



Ducted Systems Technical Services Service Letter

Letter: **YS-005-2020**

Date: October 09, 2020

To: Ducted Systems (Factory Direct) S1 HVAC Branch Service, Sales, Warranty Managers
Ducted Systems (UPG/Applied) Distribution Service, Sales, Warranty Managers

Subject: **Blocked suction process tube / Suction access port on Heat Pumps**

Product: THE, YEE, TE4B, REP14L, YHE, TH4B, RHP14L, YHG, CH6B, TH6B, RHP16L, YZT, HC19B, and HL19B

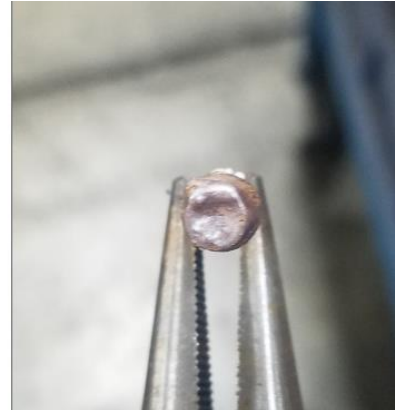
Effective: **October 06, 2020**

Expires: **December 31, 2020**

Summary: **This letter provides explanation and short term (temporary) resolution for heat pump models which contain a blocked suction process tube.**

Starting in November 2019 the suction process tube used to access the suction side of the refrigerant circuit during heating operation of the above-mentioned heat pump models was changed from a 1/4" tube to a 3/16" tube. We started receiving reports of field installed heat pumps that contained refrigerant charge and were operating properly, however, there was no pressure indicated at the suction process tube access port. This access port is necessary for unit charging, commissioning, and servicing any time the heat pump is operating in heating mode.

Our internal investigation revealed that the suction process tube was being brazed shut during unit build. It was determined the cause of the error was an improperly created hole in the suction line tubing where the process tube is inserted prior to brazing. Specifically, the hole appears to be pressed instead of drilled which created a "pool" as shown in the image below. During process tube brazing, on some units, the process tube would fill with brazing alloy completely sealing it off from the refrigeration circuit. On units brought back to the factory for investigation when we removed the suction process tube the suction line itself remained sealed with a "slug" of brazing alloy. See images below of sealed suction line and slug of brazing alloy removed from the suction line.



Since the currently installed suction process tube cannot be safely removed and re-inserted at the same location due to the excessive amount of brazing alloy, we have developed a kit that contains 3 different sizes of a pre-drilled copper couplings as shown to the right, replacement suction process tube, bi-flow liquid line filter drier, cable ties, and installation instructions. The blocked suction process tube will remain installed with the unit but rolled back behind the unit block off panel and secured with a cable tie. The copper coupling and replacement suction process tube will be installed in a different location between the reversing valve and compressor. Specific locations will be called out in the kit installation instructions.



We expect to have repair kits in stock at Source One very soon. If there is an immediate need to access the refrigerant circuit during heat pump heating operation, this letter authorizes the use of a SUPCO bullet piercing valve as shown to the right as a temporary means of access. There are many different piping configurations between the different heat pump models and capacities. Locate the piercing valve as close as possible to the current suction process tube preferably close to the unit base pan. The heat pump models contain either a 5/8, 3/4, or 7/8 inch suction line. Bullet piercing valves are not offered at Source One and must be field sourced. SUPCO part numbers are shown below:




BPV21 for use on 5/8" copper.
BPV34 for use on 3/4" copper.
BPV78 for use on 7/8" copper.

This letter is to be used as a **fix-on-fail** immediate need basis only and will **expire at the end of the year**. A follow up letter advising on the Source One repair kit, refrigerant, and additional labor will be released very soon. This letter will allow a \$25.00 credit for the piercing valve required and one hour labor to install and use the temporary valve. File a warranty claim using the service letter number. The warranty claim must include the invoice from the servicing dealer.

All in stock heat pump models exposed to this issue were placed on quality hold on 09/08/2020. Each individual unit was checked and units not having a blocked suction process tube were marked with green dot stickers on the unit carton labels and taken off of quality hold. Processes were put in place to create the appropriate hole in the suction line copper tubing pieces. A step was added during the build process to confirm the suction process tube has access to the refrigerant circuit. Any piece of the above mentioned equipment models shipped from Wichita on 09/10/2020 and after is not affected by this issue.

An update/revision to this service letter will follow. If you have any questions on this feel free to call Ducted Systems Residential Distributor Technical Services at 1-877-874-7378 and speak with a technical support representative or email us at be-ams-be-ductedsystemsresidentialdistributorsupport@jci.com


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