Important Talking Points About R-407C Systems

The Guardian® R-407C system – featuring our model GAW14L air conditioning unit – is the cost-effective, high-efficiency solution to give older HVAC systems new life. To help you share the story and answer questions regarding R-407C sales and installation, we've produced this handy guide. We encourage you to use the front of this sheet when discussing high-level points about R-407C refrigerants. Then use the back to address more specific technical questions and concerns about our R-407C systems.

1. Guardian® is committed to meeting the needs of consumers and contractors. Our **R-407C systems are a more cost-effective option** versus a complete indoor and outdoor system or a major retrofit – when updating or changing an R-22 system to R-407C, minimal alterations in the refrigeration system are required.

2. Over **1,100 certified AHRI system matches with up to 14 SEER efficiency** are available to simplify sales and installation. The coil and outdoor, 14 SEER unit are available individually or as a complete system.

3. Inventory is available now with no limitation on sell-through, so there is no risk of stranded inventory. Unlike competitors, our R-407C systems are **approved for installation in all U.S. regions and Canada**.

4. We are committed to producing products that are environmentally responsible. **R-407C is a non-ozone depleting refrigerant** with a lower global warming potential (GWP) than R-22 or R-410A and is not on any EPA phase-out lists.

5. R-407C is chlorine-free. **It meets ASHRAE Standard 34** for refrigerant toxicity and flammability and is considered non-flammable by the U.S. Department of Transportation (DOT).

6. R-407C is a blend of three HFC refrigerants (R-32, R-125, R-134A) **designed to closely match R-22 pressure and performance** and allow for a smoother refrigerant transition.

7. All of our R-407C systems are **designed, engineered and assembled in the United States** and come with a full, 5-year parts and compressor warranty administered by Guardian® – no registration required.

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Below you will find a list of frequently asked questions concerning Guardian® R-407C systems and installation. In-depth specifications and related product details can be found in the system Tech Guide. **Information presented below does NOT replace the Installation Instructions supplied with Unitary Products R-407C units. Do not attempt installation or service without fully reading and understanding the documentation provided with the unit being installed.** Information provided below may be subject to change.

Q: Can an R-407C outdoor unit be installed in an existing R-22 AC system?
A: We recommend the installation of matched systems whenever possible. In applications where space or other limitations prevent the installation of matched system components, we recommend following the installation procedures supplied with the equipment. The new system should be charged with R-407C per the application and technical literature supplied with the equipment and per the guidance provided in the R-407C Technical Service Guide.

Q: Is there a true "drop-in" refrigerant to replace R-22?
A: No. There are no exact "drop-ins" which perfectly match R-22 performance. Major compressor manufacturers recommend converting to polyolester (POE) oils to maximize compressor life and retain warranty coverage. Our R-407C units come factory-supplied with POE oil to ensure proper miscibility (ability to mix evenly) with R-407C.

Q: Is R-22 legal to be used as a "service" refrigerant?
A: Yes, until January 1, 2024 per current EPA mandates. Guardian® does not condone the use of R-22 or other "drop-ins" in systems that are designed for use with R-407C.

Q: Does R-407C need to be recovered?
A: Yes. Federal law prohibits the venting of refrigerants into the atmosphere (even chlorine-free ones like R-407C). Make sure the refrigerant recovery machine and cylinder used are compatible with R-407C.

Q: Can R-407C systems be "topped off" after a leak?
A: This is not recommended, since refrigerant blends like R-407C can fractionate (separate) during a leak and compromise system performance. When a system leak is found and repaired, the system should be recharged with the calculated Total System Charge with virgin R-407C refrigerant to ensure optimal capacity and efficiency.

Q: Are oil traps required with the use of R-407C?
A: With the excellent miscibility with POE oils, the common practice of installing oil traps if the condenser is more than three feet above the evaporator is no longer required.

Q: Are there dedicated R-407C TXVs?
A: Yes, the TXV part numbers and applications are listed in the Technical Guides and Price Pages. Different TXVs are available for older copper coils (Aeroquip fitting) and for new MaxAlloy™ aluminum coils (Chatleff fitting).

Q: Is it necessary to change the indoor expansion device?
A: Like our 14 SEER R-410A systems, these R-407C units require an indoor TXV. For both types of designs, the servicer must evaluate the particular application and determine if a condenser-only replacement is suitable or if the indoor unit must also be changed.

Q: Will an R-407C system require the use of different filters?
A: Due to the use of a significantly different type and amount of desiccant required to offset the higher moisture content expected from POE oils, liquid line driers and suction line filter driers (if needed) must be rated for use with R-407C.

Q: What type of material is used to connect linesets on R-407C systems?
A: Soft solder is not to be used. A brazing alloy with a minimum 5% silver content is recommended.

Q: Since the units will match with older coils, does this include 10 and 8 SEER coils?
A: Similar to the servicing or R-410A systems, the installer must evaluate the condition of the existing indoor unit and whether a condenser-only repair is suitable rather than a full system replacement. The use of an existing coil will not automatically void the equipment warranty, provided the critical readings startup sheet is acceptable.

Q: How can I purchase an R-407C system?
A: Guardian® R-407C systems are available for purchase online, at www.orderguardianhvac.com. Alternately, you may contact your Regional Account Manager for ordering information.

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