

Building The Finest Commercial Refrigeration – True, "The Best of the Cold Ones"



Good Refrigeration Practices

Good refrigeration practices will always start with good detective work to find out what caused the failure so we can eliminate the possibility of a repeat failure. Below is a step by step set of procedures we would recommend is followed when repairing a refrigeration system.

- Before opening the refrigeration system remember that the POE oil is very hygroscopic and absorbs moisture very quickly. You should not leave the system open to the atmosphere for more than 15 minutes. Any vacuum that exists before any repair should be broken with nitrogen to avoid moisture being pulled into the system.
- When accessing the system do not remove process tube ends. Use Temporary bolt on access valves for diagnosing and repair.
- When repair is complete valves need to be removed.
- For your manifold gauges, use as short as hose as possible. We recommend a maximum length of 12".
- The introduction to the refrigeration system of anything other than a flushing agent, nitrogen, refrigerant, or oil is prohibited.
- If you are changing a component keep the system closed up with plugs or caps to reduce moisture contamination.
- Recover the refrigerant from the system. Note R-290 can be vented in a well ventilated area with no source of ignition.
- Remove the faulty refrigeration component and filter drier by cutting them out with a tubing cutter.
- Take a look at the filter drier and the components that have been removed for signs of oil breakdown, foreign objects like desiccant from drier, metal pieces from valves, etc.
- Be sure and test the oil from the refrigeration system for contamination using the proper test kit for the type of oil.
- When replacing a compressor make sure to also remove all the old oil from the system.

- If the oil shows signs of contamination. Flush the system.
- While purging nitrogen through the system drill (approximately 1/8")(3.18 mm) hole in the bottom of the accumulator (IF EQUIPPED) so we do not leave contaminated oil in the system. After blowing this out with nitrogen, be sure to braze the hole closed.
- Always replace the drier with the exact OEM size.
- When brazing on R-290 system always purge nitrogen through the system.
- Place a nitrogen charge in the system to check for any leaks.
- Release the nitrogen down to 2 PSI.
- · Change vacuum pump oil regularly to ensure the deepest vacuum your pump is capable of.
- Start pulling a vacuum as soon as possible to help remove moisture.
- Using a micron gauge pull down to 500 microns.
- See if the system will hold this micron with the gauges closed and the pump switched off to test for leaks of moisture.
- Once the system is evacuated, weigh in the listed refrigerant charge located on the serial tag inside the cabinet. R-290 can be added as a liquid or vapor. Refrigerant 134a/404A charge as a liquid only. Refrigerant should be charged through the high side.
- Test run unit and check for proper operation.
- Remove access valves.

ANY NITROGEN ADDED TO THE SYSTEM SHOULD NOT EXCEED 200 PSI (13.8 BAR).

Please call True Technical Service with any questions regarding the above practices.

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