



# Support and Warranty Policy

# Technical Service, Support, and Warranty Policy

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## Document Purpose

We meet the high-quality requirements of the market by implementing the highest standards in quality, which is evidenced by all our employees, state-of-the-art components, and intense product evaluation and monitoring. BEKO Technologies, Corp.'s ("BEKO USA") explicit aim is constant quality leadership.

This document is intended to provide guidance and inform our customers about our product warranties and procedures.

The following pages address the limitations of our warranty and return coverage, explain the procedures for warranty services, and the responsibilities of all parties involved. This document also explains how the warranty procedures will be applied. Additionally, you will find information about product returns and other product support areas.

## Standard Warranty, Extended Warranty, and Terms and Conditions of Sale

Our complete Terms and Conditions that include specific paragraphs pertaining to both our standard and extended warranty coverage are available online [here](#), they are included digitally with every order confirmation, and in both digital and hard copy versions of our Price Book.

## Guidelines for Warranty Services

### ■ Reimbursement

A general overview of BEKO USA's labor and travel reimbursement policy for warranty services is as follows.

- BEKO USA will pay 75% of the distributor's published service rates when labor coverage is applicable. In no instance, will rates of more than \$85.00 per hour be accepted.
- Labor premiums associated with weekend, holiday, overtime, or afterhours work are not covered by this warranty.
- All hours worked will be paid on a standard per man, per hour basis. The Labor Reimbursement Rate Schedule will be used to establish the reimbursable labor hours allowed for repairs to equipment.
- BEKO USA does not cover environmental charges, torch fees, vacuum pump fees, or truck charges.
- BEKO USA pays up to 100-miles each way at a rate of \$0.70 per mile and \$85.00 per hour for travel. Mileage over 200-miles total must be approved by the Technical Service Department in advance (e.g. more than 100-miles in one direction). Travel time will be calculated based on an average driving speed of 40 miles per hour. For example, an 80-mile round trip at a speed of 40 miles per hour would be considered as two hours of travel time.

- BEKO USA will not reimburse for toll fees, parking fees, ferries, waiting time, security checks, hotel, or meals unless authorized by Technical Service Department prior to the start of the job.
- The travel time will be calculated from the distributor's facility from which the technician works to the job site or from the technician's home, whichever is closer.
- All parts necessary for the repair must be obtained through the Technical Service Department. Third-party parts are forbidden to be used and will only be allowed with prior approval from the Technical Service Department.
- The defective parts replaced during warranty repair service must be returned to BEKO USA, unless the Technical Service Department has given authorization that the defective parts may be disposed of. Smaller parts such as a filter dryer or O-rings do not have to be returned, but in some instances the Technical Service Department may request to have these parts returned for evaluation.

### ■ Warranty Claim Procedures

Filing a warranty claim for service work requires the use of a warranty claim form. The warranty claim form must be completed with all information requested before any consideration can be given to the claim. Please be as accurate and detailed as possible, since we can only reimburse for the work as it is explained on the claim form. All invoices related to the warranty claim must be submitted along with the claim form. All warranty claim related documentation must be submitted to the Technical Service Department within thirty (30) days of filing the claim. Any claim received after this period is subject to rejection.

All equipment shipped from the factory is calibrated and/or adjusted to proper quality control specifications, and certain routine maintenance and inspection is required. General maintenance items such as basic cleaning, hot gas by-pass valve adjustments, inspection checks of drains, air-cooled condenser cleaning, maintaining pressure switches and water regulating valves, and other similar work is considered part of routine maintenance and are not covered under warranty.

Pre-authorization for warranty service work is required and our service department should be contacted prior to service or while on site to take advantage of factory troubleshooting assistance and proper recommended service procedures. Labor and material charges incurred because of improper troubleshooting or improper service procedures may not qualify for warranty claim reimbursement.

### ■ Warranty Claim Form

The warranty claim form is available on BEKO USA's website for download [here](#).

Prior to filing a warranty claim the technician on-site should obtain the following information:

- Model Number (a seven-digit material number not the product name)
- Serial Number or P.O. Number
- Date of Start-up
- Equipment Operating Hours
- Customer's Name
- Phone Number
- Mailing Address and E-mail Address
- Detailed description of the problem and any information, including pictures, that would be helpful with identifying the correct parts to use or resolution to the issue.

The completed form needs to be filled out completely and send via e-mail to the Technical Service Department ([service@bekousa.com](mailto:service@bekousa.com)). The Technical Service Department will either authorize the customer to return smaller equipment, such as BEKOMAT® drains, CLEARPOINT® filters, and most refrigerated dryer models that are 200 scfm and smaller, to the factory in exchange for a replacement unit or authorize a field repair should the problem be related to a mechanical failure rather than a catastrophic system failure. When an “in warranty” unit is to be returned, a ticket number must be assigned. The Technical Service Department will issue the necessary documentation required to return the item and ship the replacement unit. The defective unit must be returned for warranty consideration. After receiving the goods and a thorough evaluation, if the defective unit claimed is found to be not warrantable, a warranty invoice will be issued.

For larger equipment, the Technical Service Department will authorize your qualified service technician to make the repair or recommend a service company with qualified technicians to perform the repair, if necessary. Any major components or parts required for the repair must be obtained from BEKO USA unless express authorization is given by the Technical Service Department to obtain the parts locally. In which case, you will be reimbursed in the amount of the parts invoice you submit.

If at any time, should anything indicate the failure is not due to a defect in materials or workmanship, repairs are to be discontinued immediately, the end user is to be contacted, and the situation fully explained. BEKO USA’s Technical Service Department must be informed of this discovery as well. No further repairs are to be performed until the end user understands the scope of the problem and decides to proceed with the repairs by issuance of a purchase order.

The following Labor Reimbursement Rate Schedule lists the maximum labor, in man-hours, accepted by the Technical Service Department to perform repairs on equipment. The maximum number of billable labor hours can be determined by adding the hours listed for each task performed. BEKO USA does not allow or reimburse for additional service technicians to assist on any warranty repairs, approval prior to starting the job is required.

## ■ Labor Reimbursement Rate Schedule

### DRYPOINT® RA REPAIR TASKS

Item Description	Hours
Troubleshooting	1.00
Compressor replacement (sweat connections)	2.00
Compressor replacement (Rotolock connections)	1.50
Fan motor replacement	1.50
Fan blade replacement	1.00
Fan switch replacement	1.00
Hot gas bypass valve replacement	1.50
Thermal expansion valve replacement	1.50
Electronic thermal expansion valve replacement	1.00
Condenser replacement	3.00
Rebuild or change condensate drain	1.00
Crankcase heater replacement	1.00
Digital controls replacement	1.00
Electrical controls replacement	1.00
Refrigerant leak search	1.00
Refrigerant leak repair with flare fitting	0.50
Refrigerant leak repair with braze joint	1.00
Recover, evacuate, and recharge models up to 500 scfm	2.00
Recover, evacuate, and recharge models larger than 500 scfm	4.00
Water regulating valve replacement	2.00
Transducer or probe replacement	1.00
High pressure switch replacement	1.00
Fuse replacement	0.50
Replace entire dryer models 15-250 scfm	1.50
Replace entire dryer models 300-600 scfm	2.00
Replace entire dryer models 800-6000 scfm	3.50



### DRYPOINT® X REPAIR TASKS

Item Description	Hours
Troubleshooting	1.00
Check valve replacement 20 thru 80 scfm	0.50
Check valve replacement 100 thru 6000 scfm	1.00
Muffler replacement	0.50
Pilot filter cartridge replacement	0.50
Replace gauges	0.50
Replace dew point probe	0.25
Control board replacement	1.00
BEKOTOUCH replacement	1.00
Solenoid valve replacement	0.75
Purge exhaust valve replacement	1.00
Inlet valve replacement	1.00
Purge control valve replacement	1.00
Rebuild/change drain	1.00
Safety relief valve replacement	0.50

### BEKOMAT® REPAIR TASKS

Item Description	Hours
Rebuild BEKOMAT® 12,13,14,16, 3 and 6	1.00
Rebuild BEKOMAT® 31,32 and 33	0.50
Troubleshooting BEKOMAT®	0.50



### CLEARPOINT® REPAIR TASKS

Item Description	Hours
Troubleshooting	0.50
Rebuild filter head	1.00
Rebuild filter bottom	0.50
Rebuild float drain	0.50



### QWIK-PURE® / ÖWAMAT® REPAIR TASKS

Item Description	Hours
Troubleshooting	1.00
Cartridge change (25,50 and 100)	1.00
Cartridge change (200 and 350)	1.50
Replace entire unit (25,50 and 100)	1.50
Replace entire unit (200 and 350)	2.50

**For all other types of equipment, please contact our Technical Service Department for time approval prior to starting the job.**

## Equipment and Parts Returns

How to return various equipment and parts to BEKO USA:

- Equipment and parts must be returned to BEKO USA whenever requested.
- To process the return the following information must be provided.
  - a. Distributor's Name
  - b. Physical Address
  - c. Phone Number
  - d. Part Number or Serial Number
  - e. Ticket Number issued by the Technical Service Department. **Without a Ticket Number the return will not be processed.**
- The above information can be completed and sent into us by e-mail ([service@bekousa.com](mailto:service@bekousa.com)) or for your convenience, we have created a document that you can complete and send in with all the necessary information on it for a general equipment or parts return. That document is located [here](#).
- Equipment weighing less than 100 pounds must be shipped via UPS Ground using BEKO USA's UPS Account Number. The UPS Account Number is shown on RMA packing slip that is sent to the individual requesting the return.

#### Return Shipping Address:

BEKO Technologies, Corp.  
 [Ticket Number]  
 900 Great Southwest pkwy SW  
 Atlanta, GA 30336

BEKO Technologies reserves the right to reject all expenses for return freight from any other freight method.

- All dryer types, flange filters, compressors, and parts weighing more than 100 pounds must be returned with the correct return freight form. This form will be sent directly to the customer and must be filled out, and sent back to our Warehouse Department will schedule the pickup for the equipment.

## ■ Refunds and Restocking Fees

The following details BEKO USA's policy on issuing refunds and explains the various restocking fees that a return may be subject to in order to set expectations in advance.

- The applicability of refunds, restocking fees, and/or any other amounts in question are at the sole discretion of BEKO USA for ALL products. BEKO USA may refuse a return of any product at any time and for any reason.
- Parts must be returned unused and in complete, original packaging. If a part is returned for credit and is missing the original packaging, BEKO USA will deduct this amount from the credit issued to cover the cost of repackaging the return.
- You may return equipment and parts for up to 60-days from the date of purchase.
- All items are subject to a 10% restocking fee.
- The restocking fees for returned DRYPOINT® RA dryers are flat rates:
  - a. 500 scfm and below, \$140.00 restocking fee
  - b. 600 scfm and above, \$210.00 restocking fee

## Technical Support Information

Support by Telephone: +1 (800) 235-6797, Option 2 for Technical Service

Support by E-mail: [service@bekousa.com](mailto:service@bekousa.com)

Hours of Operation: Monday – Friday, 8:00 AM to 5:00 PM EST

Emergency Support: In the case of an emergency, support may be available on weekends and holidays from 8:00 AM to 5:00 PM EST. To access emergency support, please call +1 (678) 628-3139. If your call is not answered, please leave a detailed message, and we will respond as quickly as possible. Please keep in mind that the Technical Service Department does not operate on a 24/7 schedule and we are unable to guarantee support at all times.

For product that has been returned for warranty evaluation, an answer will be received within 3-7 business days after the product has been received depending on the product being evaluated and severity of the issue.

Telephone support is free-of-charge to our customers and BEKO USA's Technical Service Department will help distributors and end users alike, and make our best effort to resolve the issue via telephone as quickly as possible.



- Escalating a Problem – If the normal support process does not produce the desired results, or if the problem has changed in priority, then the problem may be escalated as follows:
  - a. First, contact the Technical Service Specialist who is working on your problem and request that the priority of your problem be escalated.
  - b. You may request to speak with a Technical Service Manager if additional escalation is required.
  - c. Finally, you may request to speak with the Director of Sales if further escalation is required.
- Resolving Problems – Due to the complex nature and wide range of products offered by BEKO USA, we cannot guarantee that your problem will be resolved within our stated response times. We make every effort to resolve problems as expeditiously as possible and typically can resolve the issue with the first telephone call, however, there are circumstances where it may take several days or weeks to fully close a ticket.
- Archiving Problems – All technical service related data is maintained in a centralized system and periodically archived, so should a future need arise to discuss an archived ticket that has been closed, a new ticket will be generated, and all information from the archived ticket will be carried forward into the newly opened ticket.

### ■ Commissioning & Troubleshooting Guidance

The following section details some general guidance and processing of information in support of commissioning & troubleshooting equipment issues by our BEKO USA's Technical Service Department. This would apply to equipment that may or may not be in the warranty period. These documents are intended to provide better turn-around time and support for answering technical related questions.

#### DRYPOINT® RA equipment

- a. The RA Dryer - Site Dryer Evaluation document will be used when troubleshooting overall dryer commissioning & operating situations. The information is used to collect key operational conditions that we will need to narrow down the information for our Technical Service Department. When completing and submitting this document, please follow-up with a direct phone call if possible and we will be able to support your questions. This document is located [here](#).
- b. The RA Dryer - Site Compressor Evaluation document is to be specifically used to diagnose issues with the compressor operation only. It is imperative that anytime a unit has a compressor issue, the root cause is determined so that the compressor is not arbitrarily changed without making sure that the system is evaluated and setup to operate correctly. This inspection should be used for all warranty as well as purchased replacement compressors. The location of this document is [here](#). The specific procedure on how to collect the information for this document is in **Appendix A** of this policy. We will support the compressor changeouts from a technical perspective in any case. There is a specific procedure on how to change out a compressor for the RA dryer in **Appendix B** of this policy.

## Appendix A | Inspection Procedures

### ■ Refrigerant Dryer Compressor Evaluation Procedure

**These procedures are for all refrigerant compressor condition evaluations irrespective of model. Regardless of warranty or replacement compressor servicing, the condition of the refrigerant system should be evaluated using this process. These procedures are only to be used as guidelines and service tips for qualified, certified refrigeration technicians.**

The evaluation of a compressor, regardless of condition should be performed while still connected to the refrigerant dryer system. The inspection will require the use of the following specialty tools:

- Multimeter
- Amprobe
- Temp probe
- Refrigerant pressure gage system
- Acid & Moisture Test kit

This procedure should take approximately 45 minutes to complete and requires the removal of the side panel on the dryer. Complete the form BEKO Technologies RA Dryer Site Compressor Evaluation while performing this procedure which is located [here](#) or can be provided to you electronically from our Technical Service team.

Procedure:

1. Remember to carefully perform safety related precautions, i.e. LOTO prior to performing any inspection/work as required.
2. Note the dryer information from the nameplate.
3. Remove the panels on the dryer as required to access the compressor and related components.
4. Note the compressor nameplate data.
5. Using a multimeter, check for open and grounded windings and note the results.
6. Using the acid and moisture test kit, follow the instructions for the kit and collect the results for each respective test and note the results.
7. If the dryer has power still connected and can be safely turned on, please turn the power on to the system.
8. Using an amprobe, check the operating amps for the compressor and note the results.
9. If possible, perform the saturation pressure check after the dryer has run for at least 20 minutes and note the results.
10. For the appropriate controllers, note the last alarm codes.
11. When tests are complete, perform a visual inspection, particularly noting the environmental conditions and provide a site ambient operating temperature.
12. Once complete, document all observations on the evaluation form.
13. Restore all connectors, panels and any other components back to their original state prior to the inspection.
14. Provide the completed form, any related photos and other information to our Technical Service team for review. Our team will quickly review then provide guidance based on their evaluation of the condition of the compressor.

## Appendix B | Repair Procedures

### ■ Refrigerant Compressor Replacement Procedure

**These procedures are for all refrigerant compressor failures irrespective of model. These procedures are only to be used as guidelines and service tips for qualified, certified refrigeration technicians. These are not to be used as step-by-step instructions for performing any service procedure. In addition to replacing the compressor the technician must determine the root cause of the failure.**

Steps to replace a refrigerant compressor:

1. Recover and weigh the refrigerant in the system. This is important, as the most common cause of compressor failure is excessive superheat. The leading cause of excessive superheat is loss of refrigerant. A recovered charge missing more than a half-pound is suspect for a leaking system.
2. After recovering the charge, perform leak test. We recommend using a trace of refrigerant and pressurize with nitrogen up to 200-300 psi to locate leaks with a refrigerant leak detector. If no leak detector is available, use soap bubbles to locate the leak. If no leak can be detected, and the pressure loss indicates that a leak is present, perform a standing vacuum test with air pressure on the dryer. Attempt to pull a vacuum. Isolate the vacuum and monitor the vacuum. If the vacuum goes to atmospheric pressure, the leak is in the piping system and a technician should be able to locate and repair the leak. If the refrigeration system pressure goes positive and eventually to the air system pressure, the system has an air-to-refrigerant leak in the evaporator. This can also be tested with two rubber gloves on the air in and outlet side and pressurize the refrigerant system with nitrogen, when the rubber gloves blow up a leak in the air to refrigerant side is present. Please contact the BEKO Technical Service Department for support with the heat exchanger replacement procedure.
3. Check the oil. Polyol Ester oil (systems using HFC & HCFC refrigerants) used in refrigeration systems is water clear and odorless. If the oil has color or odor, do an acid test. If acid is present, please call the BEKO Technologies Service Department and request the flush procedure. After the flush proceed with the compressor replacement.
4. Pressure test after closing the system and evacuate the system.
5. Replace the compressor and the filter dryer. Filter dryer always must be replaced if a system had a leak or was opened because of a major component replacement. Be careful when unbracing the filter dryer because of rest oil inside the filter. Catch any oil coming out of the filter dryer.
6. It is recommended that when possible the micron vacuum gauge be connected to the system at a location other than where the service gauges are connected. The desired system vacuum is 500 microns or less. Large contaminated systems may require several vacuum pump oil changes and overnight vacuuming.
7. Charge the system with refrigerant. It is acceptable to use the uncontaminated refrigerant that was recovered from the dryer. If the acid test showed acid, new refrigerant is required.
8. Operate the dryer without air flowing through the system. Check for superheat, operating pressures, refrigerant flow, condenser fan cycling, evaporator temperature, Compressor oil level if side glass is available etc. Record these readings on a start-up form. In the case of an electrical failure, inspect and test the contactor for damage caused from the failed compressor. Replace if needed.

9. Operate the dryer with an air load. Check the operating conditions and record them. Note the temperature of the liquid line in and out of the filter dryer. A difference of more than 1 degree indicates that the filter is restricted and needs to be replaced.
10. Maintain the datasheet and compare the original readings to subsequent readings to note changes in the dryer performance.
11. Replacement compressors in a system with a burnout and acid in the system should be inspected 1 week after being placed into service. Check oil levels and filter dryer temperatures.

## ■ Evacuation Procedure

**These procedures are to be used as guidelines and service tips for qualified, certified refrigeration technicians. These are not to be used as step-by-step instructions for performing any service procedure. In addition to replacing the compressor the technician must determine the root cause of the failure.**

**Proper evacuation after a service or repair of refrigeration equipment is critical to the operation and correct function of the equipment. Evacuation is a 2-step process that consists of the degassing and dehydrating processes.**

1. **Degassing** removes non-condensable gases from the unit. Non-condensable gases will not condense in the condenser and will decrease the space that is needed by the refrigerant to condense from a gas to a liquid. Non-condensable gases will also decrease the effectiveness of refrigerant in the evaporator. Non-condensable gases will cause higher temperatures and pressures in the refrigeration circuit while also decreasing the cooling capacity of the refrigerant circuit.
2. **Dehydrating** removes moisture from the refrigeration circuit. Moisture in the refrigerant circuit can cause critical failure of the components in the circuit. Moisture will break down certain types of oils and cause decreased lubrication ability which can lead to the failure of compressors or clogging of metering devices. Moisture can freeze inside of the metering device causing a restriction which will lead to system malfunction. Moisture in a refrigeration circuit can also lead to high acid levels which can eat away at the coating on compressor windings, and copper plating that can cause a short also known as a compressor burn out.

A properly performed evacuation can remove non-condensable gases and moisture to prevent the types of failures mentioned above. The steps that need to be taken beforehand and during the process to ensure you have a properly cleaned system are also listed below.

Steps for a proper evacuation:

1. Any copper tubing used in the unit must be kept clean and dry throughout the entire service process. If any piping is removed, inspect it and keep it free from debris and liquid.
2. Any cut piping should be reamed and deburred. Internal restrictions can cause erosion of the piping, decreased gas velocity and compromise oil return.
3. During brazing the refrigeration system should be purged with nitrogen. The unit only needs to be purged with 2-3 psi. The reason for this is to remove oxygen from the system while the copper is being heated to prevent the formation of copper oxide and other contaminants while brazing. Also, sweeping the system with nitrogen will decrease the amount of moisture in the system and assist with shorter evacuation times.

4. Any time a refrigeration circuit is opened it is required to replace the Liquid line filter dryer. When we evacuate a system, we cannot remove 100% of the moisture. Our goal is to reach 500 microns or lower standing reading for at least 15 minutes. The purpose of the liquid line filter dryer is to assist in entrapping the residual moisture in the refrigeration circuit.
5. Be sure to pressure test the system with dry nitrogen. If there are any leaks within the system this is when we want to find them. Finding you have a leak while the system is under a vacuum is worse because we are drawing in ambient non-condensable gases and moisture. Be thorough with your pressure test.
6. Is your vacuum pump up to the task? How do you know? Using a micron gauge is the only method for confirmation of a properly working vacuum pump and evacuated system. The time it takes on evacuating 2 of the exact same units can vary greatly depending on many factors. Do not guess on this, your customer's satisfaction and confidence is on the line.
7. Test your vacuum pump. Attach the micron gauge directly to the pump using the ¼" SAE fitting. Turn the pump on and verify that the unit is capable of pulling a vacuum level of 100 microns or less. Good pumps can achieve below 50 microns. If your pump cannot achieve 100 microns or less try changing the oil. Sometimes multiple oils changes are required to remove large amounts of moisture from a wet pump. If the pump will still not achieve 100 microns or less it may be time for a new pump or to have service performed on your existing pump.
8. It is now time to perform an evacuation on the dryer. It is recommended to use vacuum rated Schrader valve removal tools when pulling a vacuum. Removing the Schrader valves can greatly reduce the amount of time it takes to pull a proper vacuum. Most Schrader valve removal tools come with an additional ¼" SAE male fitting on the system side of the isolation valve, one of these fittings should be used to attach your micron gauge. The hoses used for evacuation should be "low outgassing", most standard refrigerant hoses that come with gauges will outgas and will prevent you from reaching low vacuum levels. Once the Schrader valves are removed, micron gauge connected, and hoses are connected to your vacuum pump move to the next step.
9. Start the vacuum pump and run it until a vacuum level of 1000 microns is achieved. Then close the 2 isolation valves and monitor the micron gauge. Take note of the leak rate after about 5 minutes of stabilization. Calculate the leak rate using a timer after the initial 5 minutes record the rise in microns over a 30 second period for at least 5 minutes. A rise in microns after a stabilization period indicates that either moisture is still present or there may be a small leak. If the micron level continues to rise to atmospheric pressure (760,000 microns) you have a leak that needs to be located and repaired. If moisture is still contained in the system, the micron level will rise significantly but not to atmospheric pressure.
10. Open the isolation valves and continue evacuation until the vacuum level is below 500 microns. Repeat the leak rate measurement for a second test. There should be a notable decrease in leak rate as compared to the first reading and this is showing our progress in the job of dehydration. If the micron gauge continues to rise to 3000-5000 microns this could indicate the moisture in the system has turned to ice. If this happens it is recommended to use an external heat source such as a heat lamp to get the moisture out of the system.
11. If the unit indicates that moisture is still present, a multiple evacuation with a nitrogen purge/ sweep can greatly reduce the amount of moisture in the system. To perform this procedure, bring the micron reading down between 1000 and 2500 microns. Isolate the vacuum pump using the Schrader valve removal tools and disconnect the hose from the low side of the unit. Break the vacuum using dry nitrogen until atmospheric pressure is reached (760,000 microns)

then purge through the unit from the high side to low side using only 1-3 psi of pressure for 1-2 minutes. Do not pressurize the system, this will not remove moisture and can prevent the sweep from being as effective. Once the nitrogen purge is completed, reconnect your vacuum pump and pull the system down into a vacuum again. You should notice that deeper levels of vacuum are achieved faster indicating progress in the dehydration process. Usually no more than 3 evacuation/nitrogen sweeps are required. If no noticeable progress is achieved during the evacuation, repeat the nitrogen purge to remove liquid moisture that may exist. If a leak is indicated, it must be repaired before further evacuation takes place.

12. **IMPORTANT** Be sure to check the oil in the vacuum pump. Oil that is “Milky” or “Cloudy” contains moisture and will not allow for the final vacuum to be achieved. Moisture in the oil will increase the vapor pressure and a loss of sealing within the pump. If the oil is wet, change it with clean dry oil.
13. After the second test open the isolation valve again and allow the pump to pull the vacuum to 200 microns or less (less is better). Then shutting the isolation valves again allow the unit to sit for 15 - 30 minutes. If the micron level does not rise above 500 microns, the evacuation process is complete. If the micron level rises above 500 you will need to continue the evacuation process.
14. Once the process is complete do not remove your hoses (deep vacuums can pull in Schrader valves and suck in atmospheric air). Break the vacuum with refrigerant using the Schrader valve tool and its isolation valve until the pressure in the system is above atmospheric pressure. Be sure to weigh the refrigerant used to break the vacuum as this will be part of your refrigerant charge.