

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 (S_u & 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 & S_u < 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	- 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	- 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	- 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.

¹ Consult your local regulations for compliance. Installations in California, Washington and New York are subject to further restrictions of replacement components, and it's possible other states may also impose additional restrictions

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 detectory. 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.

What is a Refrigerant Detection System (RDS)?

RDS works to detect any refrigerant leaks and complete a mitigation sequence. An RDS contains a refrigerant leak sensor, mitigation control board and wire harness.

Will all products have the new RDS installed on them?

An RDS will be factory-installed in all coils, air handlers and packaged units (containing more than four pounds of refrigerant). Each product will contain the same RDS.

How is American Standard simplifying the contractor experience for equipment requiring an RDS?

Our technical experts honed in on the requirements of the regulation which we then paired with direct dealer feedback to build our design. Focused on a seamless transition for our customers, American Standard developed an RDS solution that emphasizes ease of equipment installation & likelihood of safe installation on a job. For nearly all indoor equipment our RDS is factory installed, including the components for leak detection and mitigation. Where necessary, we provide clear and simple instructions to field install the RDS.

Are there any new steps required of contractors when working with an RDS on ducted equipment?

Aside from seeing new components, including a Mitigation Control Board & Refrigerant Leak Detection Sensor, contractors will notice some adjusted standard field wiring that now includes the Coil. If the installed system includes an Air Handler or Packaged Unit, there is no change to field wiring. We kept things simple to ensure that seamless transition.

Are there any advantages to American Standard's approach to the Low GWP transition for Indoor Coils?

American Standard has developed refrigerant-specific equipment, meaning equipment designed for use with R-454B and equipment designed for use with R-410A. This simplifies the decision-making process in deciding which indoor Coil to install. The RDS is factory installed on almost all equipment, limiting work needed at the point of install. Moreover, the RDS components are the same among American Standard manufactured Coils, Air Handlers, and Packaged Units (sourced equipment may differ). At American Standard, we chose to make no changes to our furnaces for the Low GWP transition, meaning new R-454B systems can be installed with existing furnaces. Our coils comply with all current UL & EPA regulations, limiting the impact from future additional regulatory changes. Finally, as always, our customers can expect the same high-quality equipment they have always received.

Will replacement/service coils for existing systems be available beyond 2024?

Yes, we will continue to offer replacement coils to service existing equipment. They are for indoor coil replacement only. A line of 4TXC Replacement coils will be available to service installed 4TXC, 4PXC-U, and 4PXC-D coils. Other coils, 4AXA, 4PXFH, and 4MXC, will have a service option available starting in 2025.

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Refrigerant Transition Ready

How does the refrigerant transition affect warranties on existing R-410A systems?

We will continue to support our R-410A systems with parts and components needed for service and repair.

How does the transition to R-454B affect compatibility with thermostats?

The 850 and 1050 thermostats will not be compatible with the new products. All communicating systems with R-454B will require the American Standard Link UX360 thermostat and/or American Standard Link Relay Panel. Note - the 850 and 1050 thermostats will only support R-410A ID Communication (with CL2 Relay Panel) until Q4 2025. American Standard will continue to honor warranty claims for the 850 and 1050 thermostats through their 10-year warranty period, as American Standard Link UX360 is not a direct replacement.

Builders/RNC Dealers

How will this transition affect residential new construction builders?

This transition may require an adjustment to equipment selection and installation practices since some R-410A products may be out of stock before the end of 2024. Since R-410A and R-454B refrigerant equipment cannot be mixed and matched, it is important to consider the timing of your project schedule relative to the timing that different products will transition to the new refrigerant. Please consult with your local distributor on their local product stocking plan and lead times, and let your local dealer and distributor know your build schedule.

When will product details like model numbers, ratings matches, technical specs, pricing, availability, and the capability to add the new R-454B products to quotes be available?

Those details will all be available when the product bulletins are released. Bulletins will be issued approximately 30-90 days before shipments of the new models from the factories to the local distributor warehouses. See subject-to-change estimated timeline on the [Playbook](#).

Which refrigerant HVAC product (R-410A or R-454B) should I spec for my new construction builds?

Continue to spec R-410A product until the product bulletins are released for the new models. Once product bulletins are released you will have 30-90 days to review the product details, pricing, consult with your distributor on their local product stocking plan and lead times, and to decide on how to proceed with your projects. Please let your local dealer and distributor know your build schedule ahead of time. See subject-to-change estimated timeline on the [Playbook](#).

How will the refrigerant transition affect my "rough-ins" for new construction projects?

The new R-454B products may have different requirements such as wire gauge, breaker size, line set diameter, or other differences which may affect your rough ins. Those details will be available as the product bulletins are released. Use the 30-90 day transition period to review product differences, project size, complexity, lead times and potential dates to work with your local distributor to decide how to proceed.

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Will there be any price increases for equipment using R-454B refrigerant?

Equipment pricing is subject to change due to the transition to R-454B refrigerant. It is advised to consult with your HVAC dealer, distributor or account manager for specific pricing questions. Pricing information will become available when product bulletins are released. Product bulletins will be released approximately 30-90 days prior to first shipment dates of the new R-454B equipment to local distributors.

As a dealer, what can I do now to be prepared for the transition?

There are two suggestions:

- 1) Training – ask your local distributor about the next available training class for the new refrigerants, and sign up. If you can't attend a class, American Standard has videos and training materials on our website [FieldTechHelp.com](https://www.fieldtechhelp.com).
- 2) We recommend you review your equipment to ensure compatibility with R-454B products such as refrigerant gauges, recovery machines, and vacuum pumps. It is recommended to purchase any needed tools as early as possible, as the availability of these products could become an issue as dealers across the country begin upgrading their equipment at the same time.