TECHNICAL INFORMATION COMMUNICATION

Quality and Continuous Improvement

Number: TIC2015-0010 **Date:** 6/23/2015

Title: Supplement to SMB14-0012: High Superheat Additive

Product Category: Air Conditioners/Heat Pumps

Products Affected

All 1.5, 2 and 2.5 ton residential split system air conditioners and heat pumps identified in SMB14-0012.

Situation

Carrier has been investigating best practices for the field application of the Zerol Ice additive to resolve the high superheat, low suction pressure condition caused by a rust inhibitor contaminate collecting in the TXV. The Zerol Ice additive has proven to be highly effective when applied according to the bulletin. The purpose of this TIC is to share with the field best practices for application of Zerol Ice additive. Please refer to SMB 14-0012 for specific details regarding the application of Zerol Ice additive and affected equipment.

Technical Information

Dealers should notice an improvement in suction pressure and superheat shortly after injecting the system and exercising the TXV. The system may not return to full capacity until it has run for several hours. It can take up to 24 hours of accumulated run time for the additive to completely clean the TXV metering pin of rust inhibitor contaminant and restore 100% of the system capacity.

Following the initial improvement in suction pressure, the additive will continue to work and correct the system with cumulative system run time. It is not necessary for the technician to remain on site during this time period.

Field data indicates that the faster and more effective option for exercising the TXV is the hot and cold water bath described by method #2 in SMB14-0012. It is important to use ice water and hot tap water for the baths and to remove the TXV bulb from the coil. Warming the bulb while still attached to the coil with other methods not described in the bulletin, such as using a MAP gas torch or a Heat Gun, is not as effective and not recommended because TXV damage can occur.

The Zerol Ice additive flows with the oil in the system and not with the refrigerant, so removing and replacing the refrigerant is not an effective method to address the TXV contamination issue. As the

amount of oil in the system remains the same regardless of the length of the line-set, there is no need to increase the additive dosage for additional amounts of refrigerant in the system.

Dealers should refrain from adjusting system charge until the additive has had 24 hour to restore normal operation. Weighing out the current charge and weighing back in the proper amount to ensure proper charging would be the only exception.

Service Bulletin 14-0012, although listed as expiring on 12/31/14 in the original publication, is still in effect and is extended through 12/31/2015. Please reference recently published SMB 15-0016 for active bulletins and expiration dates.

References SMB14-0012