

Refrigerant Transition FAQ

Why is American Standard transitioning from R-410A refrigerant?

The American Innovation & Manufacturing (AIM) Act directs the U.S. Environmental Protection Agency (EPA) to implement a phasedown of the production and consumption of HFCs by 2035. As part of this work the EPA has published a rule that beginning January 1, 2025, the U.S. Federal Government will require Residential HVAC equipment to use refrigerants with a Global Warming Potential (GWP) of less than 700. This legislation directly aligns with American Standard's commitment to energy-efficient solutions and reducing our carbon footprint.

What does A2L mean?

Refrigerant Classification is defined by ASHRAE 34. The first digit refers to toxicity. The A is lower toxicity, the B is higher toxicity. The numbering 1,2L,2,3 refer to flammability. The lower the number, the lower the flammability. 2L is the lowest flammability classification, refrigerants with this classification are difficult to ignite and non-explosive.

Increasing Flammability (Su & HOC)	Higher Flammability	A3	B3
	Lower Flammability	A2	B2
		A2L	B2L
No Flame Propagation	A1	B1	
		Lower Toxicity	Higher Toxicity
		Increasing Toxicity	

Examples

Class 3 Requirements 1. Exhibit flame propagation @ 60C & 101.3 kPa 2. LFL < 0.10 kg/m ³ or HOC > 19,000kJ/kg	Propane (R290)
Class 2 Requirements 1. Exhibit flame propagation @ 60C & 101.3 kPa 2. LFL > 0.10kg/m ³ 3. HOC < 19,000 Ki/kg	Hair Spray, Dust-off (R-152a)
Class 2L Requirements 1. Same as Class 2 requirements & Su < 10 cm/s	R454B, R32
Class 1 Requirements No flame propagation @ 60C & 101.3kPa	R410A

Refrigerant Classification (ASHRAE 34 & ISO 817)

What are the details of the EPA transition rule?

On October 24, 2023 the EPA published the final AIM Act Technology Transition Rule which regulates the industry use of refrigerants with Global Warming Potential (GWP) above 700. Then in late December 2023, the EPA released a technical correction based on the Good Cause rulemaking process. With this correction, the EPA has extended the allowable installation date to January 1, 2026, for all R-410A ducted and ductless split systems built or imported prior to January 1, 2025 – effectively allowing 12 months of sell through. Reference the table below for a summary of the rule details.

Category	Impacted Equipment	Enforcement Rule	Example
R-410A Self-Contained Units	<ul style="list-style-type: none"> Packaged Units Dehumidifiers 	Product manufactured or imported before 1/1/25 may be installed until 1/1/28 (3 year sell through)	An R-410A packaged unit can be installed up until 1/1/28, if it was manufactured or imported into the US before 1/1/25.
R-410A Split Systems	<ul style="list-style-type: none"> Split Ducted Systems Ductless Systems 	Product manufactured or imported before 1/1/25 may be installed until 1/1/26 (1 year sell through)	A full system can be replaced in 2025 with an R-410A system only with components produced or imported prior to 1/1/25.
R-410A Split System Service Components	<ul style="list-style-type: none"> Split Air Conditioners Split Heat Pumps Air Handlers Furnace Coils Ductless Indoor Units 	Partial system for service is allowed after 1/1/25 ¹ . ('Service' label required for Manufactured/Imported after 1/1/25)	A homeowner's air conditioner compressor fails in January 2025, but the furnace and coil are working properly. The air conditioner may be replaced with an R-410A service air conditioner, even though it's post 12/31/24 ¹
R-410A Equipment Exports	Equipment manufactured in the U.S. for export	Split Systems: No imposed restriction Packaged/Dehumidifiers: until 12/31/27	An R-410A air conditioner manufactured in the U.S. can continue to be exported to Canada (no time limit). An R-410A packaged unit and dehumidifier cannot be exported after 12/31/27.

* Awaiting DOE guidance on if/how DOE Performance Ratings requirements will apply

¹ Installations in the state of California are subject to CARB restrictions on component replacements.

Additionally, resources from the EPA can be found here: <https://www.epa.gov/climate-hfcs-reduction/technology-transitions-program>. EPA Final Rule Fact Sheet: <https://www.epa.gov/system/files/documents/2023-10/technology-transitions-final-rule-fact-sheet-2023.pdf>

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What products will be impacted by the required transition?

All refrigerant-bearing products in our premium and value portfolios, including heat pumps, air conditioners, air handlers, coils, packaged units, ductless, and light commercial products will need to transition to support future refrigerant. Currently, we do not anticipate any major impacts to the furnace product portfolio.

Will I be able to field convert equipment from R-410A to a future refrigerant or from a future refrigerant design back to R-410A?

No, equipment cannot be field converted due to required safety regulations. All our products must meet UL/CSA safety requirements. Due to the change from an A1 to and A2L refrigerant, all systems require additional safety mitigations. These modifications are required to be factory installed to comply with UL safety where the design refrigerant must be present on the factory nameplate for both indoor and outdoor.

Will we be able to complete outdoor only replacements with the future refrigerant models?

Yes, while inventory of R-410A products is available. However, full refrigeration system replacements will be necessary once inventory of R-410A systems is no longer available.

Will there be a dry ship loophole like we saw leveraged during the R-22 to R-410A transition?

No, the dry ship 'loophole' exercised during the R-22 to R-410A will remain closed for the upcoming transition. For clarity, the resolution introduced does not ban dry shipping entirely, instead the DOE updated the ratings procedures for dry shipment which significantly reduce the ability to qualify.

Will equipment model numbers change?

Yes, we want to make it easy to identify equipment that will use the future refrigerants. All new ducted and ductless models will use a "5" for R-454B or "3" for R-32 to differentiate from the "4" used today to identify R-410A. Additionally, PTAC models will update the sequence design digit (digit 4) from an F to a G to symbolize the refrigerant change.

What tools will be needed for dealers to service and install A2L refrigerants?

It is important to only use A2L compatible tools when handling A2L systems. Impacted tooling includes gauges, recovery machines, vacuum pumps and leak detector. Additionally expect to use more nitrogen.

Will the new R-454B designs allow for reuse of line sets?

Line set reuse is permissible with proper purging. While R-454B designs may work best with smaller line set sizes, alternate sizing may be acceptable with reduced limits to rise & run length (or other performance limitations, see model installer's guides for specific details).

When can we expect to see American Standard products designed for the future refrigerant?

New products with low GWP refrigerant will begin shipping in early 2024. This excludes our PTAC portfolio, which is already impacted by California's early Low GWP requirements for portable cooling units. PTACs will begin shipping Fall 2023.

Do these regulations affect Canada, in addition to the U.S.?

Regulations developed by the U.S Environmental Protection Agency (EPA) affect only the United States. Environment Canada is expected to similarly enact changes for Canada, but no rulings have been proposed at this time. Continue to check back in and we will update as more information becomes available.

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How can I stay up-to-date with the latest information regarding the transition?

The Refrigerant Transition Playbook is a great place to explore resources and information ahead of and throughout the transition. The Refrigerant Transition Playbook is located here:

[ASDealerNet](#) > [Marketing Center](#) > [Playbook HUB](#) >

[American Standard Refrigerant Transition Playbook](#)

What do AHRI ratings with "+ T-Stat" mean?

You may see new system ratings in AHRI with "+ T-Stat," similar to how you may see "+ TDR" or "+ TXV" today. This new designator simply means to use a standard 24V 2-stage thermostat for this combination.