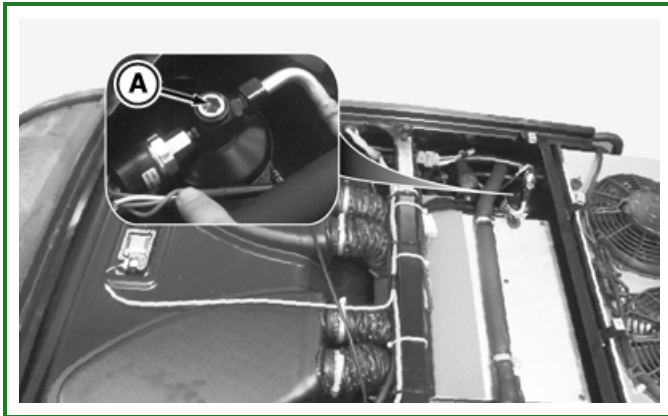


## Receiver-Drier



PY26986-UN: 5G VNF



APY05132-UN: 5GL Low Profile Cab

### LEGEND:

A - Receiver-Drier

The receiver-drier (A) is located in the roof near the condenser. The receiver-drier performs two functions. Firstly, it receives high-pressure refrigerant from the condenser and stores it until required by the evaporator.

Secondly, it absorbs moisture and acid that would have a detrimental effect on the systems ability to operate. Solid foreign bodies are separated out by a special filter element, whereas a desiccant, which fills the space between the filters, absorbs moisture and acid.

The sight glass on the receiver-drier enables the refrigerant to be observed when tests are or service work is being performed. The receiver-drier inlet is connected to the condenser, and its return line to the expansion valve.

Replace receiver-drier every time the air-conditioning system is repaired, as the moisture-absorbing material becomes less effective as time passes.

### IMPORTANT:

If a new receiver-drier has been stored with unplugged openings, it can no longer be used.

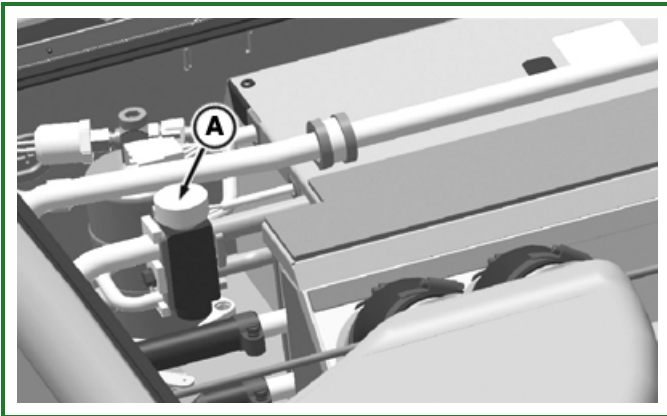
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## Expansion Valve



**PULX002847-UN: 5G VNF**



**APY05133-UN: 5GL Low Profile Cab**

### **LEGEND:**

A - Expansion valve

The expansion valve (A) is located in the evaporator/heater core housing in the cab roof. It is connected to the receiver-drier outlet and to the evaporator inlet. It has two additional connections, one from the evaporator return line and another to the compressor inlet.

The expansion valve is a diaphragm valve with a stainless steel thermal head. Its purpose is to control the through flow of refrigerant in relation to the return temperature from the evaporator.

If too much refrigerant flows through the evaporator, liquid refrigerant could reach the compressor via the return line, and damage the compressor.

Too much liquid refrigerant is one reason why the system not be performing well, as the refrigerant does not evaporate completely.

A variable throttle is located in the inlet to the expansion valve. This throttle is formed by valve ball and actuating pin. At this point the pressure of the liquid refrigerant is reduced considerably. This allows the refrigerant to expand and change into its gaseous state in the evaporator, thus bringing down the temperature.

Once the refrigerant has left the evaporator, it has to flow through the expansion valve once again. However, it does not do so through the throttle, but through a passage where the refrigerant temperature can be registered by the thermal head.

The thermal head is filled with gas, which expands and contracts as the temperature rises and falls. This process is employed to produce a movement at the diaphragm that is passed on to the throttle. This makes it possible to control the through flow of refrigerant in relation to its temperature.