is a legal substitute for our actual Creative Commons license, which may be found by [clicking here](#).

The human-readable, Creative Commons copyright license summary:

You are free to:

- **Share** — copy and redistribute the material in any medium or format
- **Adapt** — remix, transform, and build upon the material

The licensor cannot revoke these freedoms as long as you follow the license terms.

Under the following terms:

- **Attribution** — You must give appropriate credit, provide a link to the license, and indicate if changes were made. You may do so in any reasonable manner, but not in any way that suggests the licensor endorses you or your use.
- **NonCommercial** — You may not use the material for commercial purposes.
- **ShareAlike** — If you remix, transform, or build upon the material, you must distribute your contributions under the same license as the original.

No additional restrictions — You may not apply legal terms or technological measures that legally restrict others from doing anything the license permits.

Name *



Date *

Class *

A2L Refrigerant Overview

All the following questions are based upon information from the video below.

Select the single best answer for each question.

<https://www.youtube.com/watch?v=MffAs84FeSY&list=PL-mtgGdh8bvj2VBzoYogabVeBvG7qtVNp&index=31&t=29s>

1. * Why is the gradual phase-down of some refrigerants and the equipment in which they're manufactured to work happening? Compared to their replacements, the refrigerants being phased down:
 - a. Are too flammable
 - b. Must employ expensive, pressed style mechanical fittings in their equipment
 - c. Have a significantly higher Global Warming Potential (GWP)
 - d. Have a much higher chemical toxicity
2. * Three of the following answer choices are true. Which one is not true?
 - a. December 31, 2024, was the last date manufacturers were permitted to build equipment that uses phase-down refrigerants
 - b. Installations of Variable Refrigerant Flow (VRF) systems using phase-down refrigerants ended December 31, 2025
 - c. Installations of equipment using phase-down refrigerants that require field piping are required to end by December 31, 2025
 - d. Installations of packaged equipment using phase-down refrigerants that do not require field piping are required to end by December 31, 2027
3. * Which of the following refrigerants are being phased down
 - a. R2D2 and C3P0
 - b. R454B and R32
 - c. R410A and R134A
 - d. SK8R and GR8
4. * In their places (referring to question 2), which of the following are being phased in as the main industry refrigerants?
 - a. R2D2 and C3P0
 - b. R454B and R32
 - c. R410A and R134A

- d. SK8R and GR8
-
- 5. * The refrigerants replacing those being phased down have been ASHRAE classified as:
 - a. A1 No Flame Propagation
 - b. A2L Lower Flammability
 - c. A2 Flammable
 - d. A3 Higher Flammability
 - 6. * Three of the following answer choices are true. Which one is not true? The refrigerants replacing those being phased down come with these requirements:
 - a. Refrigerant cylinders require a red band
 - b. Refrigerant cylinder threading must be left-handed; to reuse existing hoses requires an adapter
 - c. Any hand tool used for piping must be a sparkless tool
 - d. Pipe fitting must be done by brazing with an acetylene torch
 - 7. * Three of the following answer choices are true. Which one is not true? Equipment using the refrigerants being phased in:
 - a. Has stub outs and pipes defaulted for pressed style fittings
 - b. Has stub outs marked with red caps for the new refrigerants
 - c. Comes with tags plainly identifying the equipment for use with the new refrigerants
 - d. Has many procedural installation “requirements” that have been relaxed to “best practices”
 - 8. * Three of the following answer choices are true. Which one is not true? Equipment using the new refrigerants being phased in require a:
 - a. High pressure thermal expansion valve (TEV or TXV)
 - b. Refrigerant Leak Detection Sensor
 - c. Dissipation Control Sequence
 - d. Wiring harness between leak sensor and control board.
 - 9. * Three of the following answer choices are true. Which one is not true? In the event of a refrigeration leak, a Dissipation Control Board will:
 - a. Intercept thermostat signals
 - b. Shut off compressor
 - c. Turn off circulation fans, so the leak doesn’t pool in one spot
 - d. Turn off any attached combustion appliances (like a gas furnace)

TEACHER ANSWER KEY



A2L Refrigerant Overview

All the following questions are based upon information from the video below.

Select the single best answer for each question.

<https://www.youtube.com/watch?v=MffAs84FeSY&list=PL-mtgGdh8bvj2VBzoYogabVeBvG7qtVNp&index=31&t=29s>

1. Why is the gradual phase-down of some refrigerants and the equipment in which they're manufactured to work happening? Compared to their replacements, the refrigerants being phased down:
 - a. Are too flammable
 - b. Must employ expensive, pressed style mechanical fittings in their equipment
 - c. Have a significantly higher Global Warming Potential (GWP)
 - d. Have a much higher chemical toxicity
2. Three of the following answer choices are true. Which one is not true?
 - a. December 31, 2024, was the last date manufacturers were permitted to build equipment that uses phase-down refrigerants
 - b. Installations of Variable Refrigerant Flow (VRF) systems using phase-down refrigerants ended December 31, 2025
 - c. Installations of equipment using phase-down refrigerants that require field piping are required to end by December 31, 2025
 - d. Installations of packaged equipment using phase-down refrigerants that do not require field piping are required to end by December 31, 2027
3. Which of the following refrigerants are being phased down
 - a. R2D2 and C3P0
 - b. R454B and R32
 - c. R410A and R134A
 - d. SK8R and GR8
4. In their places (referring to question 2), which of the following are being phased in as the main industry refrigerants?
 - a. R2D2 and C3P0

- b. R454B and R32
 - c. R410A and R134A
 - d. SK8R and GR8
5. The refrigerants replacing those being phased down have been ASHRAE classified as:
- a. A1 No Flame Propagation
 - b. A2L Lower Flammability
 - c. A2 Flammable
 - d. A3 Higher Flammability
6. Three of the following answer choices are true. Which one is not true? The refrigerants replacing those being phased down come with these requirements:
- a. Refrigerant cylinders require a red band
 - b. Refrigerant cylinder threading must be left-handed; to reuse existing hoses requires an adapter
 - c. Any hand tool used for piping must be a sparkless tool
 - d. Pipe fitting must be done by brazing with an acetylene torch
7. Three of the following answer choices are true. Which one is not true? Equipment using the refrigerants being phased in:
- a. Has stub outs and pipes defaulted for pressed style fittings
 - b. Has stub outs marked with red caps for the new refrigerants
 - c. Comes with tags plainly identifying the equipment for use with the new refrigerants
 - d. Has many procedural installation “requirements” that have been relaxed to “best practices”
8. Three of the following answer choices are true. Which one is not true? Equipment using the new refrigerants being phased in require a:
- a. High pressure thermal expansion valve (TEV or TXV)
 - b. Refrigerant Leak Detection Sensor
 - c. Dissipation Control Sequence
 - d. Wiring harness between leak sensor and control board.
9. Three of the following answer choices are true. Which one is not true? In the event of a refrigeration leak, a Dissipation Control Board will:
- a. Intercept thermostat signals
 - b. Shut off compressor
 - c. Turn off circulation fans, so the leak doesn’t pool in one spot
 - d. Turn off any attached combustion appliances (like a gas furnace)