

THEME RECEIVER DRYER

WHEN REPLACE THE RECEIVER DRYER?

BACKGROUND

The receiver dryer is a filtering unit located on the high-pressure side of the AC loop between the condenser and the expansion valve. The parts main role is to filter particles and debris flowing in the circuit as well as to absorb any moisture.

PROBLEM

The receiver dryer is crucial for optimal system operation and especially for the compressor vitality. Absorbing moisture in the AC system prevents inner corrosion and ensures a proper system/compressor lubrication. In addition, particles, debris, metal chips, and other materials flowing in the loop, gets filtered and kept away from the system components, preventing them from clogging (condenser, expansion valve, evaporator) or seizure (compressor).

If the receiver dryer is worn out, spoiled or not operating, it will eventually lead to circuit clogs, system abnormal pressures and lack of performance. This will seriously affect other system components, where especially the compressor is at risk.

Under normal running conditions, on a hand touch, both inlet and outlet lines of the dryer should feel warm and be more or less of the same temperature. Cold outlet line of the receiver dryer or any frost spots on it indicates the filter failure.

RECOMMENDED SOLUTION

The receiver dryer must be regularly replaced. It is recommended replace the receiver dryer every second year or whenever the circuit has been opened.

Always install new receiver dryer any time the compressor is replaced and always when a serious leakage has been noticed and repaired. During service procedures, such as flushing the system, the part must be bypassed and replaced after the procedure is completed. Follow user manuals and manufactures guidelines whenever applying additives such as UV dye agent, leak-stops, and/or flushing agents. Excessive volume or improper use of additives and/or oil will spoil the receiver dryer.

Avoid exposing new dryer to the ambient air by, for example, removing sealing caps or leaving the circuit open without seals.

WHAT CAN IMPACT THE RECEIVER DRYER FUNCTION?



Wear – Filtering and desiccant layers are normally worn out after a period of time. This will cause the receiver dryer to lose its ability to properly filter the refrigerant and absorb moisture.



System opening – If the system is opened during service procedures or the system is leaking, the extremely hygroscopic desiccant will extract moisture from the air, thus loss ability to remove any humidity from the system. Running the system empty due to leakages will also negatively impact the receiver dryer.



Excessive system pollution – Particles produced by chemical reactions caused by wrong use of additives (flushing, leak-stop agents), wrong oil mixtures, particles from compressor seizure, inner corrosion and/or carbonized oil caused by overheating, can quickly soil and clog the receiver dryer.



Too much oil in the system – If the recommended lubricant volume is exceeded, it reduces the dryer ability to filter the system properly as the desiccant and filter layers will overflow. Too much UV agent or flushing agent residues in the system will have the same effect on the receiver dryer.



Contamination of the in- and outlets will cause the receiver dryer to clog



Worn out desiccant and filtering layers inside the receiver dryer



Desiccant layer inside the receiver dryer is overflowing



Worn out insert bag dryer - desiccant soaking by too much UV agent added to the system

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