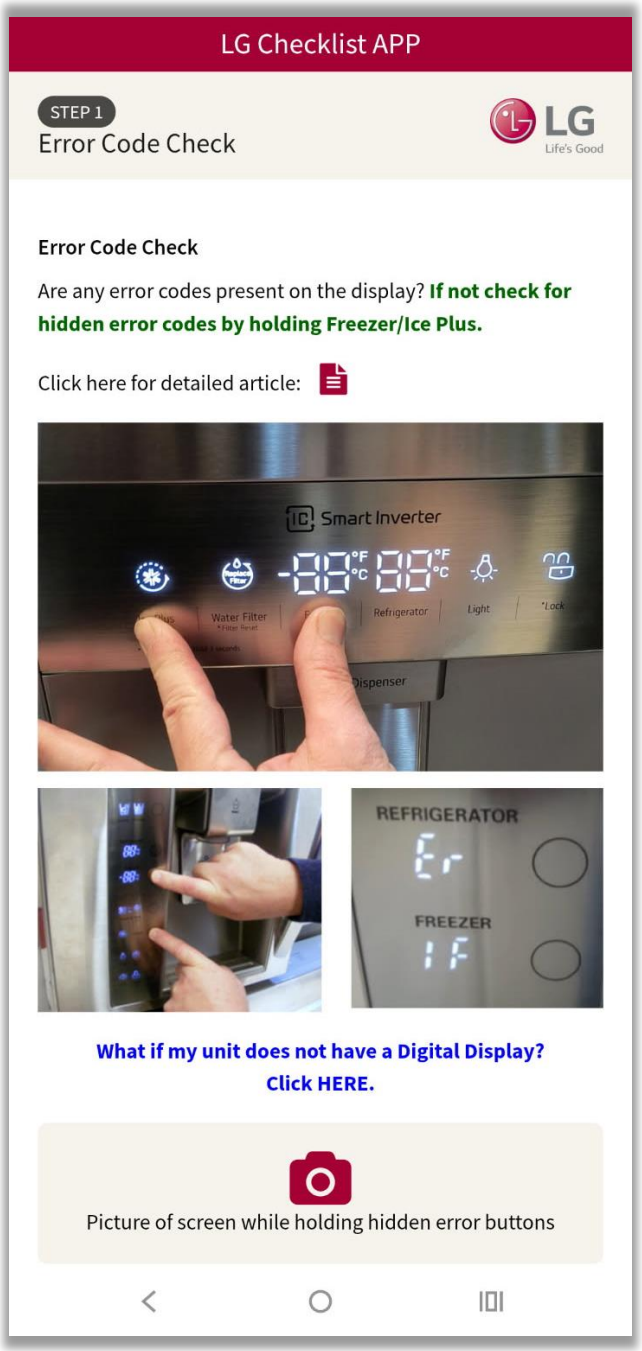
Step 1: Checking for Error Codes

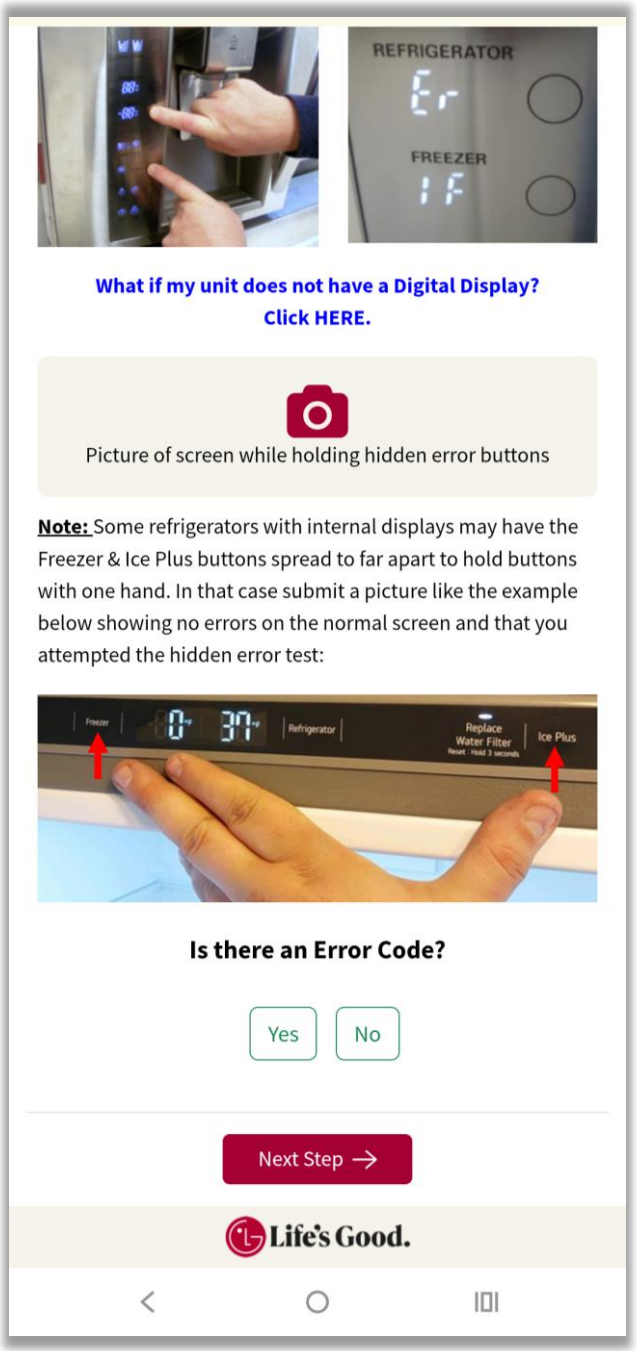
Step 1: Tech will need to check the display for error codes.

If there are no error codes displaying on their own, then check for hidden error codes using the (Freezer + IcePlus) buttons.

If there is an error code and it can cause a cooling issue tech will be instructed to fix the error code issue before tapping into the sealed system.

Picture of Error Code Check is Required.





Step 1&8: Checking for Error Codes

What are Reviewers Looking For?

1) Reviewers are simply checking to make sure the picture of the Error Code Check was submitted.
2) Checking Time Duration. (Remember per upper management that checklist's should not be completed under 50 minutes).

Step 1 Error Code Check

Reviewers Screen:

Issue Found (Step1)	◯ Yes ◯ No Clear				
Error Code Check @ 08/11/25 11:40 (1)		Found Error Code	No	Error Code	
Final Error Code Check @ 08/11/25 13:12 (1)		Found Final Error Code	No	Final Error Code	
Repair Started	2025-08-11 11:40	Final Step Finished	2025-08-11 13:12	Repair Duration (2)	1h 32m 45s

Step 2: Blink Code Check / Initial Machine Room Picture

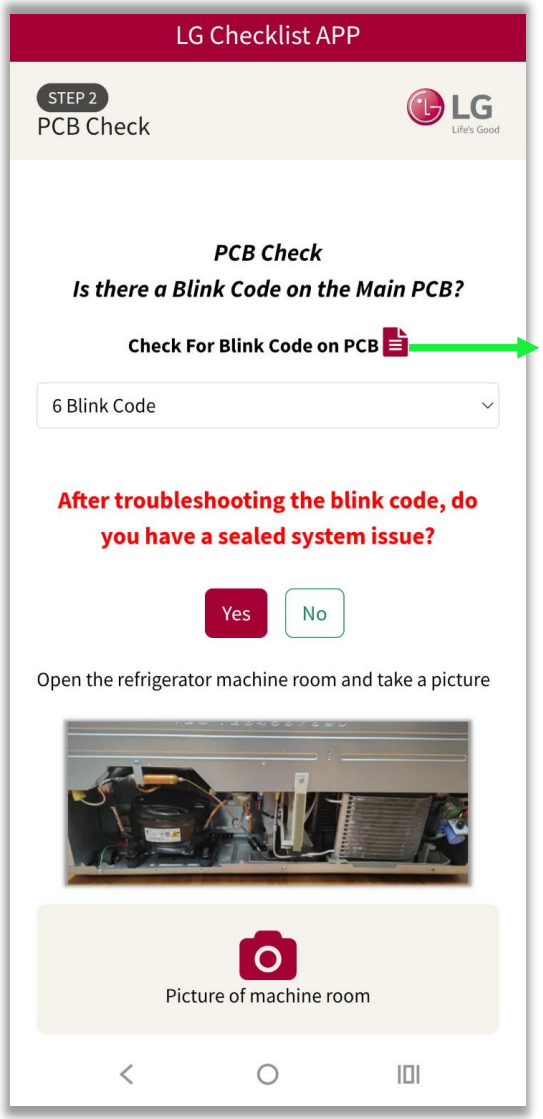
Step 2: Tech will be asked to check the Main PCB to see if there is a blink code present.

If there is a blink code troubleshooting info is available and then tech will need to select whether the blink code was corrected without the need for sealed system repair. If they were able to resolve, the checklist ends, and a description is needed.

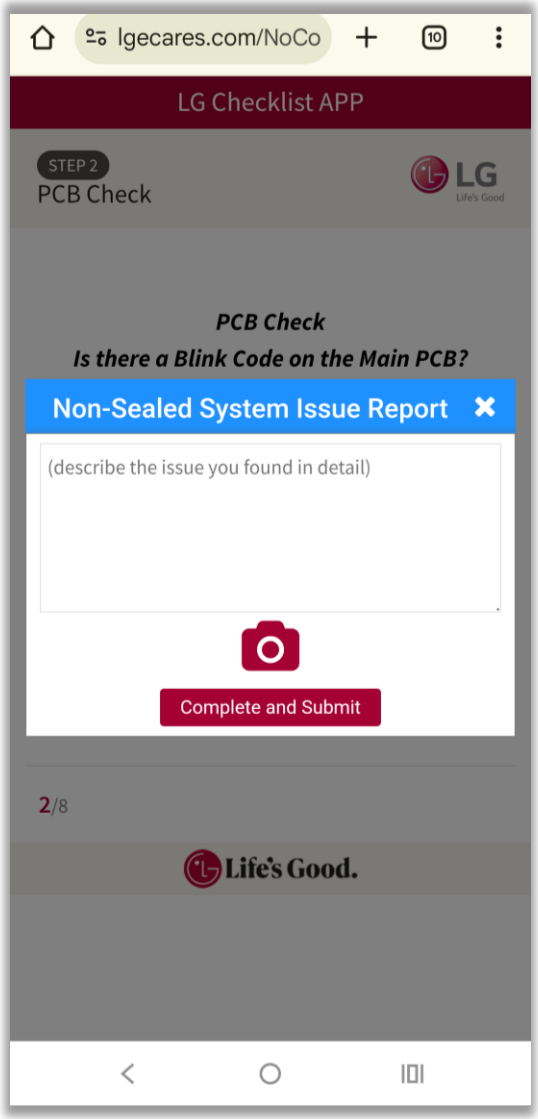
If blink code is sealed system related, continue checklist. And…

Picture of Machine Room is Required.

If there is a sealed system issue after checking Blink Code…



If there is not a sealed system issue after checking Blink Code…



Step 2: Blink Code Check / Initial Machine Room Picture

What are Reviewers Looking For?

1) Reviewers are simply checking to make sure a proper picture of the Machine Room was taken. The picture should show the entire Machine Room before the repair began.

Reviewers Screen:

Step 2 Blink Code Check

Issue Found (Step2)	◯ Yes ◯ No Clear				
Blink Code on PCB	No Blink Code	Sealed System Issue	Yes	1 Machine Room @ 08/11/25 11:43	

Make sure compressor label is visible and readable and that you select FLD165/FMA on Step 3 if that type compressor is installed and use your Diagnostic Jig!!!

Step 3: Sealed System Diagnosis (FLD165/FMA)

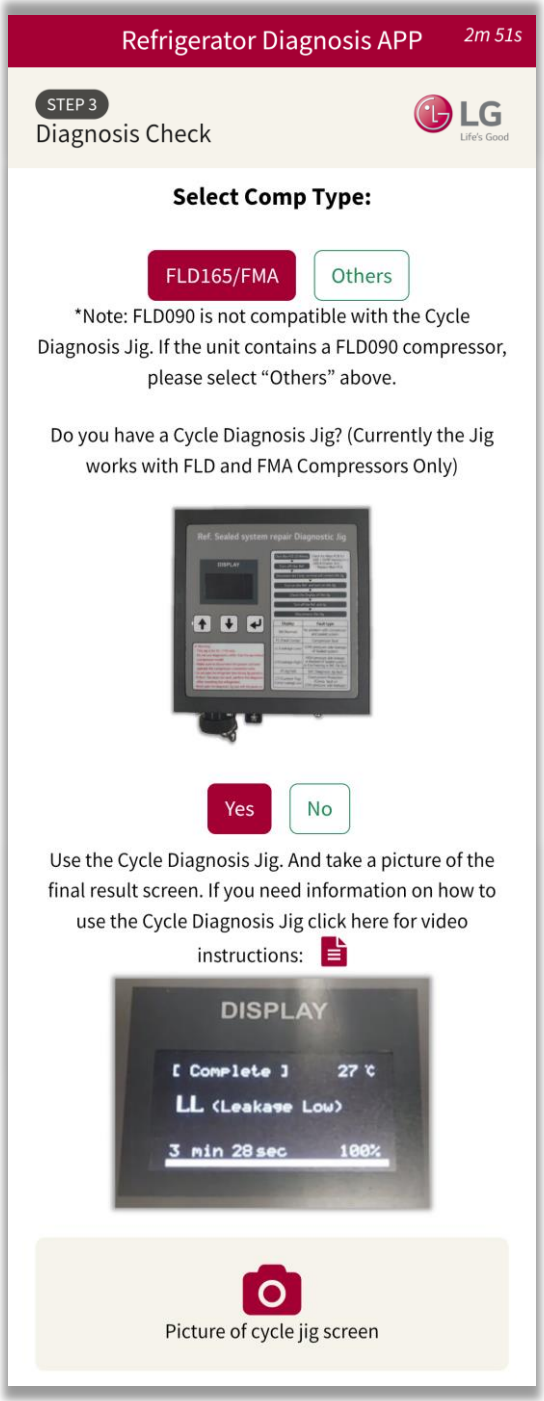
Step 3: Tech will be asked if the unit has a FLD/FMA Compressor installed.
If So…

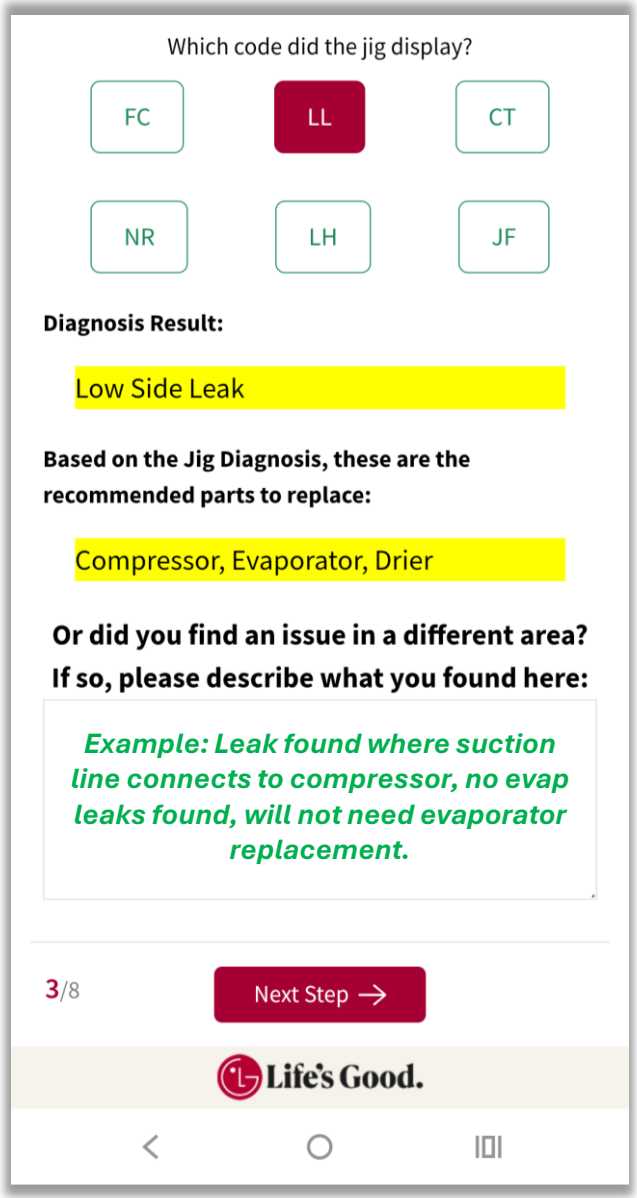
They will be asked to use the Sealed System Diagnosis Jig that was issued to all DMST.

Once the jig has completed diagnosis the tech will need to select what the final diagnosis answer was and take a picture of the screen showing the jig diagnosis.

Part Recommendation will be given when the tech selects the jig diagnosis answer.

Picture of Jig Diagnosis Screen is Required.





Techs may sometimes run into unique situations. A comment box has been added where techs can freely explain what they are seeing that might require a different repair than the recommended parts.

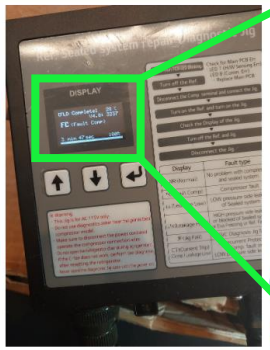
Step 3: Sealed System Diagnosis (FLD165/FMA)

What are Reviewers Looking For?

1) Reviewers are simply checking to make sure the Diagnosis Jig picture was uploaded and shows the final answer screen. (They confirm that the correct Jig Code was selected by the DMST also).
2) Reviewers also check for any comments techs might have left on Step 3. (If tech has issues with diagnostic jig, does not have a jig, etc, those notes should be posted here.)

Step 3 Diagnosis Check

Reviewers Screen:

Issue Found (Step3)	◯ Yes ◯ No Clear				
Compressor Type	FLD/FMA	Has Jig	Yes	No-Jig Reason	
Jig Code	FC (1)	Connect Fld165/Fma Compressor		Jig Connected Compressor Properly	
Refrigerant Type	R600	Low Side Pressure		High Side Pressure	
Equalization Time (min)		Diagnosis Result	Faulty Compressor	Recommended Parts	Compressor, Drier
Yoder Leak		High Side Leak?			
Tech Comment (2)					
(1) Cycle Jig Screen @ 08/11/25 11:53				Equalization Pressure	

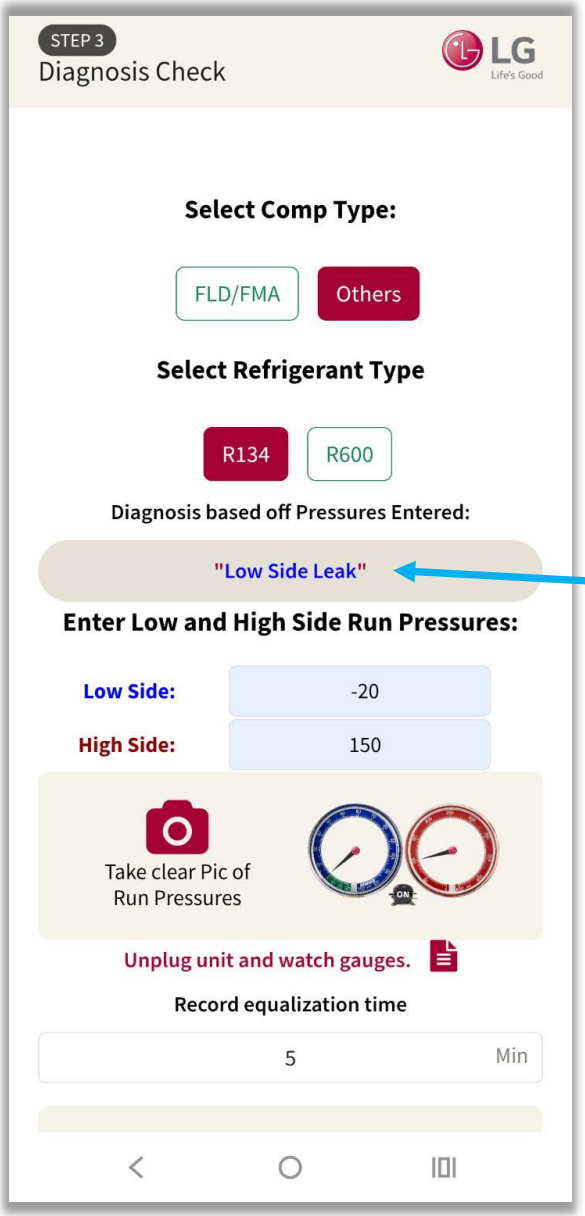
Step 3 Cont'd: Sealed System Diagnosis (Non FLD165/FMA)

Step 3 Cont'd: If the unit does not contain a FLD/FMA Compressor...

Tech will be asked to input Run Pressures and Equalization Time. Based off these readings a diagnosis will be given.

Part Recommendation will be given based off the diagnosis result.

Pictures of Run Pressures and Equalization Pressure will be required.



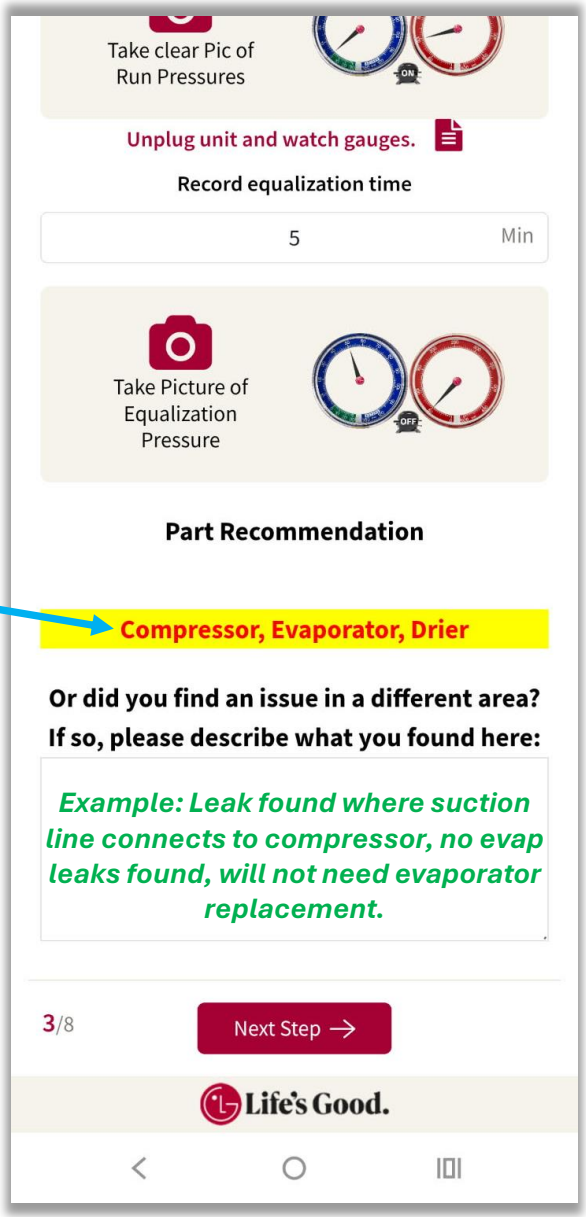
Diagnosis Result and Part Recommendation will appear once tech has entered:

1) Refrigerant Type

2) Low Side Run Pressure.

3) High Side Run Pressure.

4) Equalization Time.



Techs may sometimes run into unique situations. A comment box has been added where techs can freely explain what they are seeing that might require a different repair than the recommended parts.

Step 3 Cont'd: Sealed System Diagnosis (Non FLD165/FMA)

What are Reviewers Looking For?

1) Reviewers are checking to make sure the Run Pressure picture is visible. They then check and make sure the tech entered the correct readings from their gauges. **Pressure in picture and inputted pressures should match.**
2) Reviewers check that the gauges are showing equalized pressure
3) Reviewers check that Equalization Time inputted is close to the time difference between the Run Pressure Picture and the Equalization Pressure picture. **If the time the tech inputs is off by more than 3 minutes then the reviewer will mark the case bad.**

Step 3 Diagnosis Check

Reviewers Screen:

Issue Found (Step3)	◯ Yes ◯ No Clear				
Compressor Type	Others	Has Jig		No-Jig Reason	
Jig Code		Connect Fld165/Fma Compressor		Jig Connected Compressor Properly	
Refrigerant Type	R600	Low Side Pressure	2 (1)	High Side Pressure	75 (1)
Equalization Time (min)	4 (3)	Diagnosis Result	Low Side Leak	Recommended Parts	Compressor, Evaporator, Drier
Yoder Leak		High Side Leak?			
Tech Comment	***Reviewer also looks here for any technician comments***				
Cycle Jig Screen		Run Pressure @ 08/08/25 07:23	 (1)	Equalization Pressure @ 08/08/25 07:27	 (2)

(3)

Step 3: What are Reviewers Looking For? (continued)

Still using the example from the previous slide…. The reviewer will blow up the pictures and make sure accurate pressures were inputted.

Tech correctly entered Run Pressure.

Low Side Pressure	2	High Side Pressure	75

Tech showed equalized pressure at 10psi

Equalization Time (min)	4

Important: When typing in pressures only input numbers. The only character allowed is the negative (-) symbol.

Do not type “psi, do not add commas, if it is digital gauges round to the nearest whole number.

If you add extra characters outside of numbers and the (-) symbol it will cause issues with the Diagnosis Result.

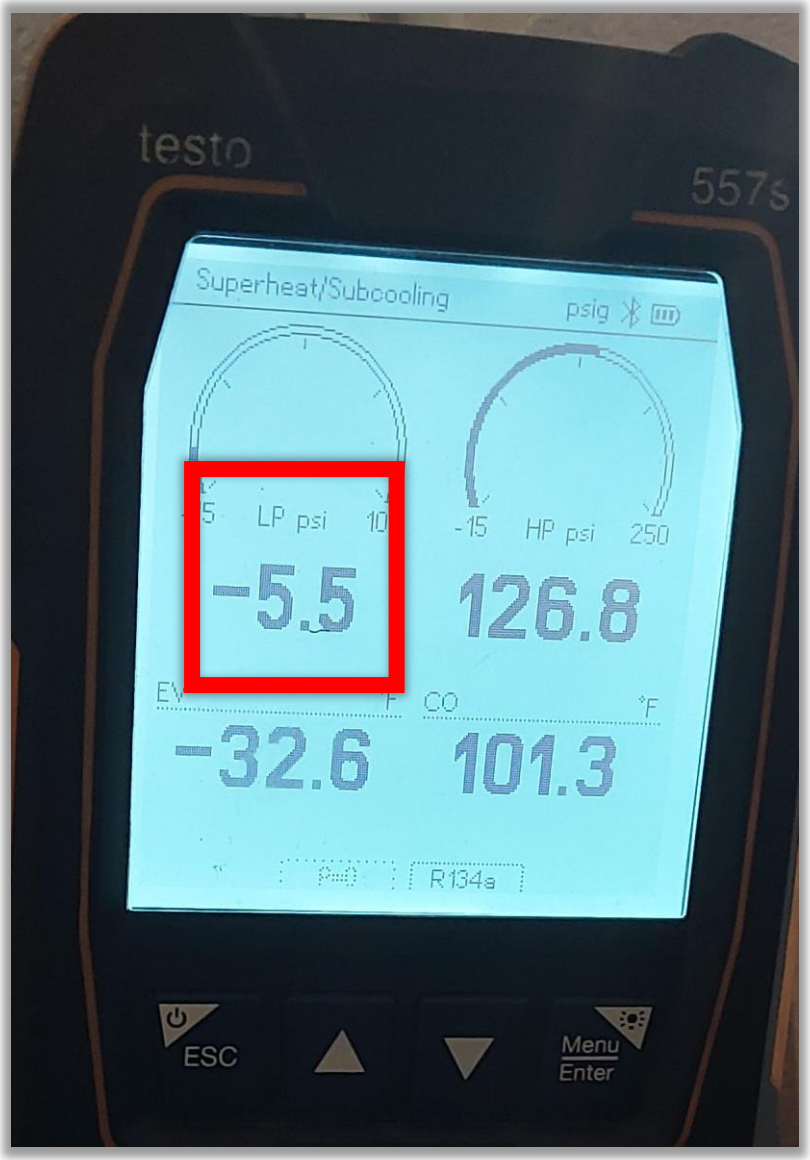
Tech entered equalization time that matched the timestamp period between the Run Pressure and Equalization Pressure pictures.

We have seen several cases where there is only 1 or 2 minutes between the picture timestamps and tech will enter 10, 15, 20 minutes.

It is <u>VERY IMPORTANT</u> that the tech enters the correct Run Pressures and Equalization Time for the Diagnosis Result to be accurate.

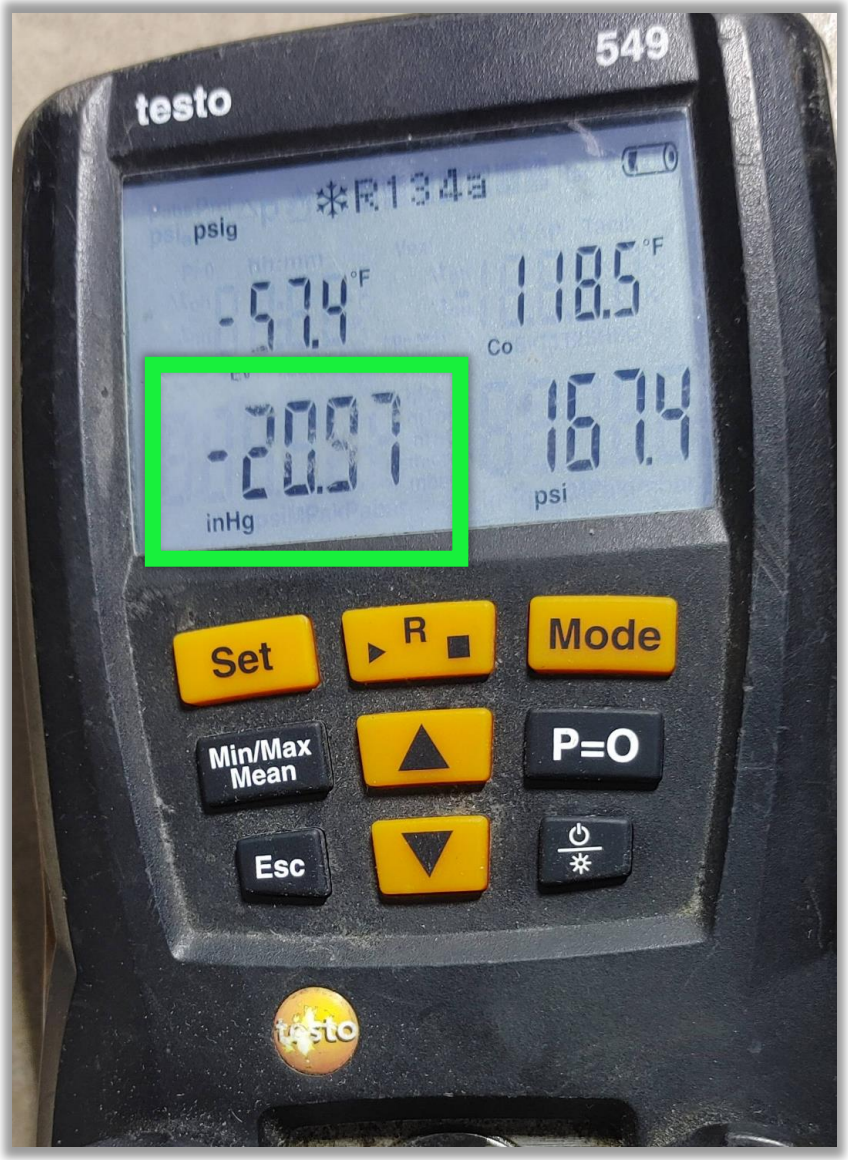
Step 3 Gauge Readings: IMPORTANT NOTE!!!

Many DMST's are submitting pictures of Digital Gauges. While it is ok to use Digital Gauges it is important that the technician understand the difference between PSI and inHg (Inches Mercury)



1psig = 2.036 inhg

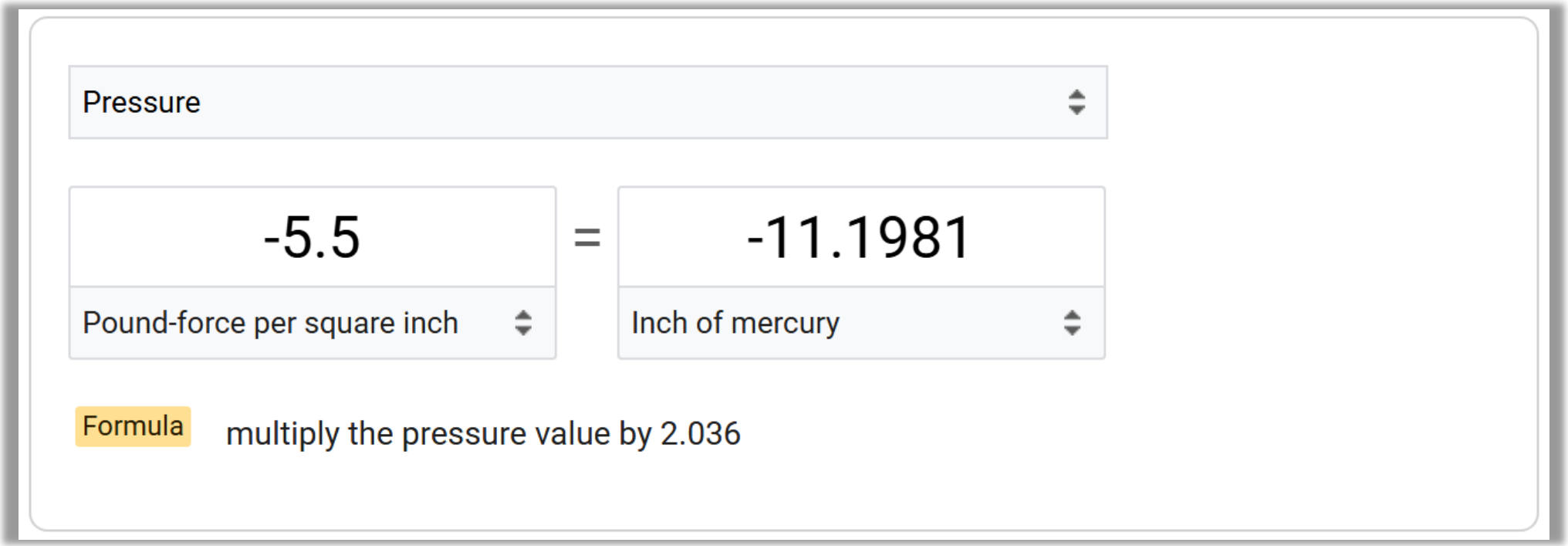
See Calculation on next slide.



In this case tech would enter -11 as the low side pressure since it is measured in (psi).

In this case tech would enter -21 as the low side pressure since it is measured in (inHg).

Step 3: IMPORTANT NOTE!!!



To make it simple....

If the techs gauges cannot be set to read (inHg). They need to double the psi reading.

Step 3: IMPORTANT NOTE!!! Equalization Time

Here is what techs are supposed to do to check Equalization....

1) Take a picture of Run Pressures
2) Unplug the unit and wait for the pressures to equalize
3) Document the time between when they unplugged and when the pressures equalized.
4) Take a picture of equalized pressure.

The time the tech enters into the Equalization time slot should be very close to the time between pictures. If the time is off by more than 3 minutes the case will be marked Bad.

Note: Technicians are going to complain that if the unit is restricted it may take a really long time for the pressures to equalize and that they do not have enough time to wait around.

Solution: If the tech has been waiting over 10 minutes and the pressures have still not equalized...

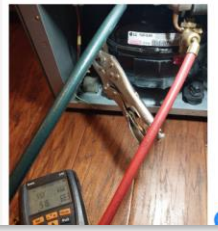
1) They can take a picture at that time of what the pressures currently are.
2) Type “11” in as the Equalization Time (Note: 11 is chosen as it will not affect the diagnosis result)
3) Then go to the comment section at the bottom of step 3 and type “I waited over 10 minutes and pressures still have not equalized”.

-**Note:** There should be at least 10 minutes elapsed between the Run Pressure Pic and the Equalization Pressure Pic if tech does this to show he waited the proper amount of time.

Step 3: IMPORTANT NOTE!!! Equalization Time

Bad Equalization Cases:

Equalization time entered should have been 3 minutes, not 53

Equalization Time (min)	53	Diagnosis Result	Unknown	Recommended Parts	
Yoder Leak		High Side Leak?			
Tech Comment					
Cycle Jig Screen		Run Pressure @ 08/13/25 10:25		Equalization Pressure @ 08/13/25 10:28	

Equalization time entered should have been 3 minutes, not 60

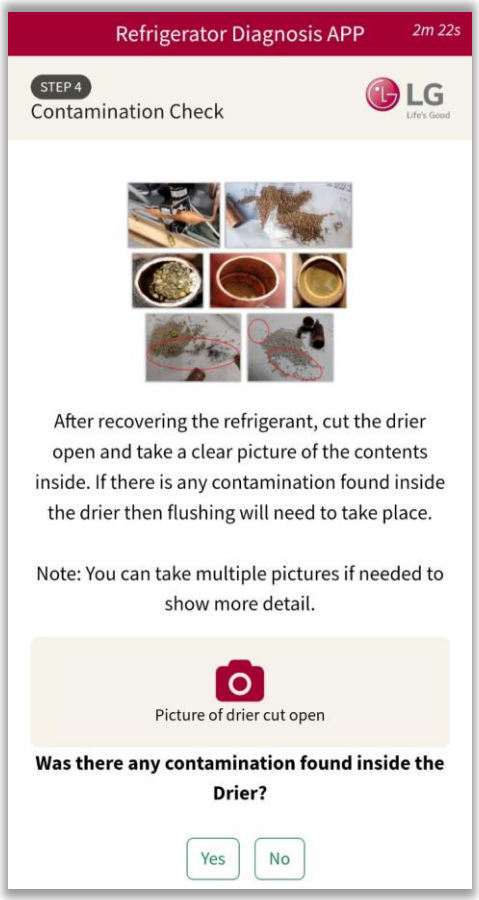
Equalization Time (min)	60	Diagnosis Result	Unknown	Recommended Parts	
Yoder Leak		High Side Leak?			
Tech Comment					
Cycle Jig Screen		Run Pressure @ 08/12/25 11:03		Equalization Pressure @ 08/12/25 11:06	

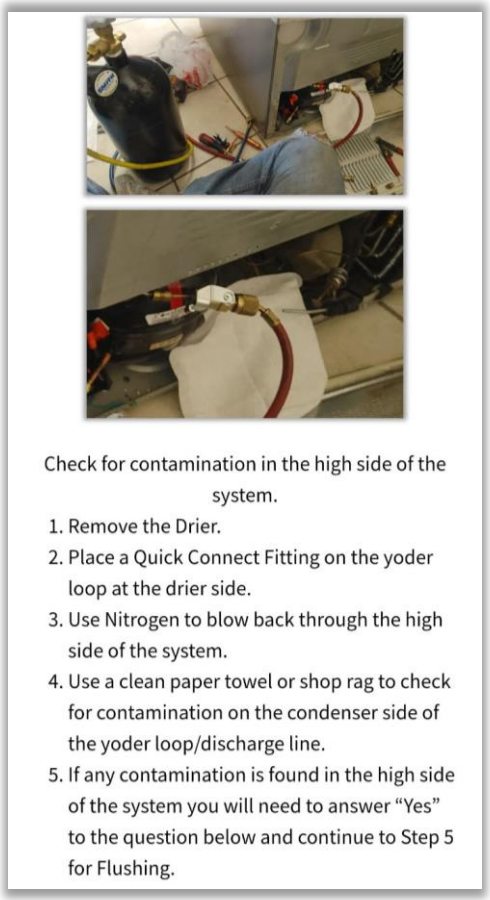
Equalization time entered should have been 1 minutes, not 5. Also tech did not show actual picture of equalized pressure.

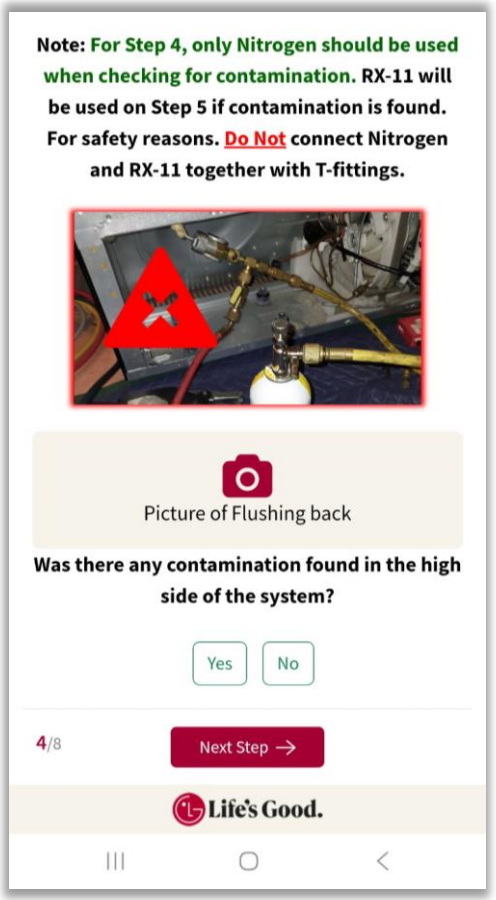
Equalization Time (min)	5	Diagnosis Result	Inefficient Compressor	Recommended Parts	Compressor & Drier
Yoder Leak		High Side Leak?			
Tech Comment					
Cycle Jig Screen		Run Pressure @ 08/12/25 13:36		Equalization Pressure @ 08/12/25 13:36	

Step 4: Contamination Check (For techs with 10% reclaim and higher)

- Techs (with 10% and up reclaim levels) will need to cut the driers open and show a clear picture of the desiccant inside.
- **Be sure the picture(s) submitted clearly show the contents of the drier for the reviewers to easily see.**
- If any contamination is found the technician will need to answer “Yes” to the questions in step 5 as flushing with RX-11 will be required.
- If no contamination is found inside the drier…Techs will need to show proof that they backflushed the high side to check for contamination. This should be a **Nitrogen Flush!**



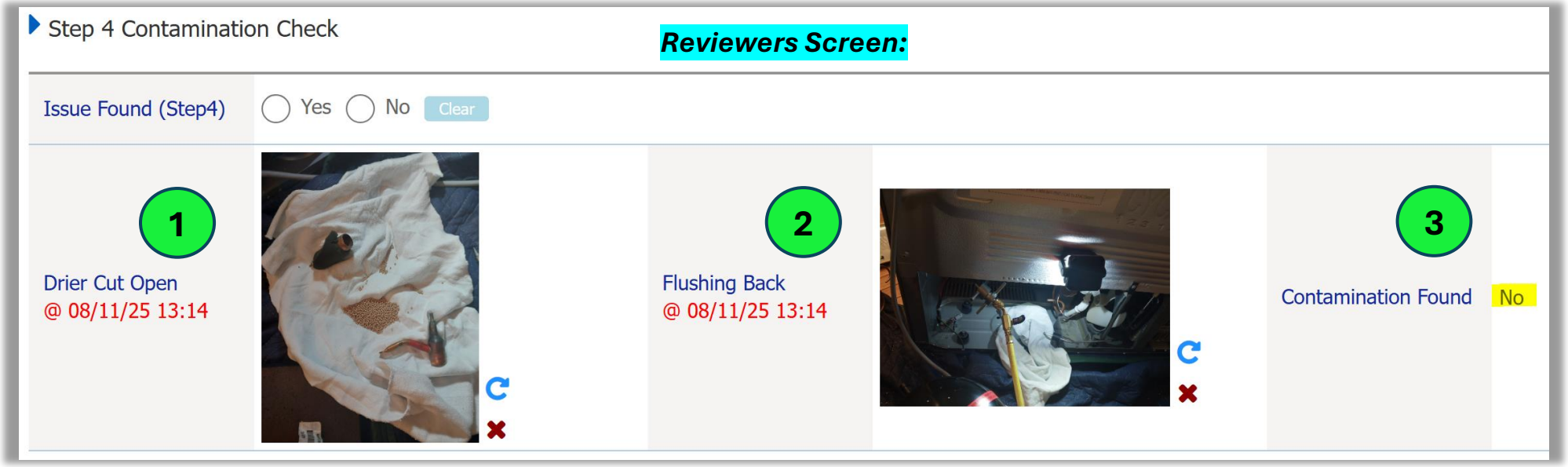


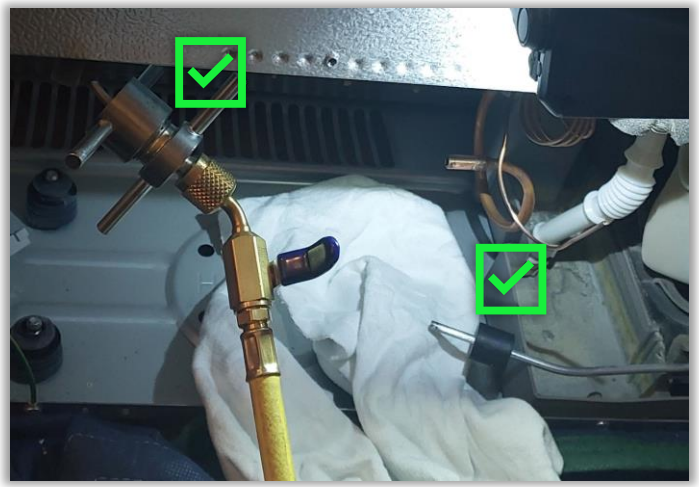


Step 4: Contamination Check (For techs with 10% reclaim and higher)

What are Reviewers Looking For?

1) Reviewers are checking to see if there is any contamination found inside the filter drier. **The picture should clearly show the drier contents.**
2) Reviewers also check for a correct backflushing setup. Pressure should be applied to the drier side of the yoder loop and blow back to the condenser. **This should show checking with Nitrogen not RX-11. No other setup will be accepted.**
3) The reviewer then checks to make sure the Contamination Found question was answered correctly by the technician.



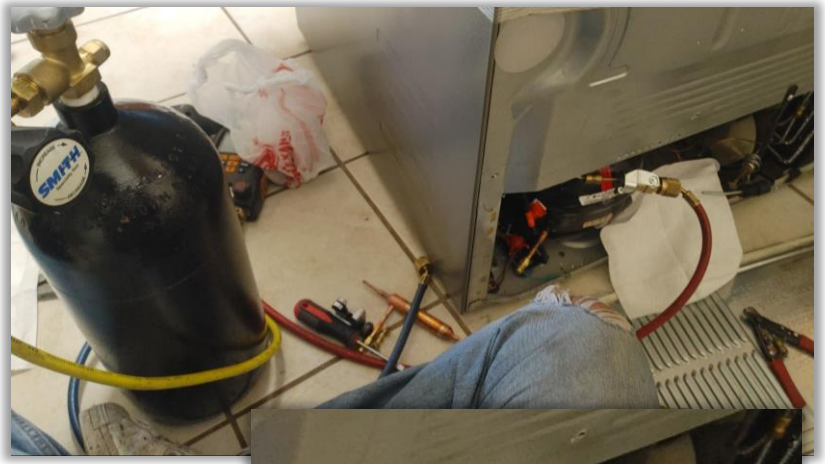


Step 4: What are Reviewers Looking For? (continued)

Good Examples of Contamination Check:

Drier Desiccant should be clearly visible:

Backflushing with Nitrogen from drier side of yoder loop should be clearly visible:



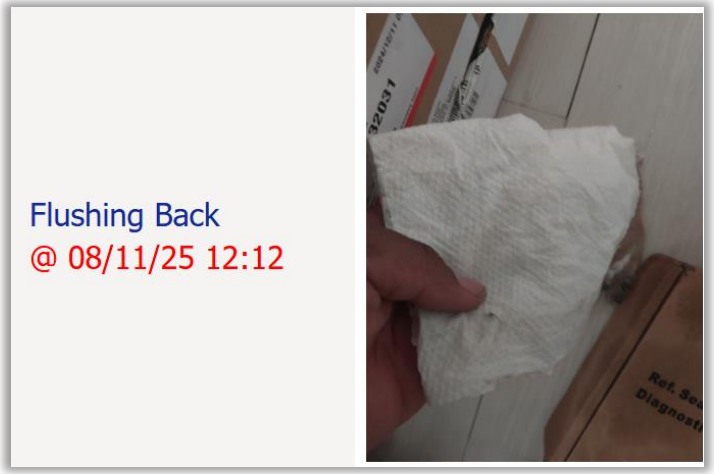
Step 4: What are Reviewers Looking For? (continued)

Bad Examples of Contamination Check:

Tech did not show desiccant.

Tech did not show paper towel/rag on condenser side and is using a T-fitting.

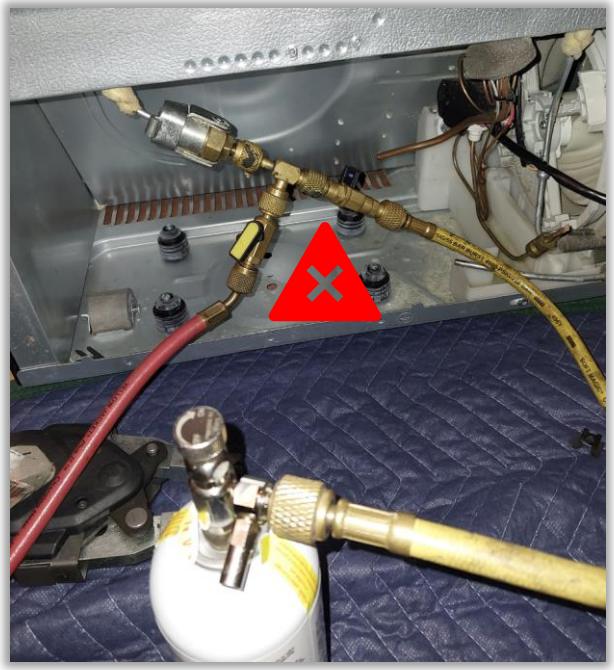
Tech did not show nitrogen hooked to drier side of yoder.



Tech did not show paper towel/rag on condenser side.

Tech did not cut drier open and did not show Nitrogen setup.

Contamination Check should be conducted with Nitrogen. Not RX-11. (RX-11 is for flushing / Step 5)



Step 5: Flushing the Sealed System

Step 5: If contamination is found during the drier/nitrogen check in Step 4, a thorough flush with RX-11 will need to be performed to make sure the tubing is cleaned internally.

Technician will need to take a picture of their flushing setup to show how they flushed the contamination from the system during the repair.

Picture of Flushing Setup is Required. (Should clearly show RX-11 hooked to dreir side of the yoder loop and a recovery bag hooked to the condenser side!!!)

Reminder: Rx-11 and Nitrogen should not be hooked to the system at the same time for safety reasons. T-Fittings should not be used.

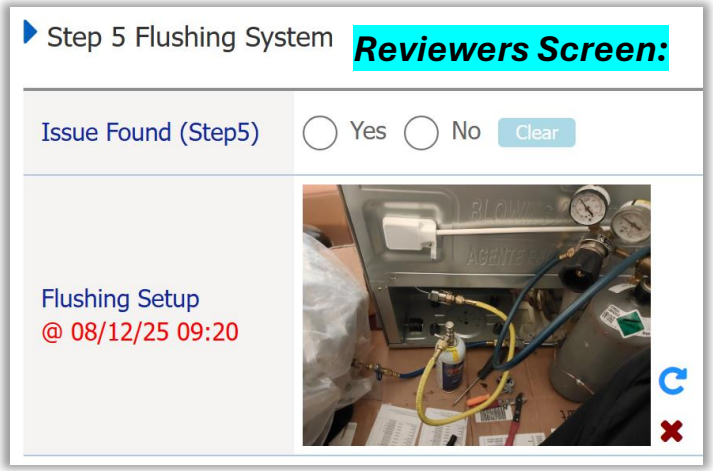
For more detailed information on flushing click this link:

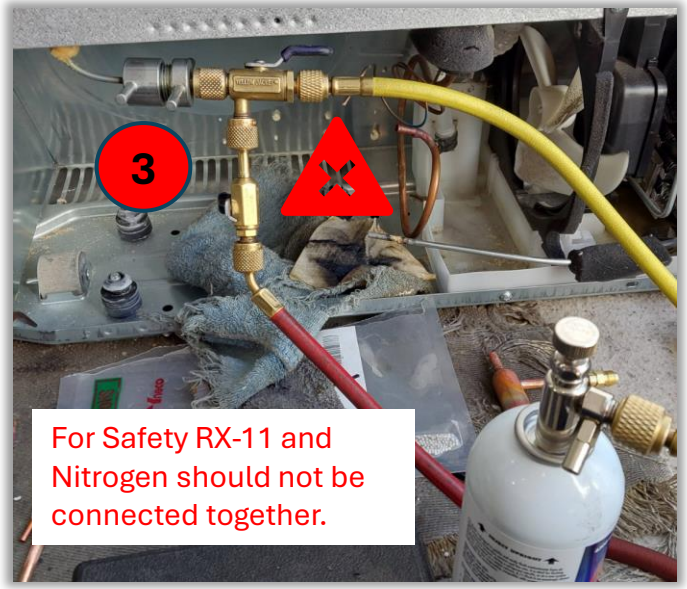
Picture of your Flushing Setup

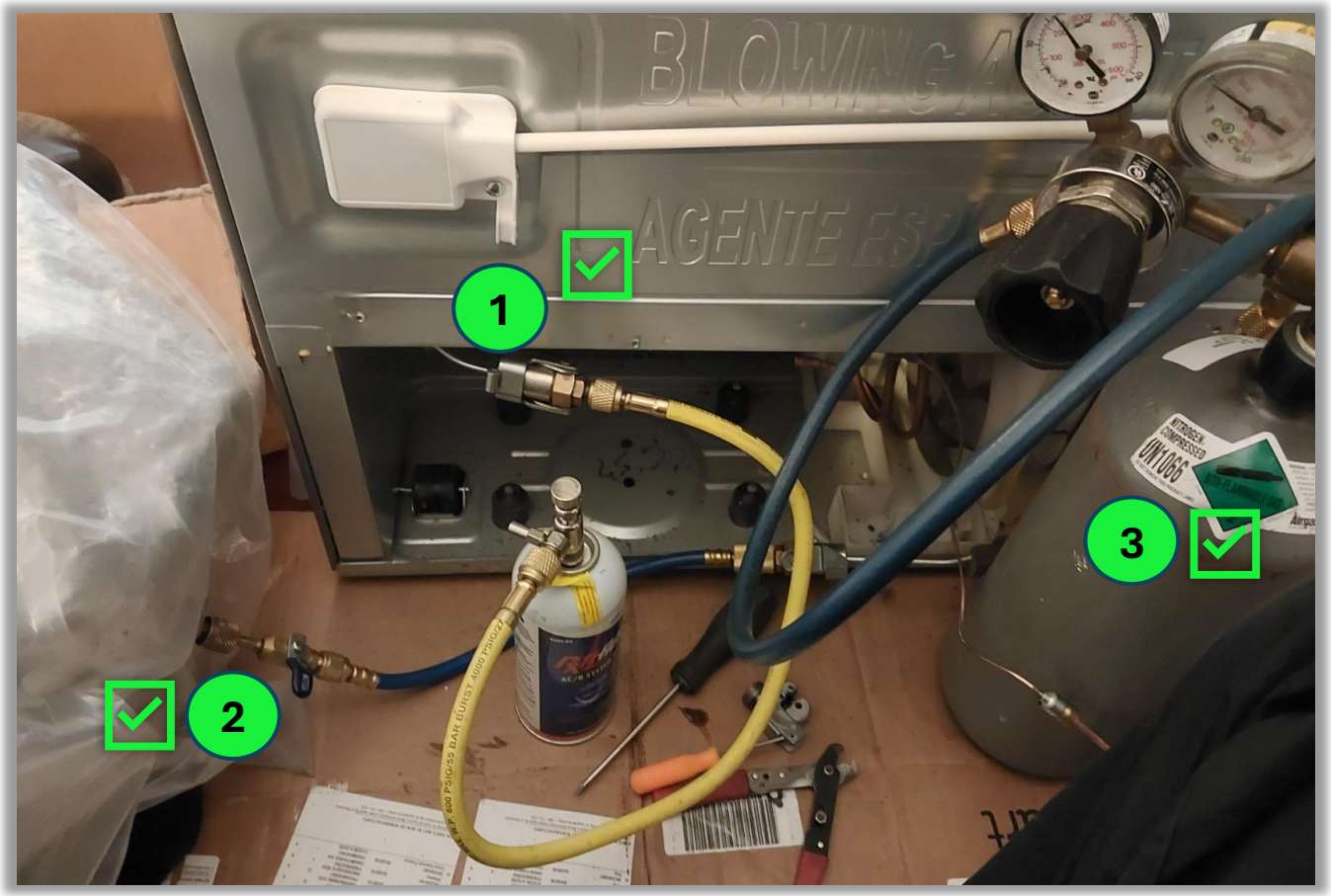
Step 5: Flushing the Sealed System

What are Reviewers Looking For?

1) Reviewers are checking to see if RX-11 is connected to the drier side of the yoder loop.
2) Reviewers are checking to see if the recovery bag is connected to the condenser side of the system.
3) Reviewers are checking to make sure the RX-11 and nitrogen are not connected together. (They should be used individually for safety reasons).







If you need a refresher on how to properly and safely use RX-11 the video can be found here: https://lgrepaircenter.com/flushingrx11/

Step 5: What are Reviewers Looking For? (continued)

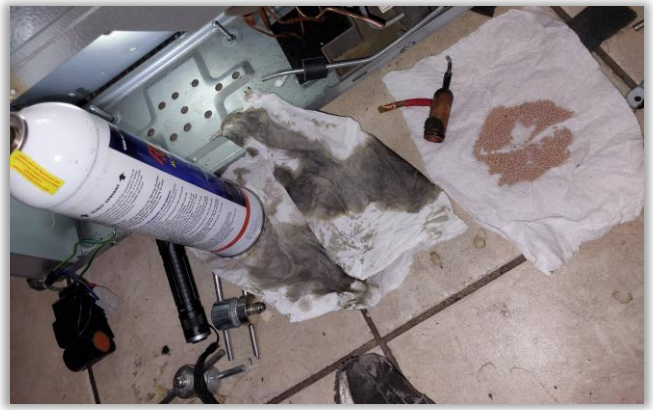
Good Examples of Flushing:

RX-11 hooked to drier side of yoder. Recovery bag hooked to condenser side. Nitrogen and RX-11 not connected with T-Fitting:

Bad Examples of Flushing:

No Recovery Bag:

No Recovery Bag and hookup not shown:



No Recovery Bag and RX-11 and Nitrogen tank should not be hooked together with T-Fitting:

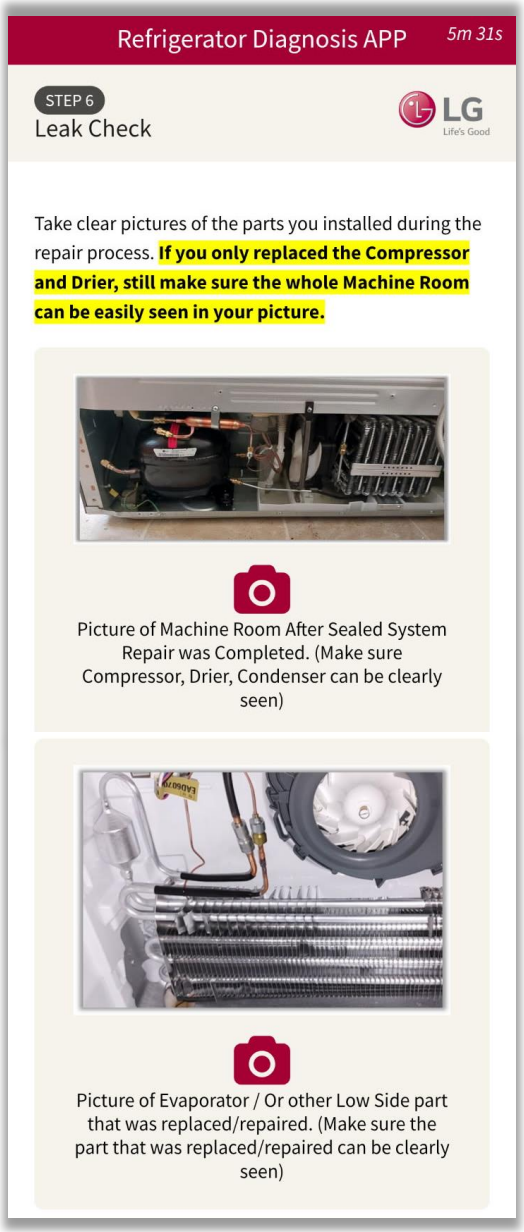
Training Video: https://lgrepaircenter.com/flushingrx11/

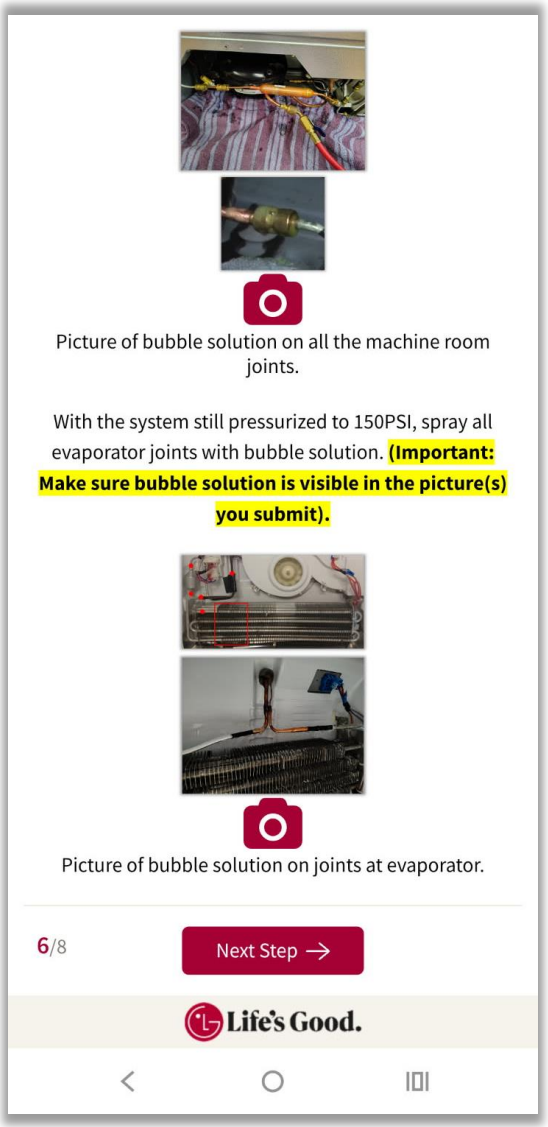
Step 6: Leak Check (For techs with 10% reclaim and higher)

Techs will still need to supply pictures of parts replaced like step 6 currently requires. But if reclaim is over 10% will also need to...

Pressurize the system to 150 PSI and supply proof that proper leak testing took place. All machine room joints will need to be shown and evaporator joints if the evaporator was replaced.

It is important that in the pictures bubble solution can be seen on the joints.





If techs need a refresher on how to perform leak checks, they can use this link: https://lgrepaircenter.com/nitrogenpressure/
This article gives multiple examples of leak points and how to videos.

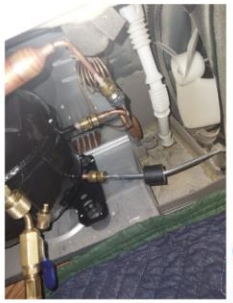
Step 6: Leak Check (For techs with 10% reclaim and higher)

What are Reviewers Looking For?

1) Reviewers check and make sure that the correct parts were installed based off the diagnosis result from Step 3. **Note: The Final Machine Room Picture should clearly show the whole machine room (Compressor, Condenser, Drier).**
2) Reviewers check to see if the system was pressurized to 150PSI for bubble checking.
3) Reviewers check for bubble solution on all joints. **(Make sure your picture(s) clearly show the bubble solution**.
4) Reviewers will answer questions about parts installed.

Step 6 Leak Check

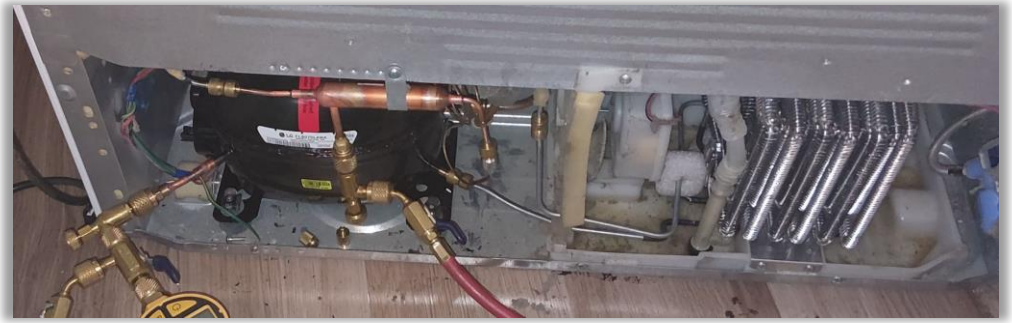
Reviewers Screen:

Issue Found (Step6)	◯ Yes ◯ No Clear		
1 Final Machine Room @ 08/11/25 12:33		1 Final Evaporator	*Note: If Diagnosis Result on Step 3 told the tech to install an evaporator coil that evaporator picture would show here.*
2 Leak Check 150 PSI @ 08/11/25 12:39		3 Leak Check Machine Room Bubbles @ 08/11/25 12:42	 
Leak Check Evaporator Bubbles	*Note: If Diagnosis Result on Step 3 told the tech to install an evaporator coil, bubbles on the evap coil connections would show here.*		
Perform Leak Check		Replace Evaporator	
Did technician reassemble using lokring?	◉ Yes ◯ No Clear	Did technician replace the parts recommended based off the diagnosis result?	◉ Yes ◯ No Clear
Install Drier?	◉ Yes ◯ No Clear	Install Compressor?	◉ Yes ◯ No Clear
Install Condenser?	◯ Yes ◯ No Clear	Install Evaporator?	◯ Yes ◯ No Clear

4

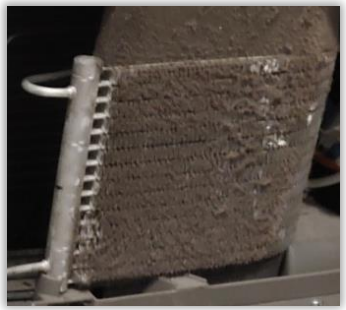
Step 6: What are Reviewers Looking For? (continued)

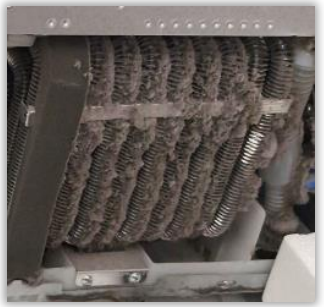
Good Examples of final Machine Room Pictures: (Clearly Shows Compressor/Drier/Condenser):



Bad Examples of final Machine Room Pictures:

Condensers left dirty in Final Machine Room Picture:





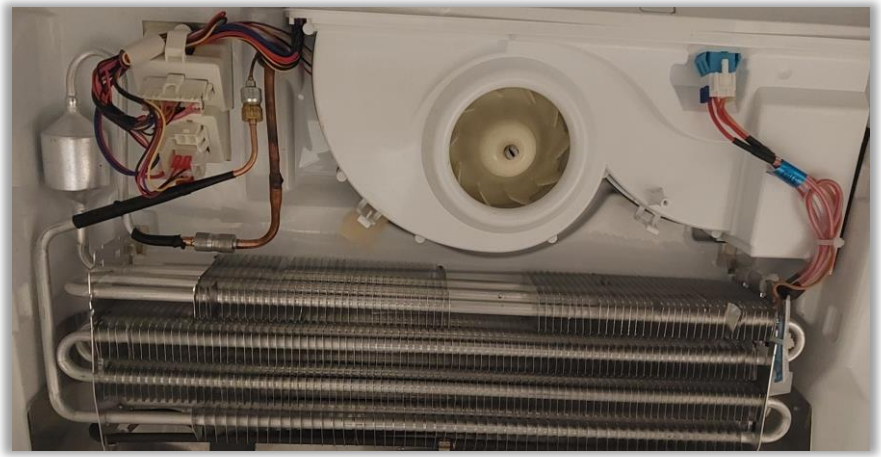
Cannot See Condenser in Final Machine Room Picture:

Final Machine Room
@ 08/13/25 08:41

Final Machine Room
@ 08/12/25 21:36

Step 6: What are Reviewers Looking For? (continued)

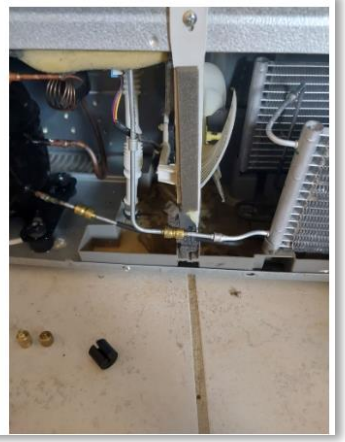
Good Examples of Evaporator Replaced Pics



Bad Examples of Evaporator Replaced Pics:

Pressures indicated low side leak, recommended part was evaporator. Tech did not show Evap.

Final Evaporator
@ 08/01/25 14:05



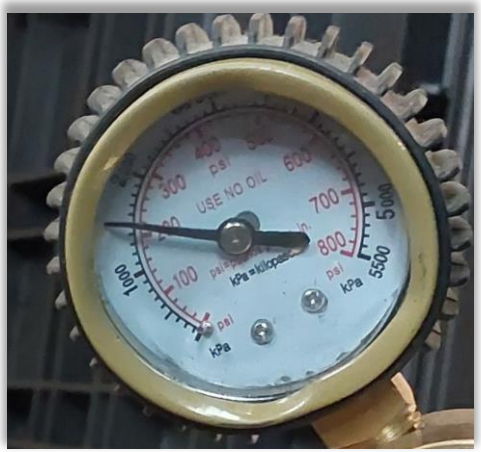
Final Evaporator
@ 08/18/25 14:24

Remember, if the diagnosis results and recommended parts requires an evaporator and you find the Low Side leak at a compressor joint for example, make sure to leave a note in the comments on Step 3 or Step 8 as to why you did not replace the evaporator. We understand suction lines or process stub valves can leak, but tell the reviewer what you found.

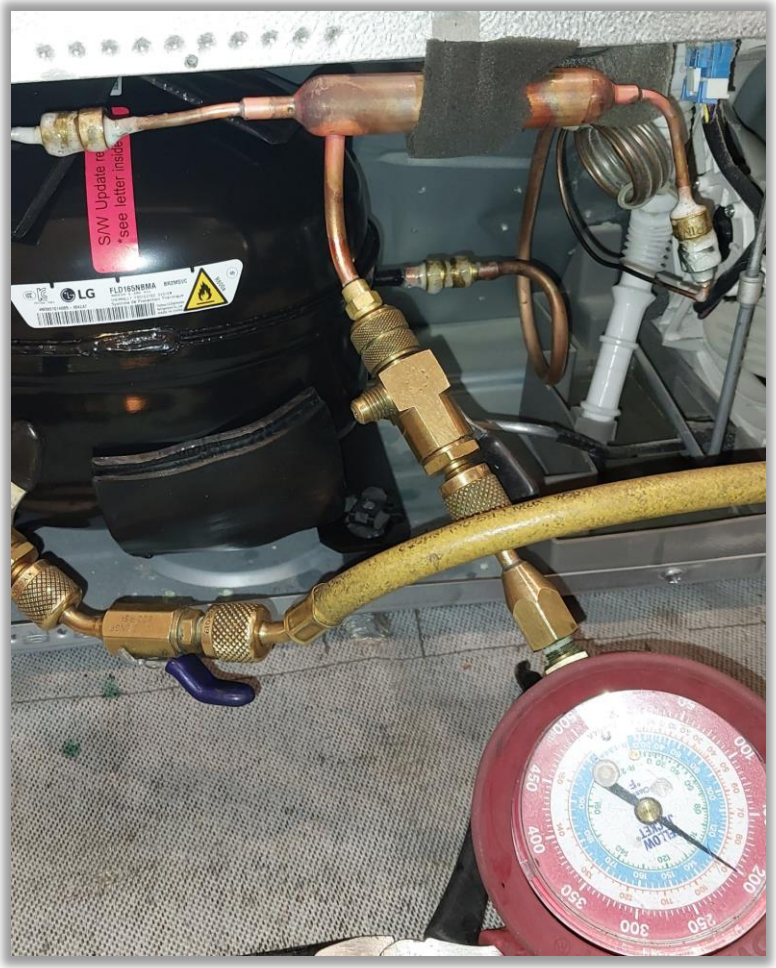
Step 6: What are Reviewers Looking For? (continued)

Good Examples of Leak Check:

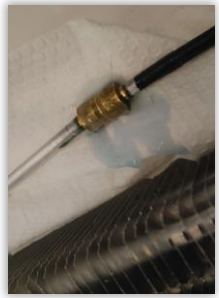
1) Pressurized to 200PSI. Bubbles Clearly Visible on Connections.



2) Pressurized to 200PSI. Bubbles Clearly Visible on Connections.



3) Pressurized to 154PSI. Evaporator Example



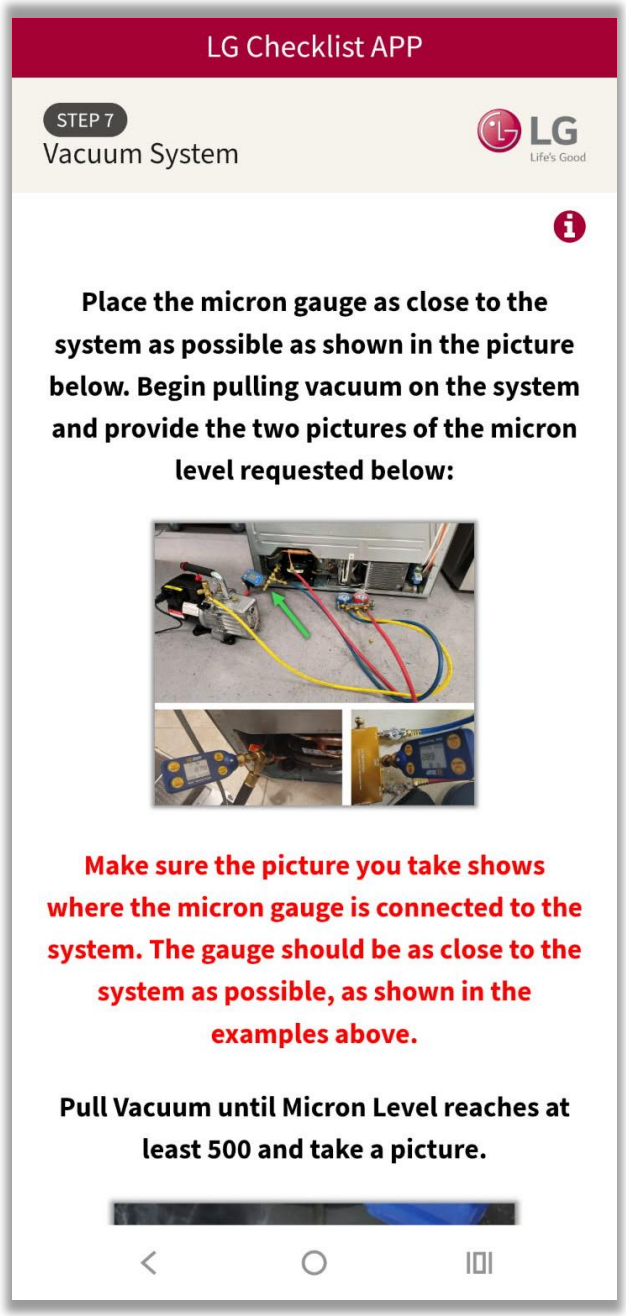
Another good example where bubbles are clearly seen on Evap joints:

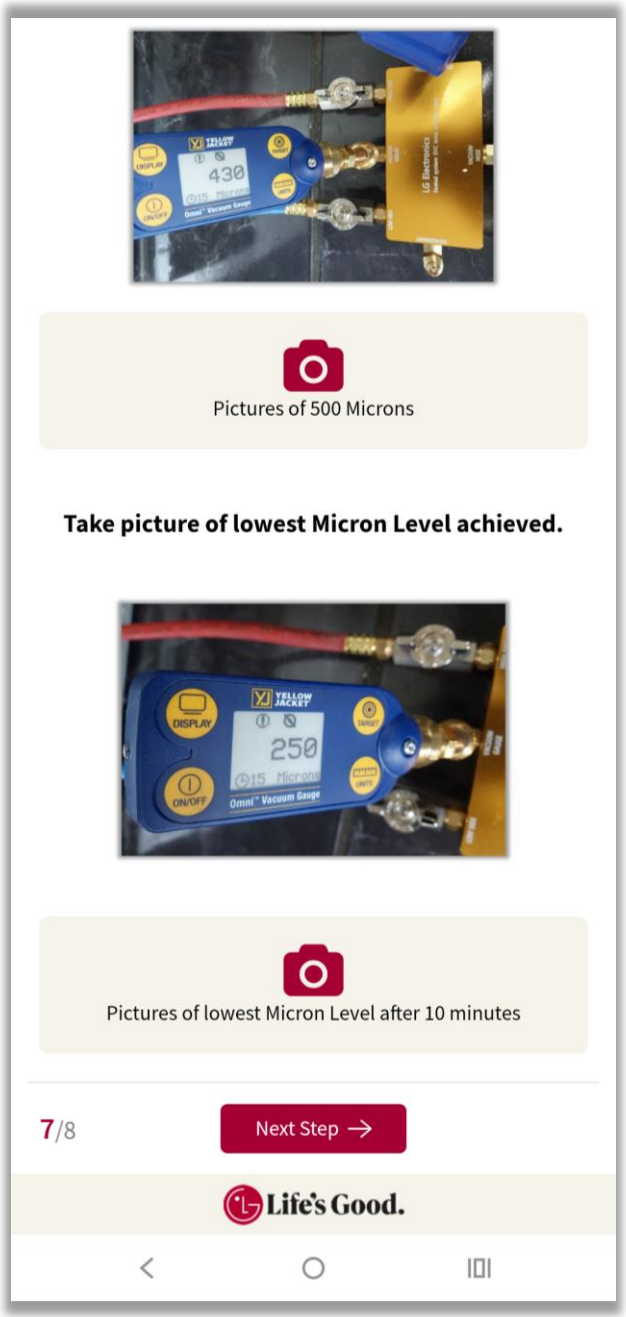
Step 7: Vacuuming the Sealed System

Step 7: The current requirement is still…

1) Pull down to 500 microns (or lower) and take the first picture.
2) A 10-minute timer will start when the first picture is taken. Continue to run the vacuum pump for the 10-minute duration.
3) Take a picture of the lowest micron level achieved after the 10 minutes is complete. ***(Expectation is that the final micron level should be lower than the 500 micron start point)***

Two Pictures Required for Vacuum Step.

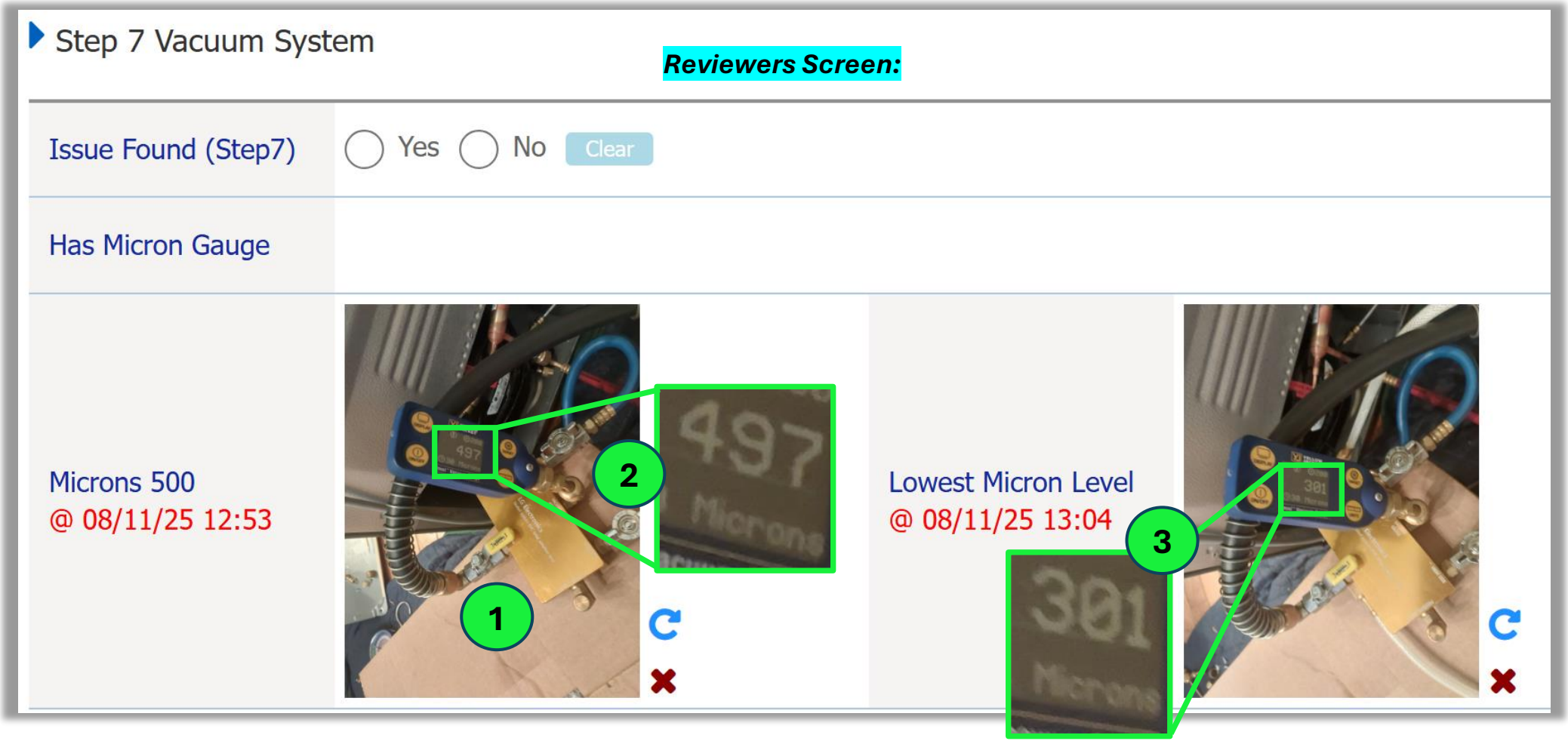




Step 7: Vacuuming the Sealed System

What are Reviewers Looking For?

1) Reviewers check the Micron Gauge location. **(Micron Gauge must be located on the "Vacuum Jig", or directly at the compressor or drier. Cannot be located at pump or manifold).**
2) For the first picture: Reviewers check for 500 Microns or Lower.
3) For the second picture: Reviewers check for a value lower than the first picture.
4) Reviewer checks to make sure all valves on Vacuum Jig are in open position.

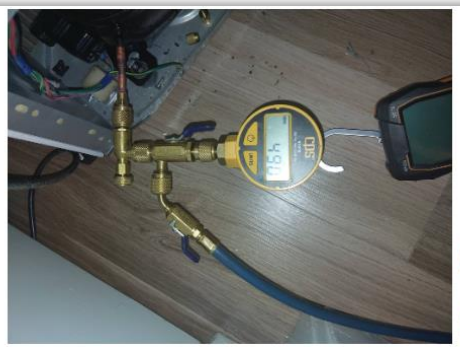


Step 7: What are Reviewers Looking For? (continued)

Good Examples of Vacuum:

1) Micron Gauge Installed at Compressor. 1st Pic= 490 2nd Pic= 370

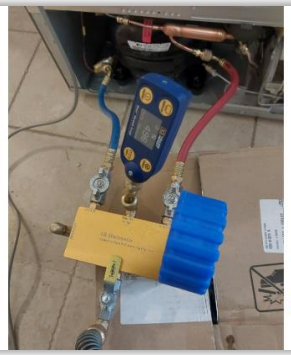
Microns 500
@ 08/11/25 17:49



Lowest Micron Level
@ 08/11/25 18:09

2) Micron Gauge Installed at Vacuum Jig. 1st Pic= 496 2nd Pic= 264

Microns 500
@ 08/01/25 16:22

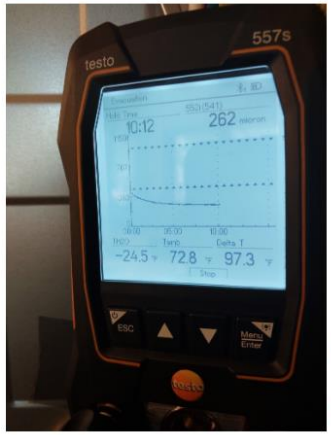


Lowest Micron Level
@ 08/01/25 16:33

3) Digital Gauges are also accepted as long as Micron Levels are Correct. 1st Pic= 453 2nd Pic= 262

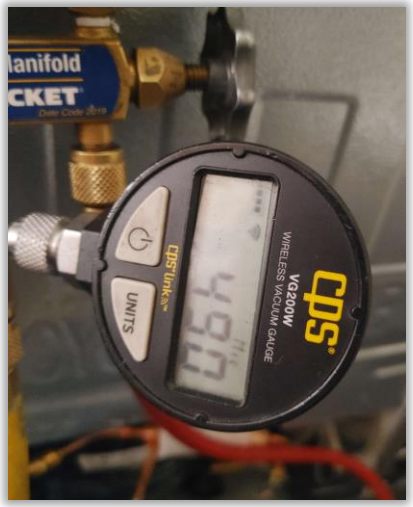
Microns 500
@ 08/11/25 16:45

Lowest Micron Level
@ 08/11/25 16:55



Step 6: What are Reviewers Looking For? (continued)

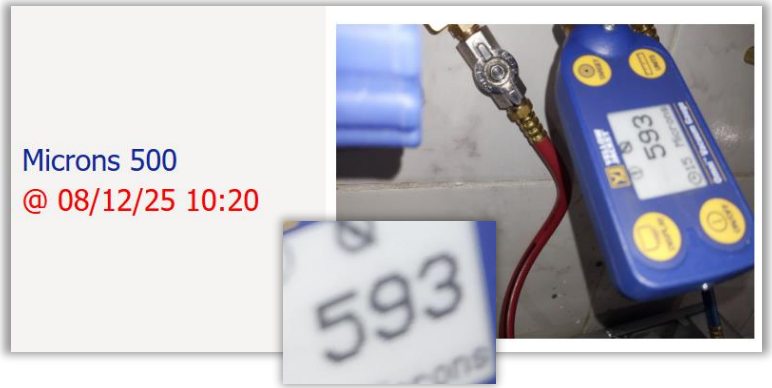
Micron Gauge should not be located at gauges:



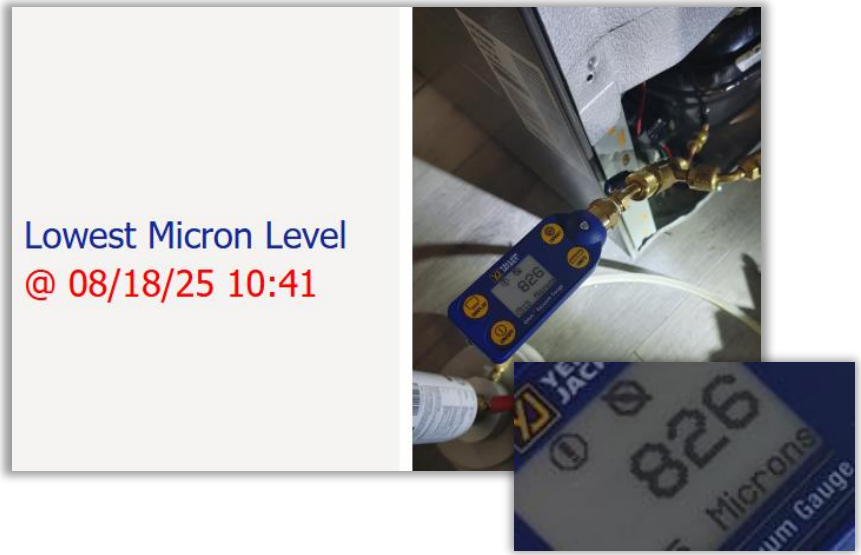
Micron Gauge should not be located at Vacuum Pump:

Bad Examples of Vacuum:

Initial Micron level should always show 500 microns or below:

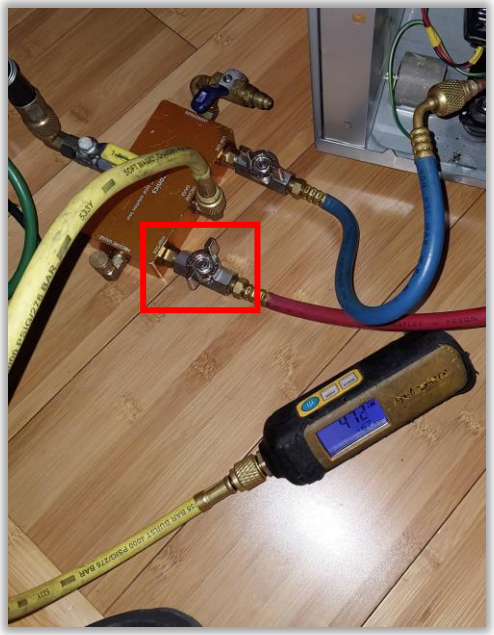


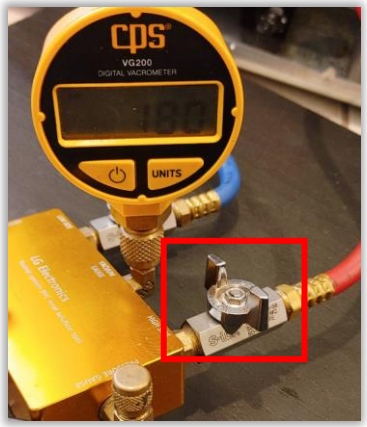
Lowest Micron Level should be less than 500 Microns:



Micron Gauge Location Issue. Tech needs to eliminate the Yellow Hose and install Gauge directly to block. (Needs female fitting or different style gauge).

Also, Red hose valve is closed. All valves should be open while vacuuming system.





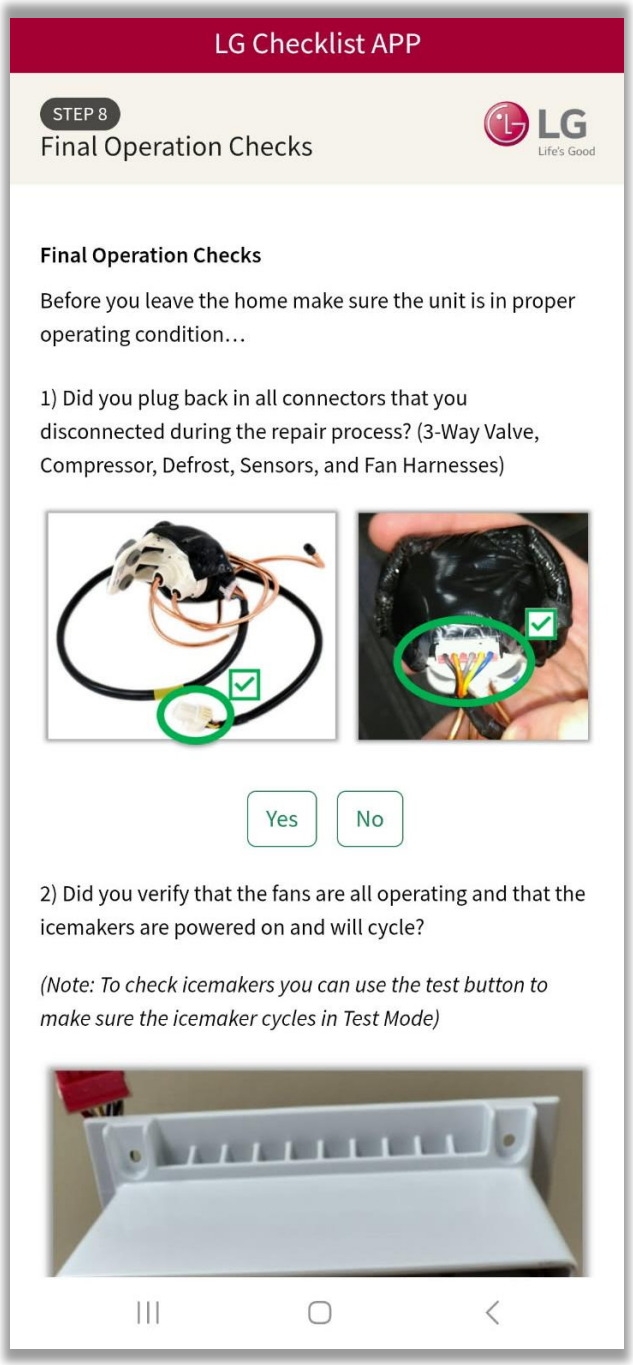
Step 8: Final Operation Check

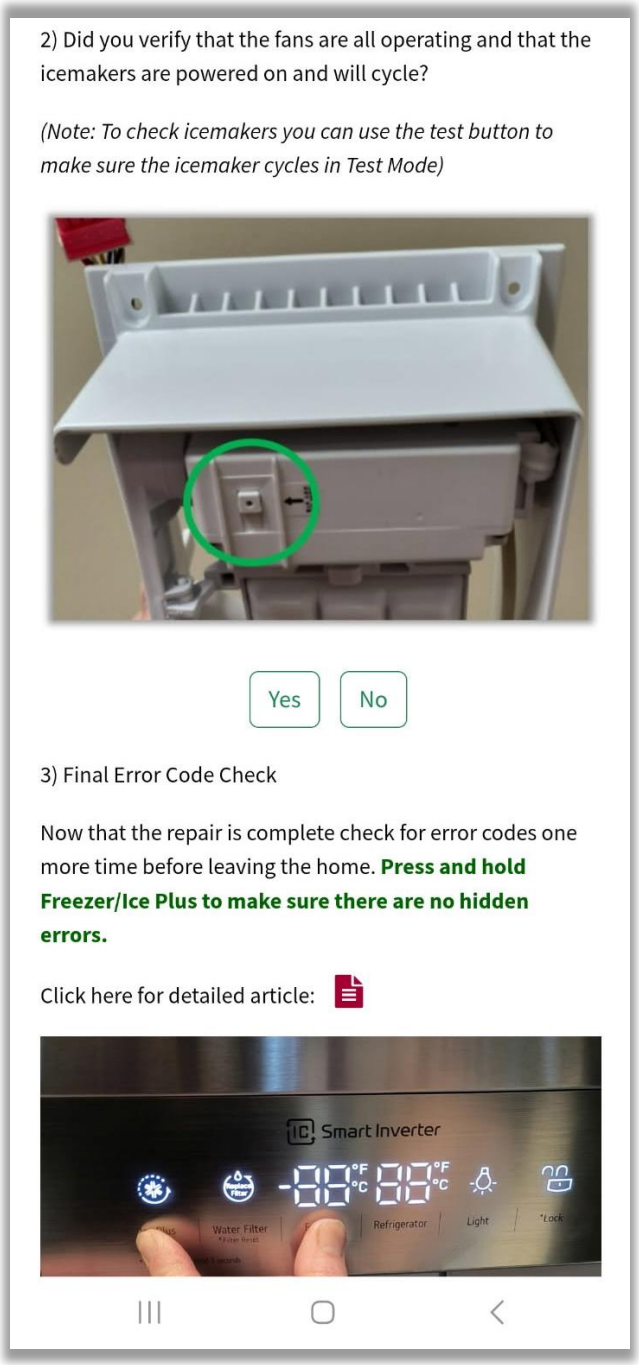
Step 8: This step reminds the tech to plug in any harnesses that were disconnected during the repair process.

Also, instructs the tech to verify icemaker functions and check for hidden error codes one more time before leaving the home.

The purpose is to reduce reclaims for simple issues that might have been missed during the reassembly process.

Picture of Final Error Code Check is required.



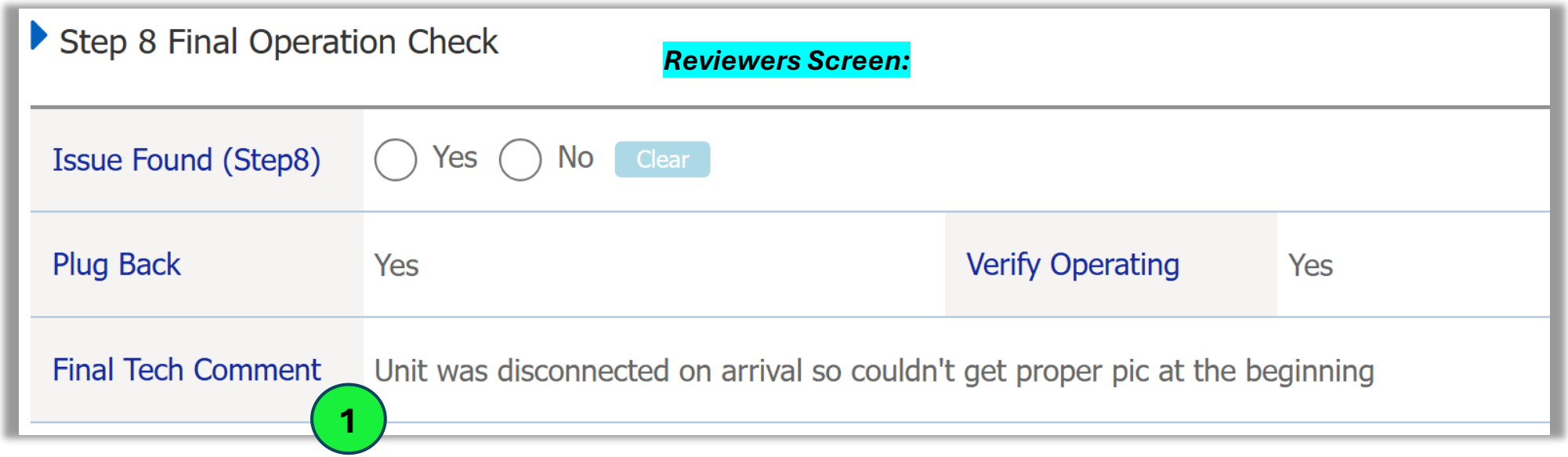


Step 8: Checking for Error Codes

What are Reviewers Looking For?

1) Reviewers check for any comments left by the technician. If anything went wrong during the checklist it needs to be documented here.

- ***Note: The Final Error Code Picture that techs enter on Step 8 is visible under "Step 1" in the Reviewer Screen. See Slide 2 for an example.***



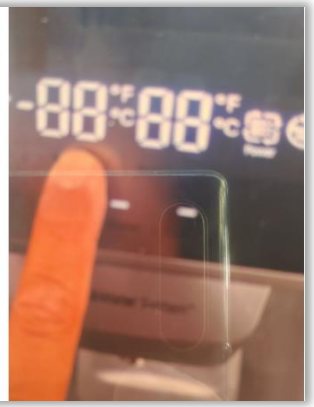
Other Things that will Result in “Bad” Checklist Grading

What are Reviewers Looking For?

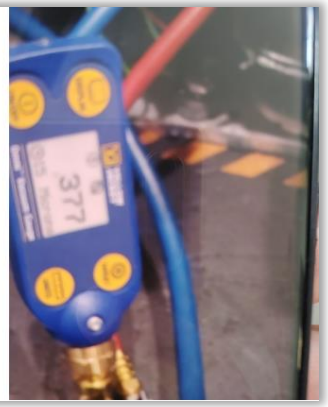
Do Not Take Pictures of Other Devices. All pictures should be taken live while on site.
(Reviewers look for distorted pictures, reflections, and phone frames)

Drier Cut Open
@ 08/12/25 11:52

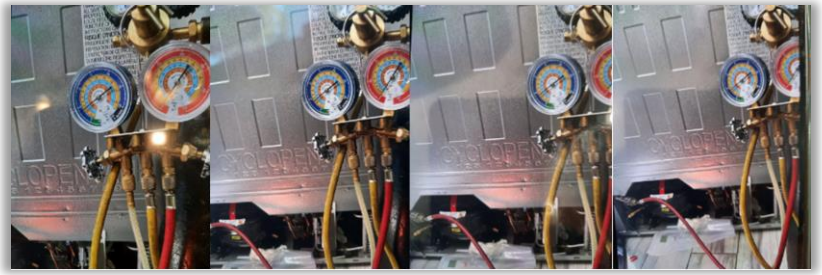
Error Code Check
@ 08/11/25 20:11



Lowest Micron Level
@ 08/06/25 18:24



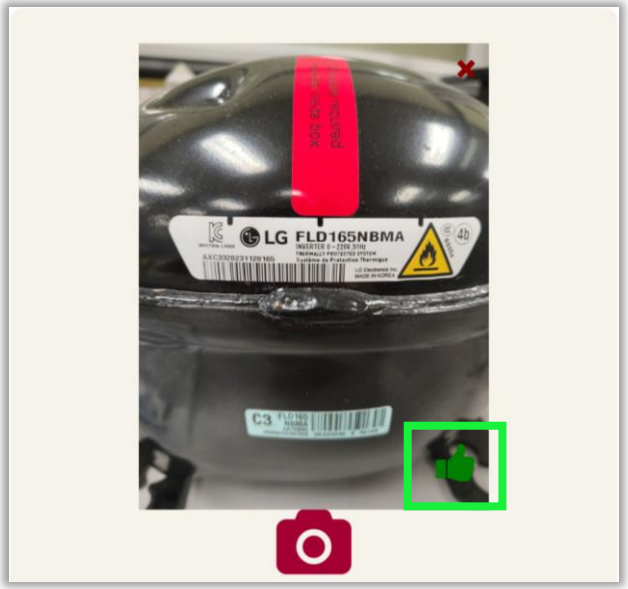
Do Not Try to use the same pictures for different Checklists.
(Reviewers watch for the same pictures being used over and over. (In below examples techs tried to use the same pictures for 4 or more different RNN’s)



Complaints About App Crashing / Losing Pictures

Techs sometimes complain that the App crashed and lost their pictures.

- **A change was made to the website around the beginning of August 2025 to try and eliminate this issue. As every picture is entered it is now saved to that checklist under the RNN as soon as each individual picture is taken. If for some reason the App closes mid checklist, all pictures up to that point are still saved. Reload that RNN# and your pictures will still be there. When you see this "Green Thumbs Up" in the bottom right corner that means your picture is locked in.**



What can you do to try and avoid the App shutting down?

- **We have tested numerous times to try and make the App fail mid checklist and have not been successful. But a few DMST's have reported lately that when MGSFS shuts down the Checklist crashes also.**

- **Recommendation: DMST's should have a tablet and cell phone. Use the device that has the least number of programs running. Also, if there are multiple web browsers open, close them and only run what is necessary to perform your work. We see screenshots from techs with 50-60 browsers open and it can cause issues.**

- **Use Chrome browser. When we test internally we are using Chrome and have no issues so far when using that browser.**