



# Freon™ M099

Refrigerant (R-438A)

## Waterton Residential Property Successfully Implements Cost-Effective R-22 Retrofit Strategy



### Property Details

- 936 R-22 units and common buildings
- 25-30 year old split systems
- 350+ units have been converted so far at Gulfstream Isles Apartments over five years

### Retrofit Highlights

"The M099 retrofit took no longer than changing out a component for R-22 and charging the system back up with R-22."

"All of my maintenance techs are sold on it."

"Ever since we started converting systems, we are having less than 1/3 the amount of air conditioning service calls."

"We have rooftop units that are pummeled by the sun for 8+ months... we are having NO problem whatsoever keeping a 20 degree split on a 98 degree day with high humidity. If M099 works here, it's going to work anywhere!"



Tyler Davidson, Senior Service Manager  
Gulfstream Isles Apartments  
2013

## Background

After several years in the home building, remodeling, and multi-family living industries in Michigan and Washington, DC, Tyler Davidson arrived in Fort Myers, FL at Gulfstream Isles Apartments in 2011 as the Senior Service Manager. He quickly realized that air conditioning maintenance and service calls were not just something he had to manage for 2-3 months out of the year: “Up North, by September, we were usually well out of A/C season; but, down here in Florida, we use air conditioning 11 months out of the year”

All of the 936 units at Gulfstream Isles, in addition to the club houses, leasing office, and laundry facility, were installed 25-30 years ago, and were designed to use R-22 refrigerant. To add to the property’s challenging demand for air conditioning, shortly after Tyler started at Gulfstream Isles, the EPA started accelerating the phaseout of R-22. “We had a pretty good history of how much R-22 we need per year, and we are budgeted accordingly. It got to the point where we were basically going to spend double our budget if we stayed on R-22.” While Tyler had experience with using new R-410A units in his previous work, for his property in Florida, this was not an option. Tyler explained, “There’s just too many things we’d have to change here...it’s not just the condensing unit and the coil. We have ¼” lines with our R-22 units, and with R-410A running at the pressures it does, you’re a lot more likely to blow that line if you have even the slightest nick in it. So, if we wanted to go with R-410A units, we would have had to bump up the line size, which would have required us pulling chases up the buildings... essentially completely remodeling each and every building.”

With the cost of R-22 increasing beyond his budget and the installation of new R-410A units being cost prohibitive, Freon™ MO99 (R-438A) refrigerant caught his eye. Tyler saw that it was listed as an R-22 replacement, and the price was in line with his budget constraints, so he ordered a cylinder and started searching online for information about how to use it: “I went on YouTube and just typed in Freon™ in the search engine. The Chemours video came up that walks through the steps to change an R-22 A/C unit over to MO99. I thought to myself - this is crazy - this can’t be right, it can’t be this easy.”

## Project Details and Results

Tyler had a unit that was down without refrigerant and without an air handler, so he decided that it would be a good test case. He ordered a new air handler, and once it and the MO99 arrived, he pulled his assistant into his office; they watched the YouTube retrofit video again and then tried retrofitting their first unit. “It was just like trying to learn R-22 for the first time,” Tyler said, “we didn’t just reach down and charge it until the lines started sweating. We used our gauges, charged it properly, and then kept watching it...12 hours, 24 hours, 48 hours...just monitored what the system did, and we were really pleased with the results.”

Summarizing the results of his first R-22 system conversion, Tyler commented, “The MO99 retrofit took no longer than changing out a component for R-22 and charging the system back up with R-22. We went in the apartment, took our delta T, checked what kind of split we were getting across the coils, and we were easily getting a 20 degree split.”

## Results

Tyler and his team converted over 150 units in the first two years to MO99. His team kept their supply of recovered R-22 on hand for any urgent service calls, and once they depleted that recovered supply, they would go out and proactively convert a few more R-22 systems. By planning their retrofits in this way, they always maintained a small amount of recovered R-22 on-hand, without relying on the availability or the price volatility of virgin R-22.



Because of his success with MO99, Tyler shared his best practice and experience with over 100 property and service managers at Waterton Residential properties across the country, and many others have since started retrofits at their locations.

He emphasizes that there are more benefits to retrofitting to MO99 than just the refrigerant cost savings, performance, and ease of conversion: "Honestly, the thing that I like most about it for me as a manager is that it makes my techs better at HVAC work. Ever since we started converting systems, we are having less than 1/3 the amount of air conditioning service calls; just from having the good practice of drawing the systems down, pressure testing them, and re-charging them with MO99. The techs have developed really good habits in diagnosing and re-charging systems. We are not having to go back to work on the retrofitted systems. All of my maintenance techs are sold on it."

"We have rooftop units that are pummeled by the sun for 8+ months... we are having NO problem whatsoever keeping a 20 degree split on a 98 degree day with high humidity. If MO99 works here, it's going to work anywhere. It's really easy to sell, not only to our corporation because of the price, but to a resident; they can feel the cold air pouring out of their vents after the retrofit, and when they hear that the new refrigerant is also safer for the environment, it's a win-win situation all the way around."

In 2013, Don Bean took over for Tyler as the property manager for Gulfstream Isles. Since taking over for Tyler, his team has converted another 200 units from R-22 to MO99 and proactively plans to convert 40-50 units each year. Don manages seven technicians on site that do HVAC work, and they've continued the training and retrofit practices that started in 2011. His maintenance technicians are amazed that it works as well as R-22, and there hasn't been a need to replace any of the units with R-410A systems.

Don echoes the same confidence and commitment to MO99 as his predecessor: "We've never had any issues with it, it cools as well as R-22, and it's saved us a ton of money! As long as you do the recommended component changes, such as the Schrader valve and filter driers, it will work." Don also shared the success they've enjoyed with other property managers. He said, "They were blown away with the information I had!"

"You can't beat it from a cost efficiency. You get to utilize the existing equipment without the high cost of R-22! Freon™ MO99 is fantastic stuff!"

### About Waterton Residential

Chicago-based Waterton Residential, one of the leading multifamily companies in the nation, is focused on the operations and performance of apartment communities in multiple markets. With over 20,000 apartment homes, the Waterton brand signifies exceptional living experiences, a sense of community, and home. Waterton employs approximately 500 associates, who are committed to achieving the Waterton vision to be THE leader in the multifamily industry. For more information, please visit [www.watertonresidential.com](http://www.watertonresidential.com).

---

**freon.com**

The information set forth herein is furnished free of charge and based on technical data that Chemours believes to be reliable. It is intended for use by persons having technical skill, at their own risk. Because conditions of use are outside our control, Chemours makes no warranties, expressed or implied, and assumes no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under, or a recommendation to infringe, any patents or patent applications.

© 2017 The Chemours Company FC, LLC. Freon™ and any associated logos are trademarks or copyrights of The Chemours Company FC, LLC. Chemours™ and the Chemours Logo are trademarks of The Chemours Company.

Replaces: K-27018

C-10257 (1/17)