

Refrigerant Transition FAQ

Why is the industry transitioning to A2L refrigerants?

The AIM Act is the ultimate driver behind the nationwide refrigerant transition. Signed into law in 2020, the AIM Act authorized the EPA to regulate the production and consumption of HFC refrigerants. The AIM Act outlines a phasedown program that reduces HFC production and consumption by 85% by 2036.

What are the specifics of the AIM Act?

The EPA is implementing the AIM Act in 3 parts. **Part 1** is the HFC Allowance Program, which restricts the supply of HFCs by setting an annual quota that the refrigerant manufacturers (not equipment manufacturers) are allowed to enter into commerce. **Part 2** is the Technology Transition rule (referred to as the “TT Rule”), which restricts the consumption of HFCs by setting GWP limits for various industry sectors and equipment types with specific manufacturing compliance deadlines. In the future, **Part 3** will target the release of HFCs and promote improved refrigerant recovery and reclaim.

When will R-410A products be prohibited?

All Bard equipment is defined by the EPA as “products” (as opposed to “systems”). R-410A products cannot be manufactured after January 1, 2025. The data center/technology subsectors were granted a 2-year extension.

Self-contained Refrigeration, AC & Heat Pump Products (All Bard Products)

| Subsector | Manufacture & Import Compliance Date |
|---|--------------------------------------|
| Stationary residential & light commercial air conditioning & heat pumps | January 1, 2025 |
| Data centers, computer room air conditioning & information technology equipment cooling | January 1, 2027 |

What happens to the inventory of R-410A equipment after the manufacturing deadlines pass?

The market has an additional 3 years to sell, distribute, or export Bard “products” after the manufacturing deadline. For stationary residential and light commercial HVAC, this sell by deadline is January 1, 2028. For data centers, computer room, and information technology equipment cooling, this sell by deadline is January 1, 2030.

Why did Bard select R-454B as their refrigerant of choice?

Some OEMs have chosen R-32 as their refrigerant of choice. Bard conducted a rigorous evaluation of both refrigerants and found R-454B to provide great performance, while also providing a much lower GWP (466) as compared to R-32 (675). This lower GWP value provides immediate environmental benefits while also positioning Bard to avoid a potential baby-step change that could be regulated in the future. R-454B is similar to R-410A in performance and characteristics and is readily available in the market as many OEMs have made the same choice.



Why is Bard changing from UL 1995 to UL 60335-2-40?

UL 60335-2-40 is the new safety standard that enables A2L refrigerants. Among other things, it introduces the RDS (Refrigerant Detection System) and leak detection mitigation requirements. This safety standard is based on a globally harmonized IEC standard but has many national differences to tailor it to the US market. All Bard R-454B products will be listed under the UL 60335-2-40 (4th edition) standard.

What is an RDS (Refrigerant Detection System)?

RDS (Refrigerant Detection System) detects refrigerant leaks and prevents ignition. It constantly monitors for refrigerant in the air and enters a mitigation mode if a leak is detected. During mitigation, the unit blower is energized, the “Y” signal is interrupted, the 24V common connections to electric heat contactors are interrupted, and a 24V alarm output signal is energized.

Which units or applications need an RDS?

Bard units with < 3.94 lbs of R-454B do not require an RDS for leak detection and mitigation. Bard units with > 3.94 lbs of R-454B *may* require an RDS depending on the application specifics. Variables such as charge size, whether the unit will be free-blow or ducted, indoor or outdoor, the size of the room the unit will be installed in, and the height of installation on the wall will all affect whether an RDS is required or not. UL 60335-2-40 (Annex GG) can be used to determine if an RDS is required.

Are A2L (mildly flammable) refrigerants safe?

In short, yes. A2L equipment should be treated with respect but has been designed in accordance with UL safety standards. Building and fire codes have been updated to address the use of A2L refrigerants.

Learn more: [A2L Refrigerant 101 \(youtube.com\)](#)

What are the storage and handling differences for A2Ls as opposed to R-410A (A1)?

Storage and transportation of A2L refrigerants are governed by the DOT along with NFPA and state and local building codes. Check with your local AHJ (Authority Having Jurisdiction) for implications of A2L storage requirements. The Department of Transportation issued a letter in 2020 indicating that any A2L equipment with < 25 lbs of A2L refrigerant is not subject to Hazardous Material Regulation (HMR).

Warehouse requirements for A2L cylinder storage should meet the following requirements, but always check with your local AHJ.

Learn more: [Cylinder Warehouse \(ahrinet.org\)](#)

Will state building codes permit the installation of A2L equipment?

State building codes are in the process of being updated to permit A2L equipment installation across the nation. Use this interactive map to determine the up-to-date status of each state’s building codes:

[A2L Refrigerant Building Code Map \(ahrinet.org\)](#)

Will there be virgin R-410A available for servicing existing equipment?

Yes, but the cost of R-410A will continue to rise over time as the production is phased down and it becomes more scarce. In 2024, we are experiencing a 30% decrease in available HFCs with the next big change coming in 2029. The reduced supply of virgin R-410A will necessitate a robust recovery and reclaim program. The future price levels of R410-A for servicing existing equipment will be determined in part by how much R410-A is recovered and reclaimed through an EPA certified reclaimer.

Do I need updated tools to service A2L equipment?

Yes, you will need A2L compatible equipment for servicing. This includes A2L compatible gauges, recovery machines, vacuum pumps, and leak detectors.

Learn more: [Technician Best Practices \(ahrinet.org\)](https://www.ahrinet.org)

Is it possible to retrofit R-410A equipment to use A2L refrigerants?

No, this is not permitted by safety standards, nor was the original R-410A equipment designed for use with A2L refrigerants.

Does the AIM Act mean that states will stop regulating HFCs on their own?

No, California and Washington both have HFC regulations passed into law that are “generally” consistent with EPA, but not entirely. For instance, while the EPA provided a 2-year extension (1/1/27) for the manufacturing of high GWP data center HVAC products, California and Washington law still prohibit the manufacturing of these units for sale into their states. In addition, New York is still progressing with their own HFC regulatory efforts and are likely to continue to do so. The EPA TT Rule may deter other states from pursuing further HFC regulatory efforts, but there’s no guarantee.

Does the EPA TT Rule take precedence over state regulations?

No, the federal EPA TT Rule does NOT pre-empt or take precedence over state laws. State laws must still be followed if they go above and beyond the requirements of the EPA rule.

Is there another refrigerant transition coming?

It’s too early to tell for certain, but there are additional HFC phasedown steps required to meet the terms of the Kigali amendment by 2036. Some states, such as California and New York, are exploring regulatory activity that would target the mid-2030s for a final refrigerant transition to Ultra-Low GWP (<10) refrigerants. Bard is closely monitoring the regulatory environment and technological advancements to ensure we are well-positioned for the future.

Still have questions about the A2L refrigerant transition? Please email bard@bardhvac.com for additional assistance.



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