

Positive Oil Exchange (POE) Valve is Time-Saving and Efficient Tool

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The Positive Oil Exchange (POE) Valve provides a time-saving and efficient tool for the removal and replacement of compressor crankcase oil. Designed to perform the recommended five flush function in just minutes without absorbing moisture, the POE valve reduces maintenance time and labor costs.

This fully ported POE assembly consists of :

- Forged brass body
- 1/4" MPT inlet connector
- 1/4" flare connector
- 1/4" flare access connector with Schrader core
- Maximum working pressure of 500 PSI
- Maximum temperature rating of 300°F.

In addition to its ease of installation, the POE can be left in the system for future use. It has a connection port for a pressure gauge, which eliminates the need to use a testing manifold to check crankcase pressure.

Installation of the POE valve in a compressor crankcase system provides an efficient moisture and contaminant-free device for removing and charging oil. This method is six times faster than the conventional access port valve procedure.



CFC Conversion Procedure using the POE Valve

Service technicians may use the following procedure when converting refrigeration systems to use alternative refrigerants which require changing to synthetic oils.

1. Remove existing oil from the system. On parallel systems, the oil must be removed from the compressors and the oil system, or any other device that can trap oil. On conventional units without oil systems, the compressor is the main component to flush. Use the POE valve for this procedure. Be aware that some conventional systems may have devices like suction accumulators that can trap large quantities of oil.
2. Blow out all compressors or devices that have been drained to remove residual oil. Use dry nitrogen with a regulator to blow out system components, unless the customer specifies another blowing agent.
3. First oil change: After the existing oil has been removed, refill the system as required by the conversion specifications. This may be done by using the POE valve. Change out all driers at this time. Pull a vacuum on all isolated system components. Place the system back in operation. Monitor all refrigerant levels. Adjust oil levels as required using the POE valve.
4. Second oil change: After 24 hours of run time, the system is ready to be flushed again using the POE valve. Take an oil sample and follow the above procedure; complete with a drier change.
5. Third oil change: Follow the same procedures for the second oil change, including a drier change.
6. After a third 24-hour run time, the system is ready to be checked for mineral oil content. Take all samples using the POE valve; one for mineral oil content and one for moisture content. If the mineral test is good, then have the moisture content checked. If the moisture test is good, then the system is ready for the final oil change and refrigerant conversion. If either of the tests are not up to specifications, then proceed with another oil change as before.
7. Fourth or final oil change and refrigerant conversion: Recover all the refrigerant from the system as required. Using the POE valve, make a final oil change and a final drier change. Evacuate the system completely. Recharge the system with the new refrigerant as required, following the manufacturer's charging procedures.
8. Monitor refrigerant and oil levels as required and correct as needed. A follow-up oil test for both mineral oil and moisture should be done 30 days following the conversion.

Illustration:



Performs the recommended 5 oil flushes in minutes.
Designed to be left in system for future service.