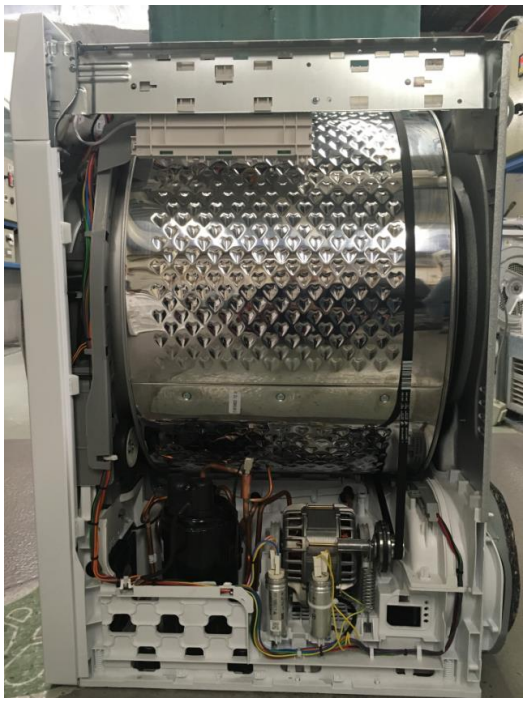
# SERVICE DOCUMENT

# HP Gas Leakage Control Steps

## MODEL: HEAT PUMP



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## 1. OBJECTIVE

To aim of this document is to decribe a test method to find out if the machine has a gas leakge or blockage inside the system when the user complains “not drying”.

## 2. METHOD

2.1. Firstly, below controls should be done (these will affect the drying performance)

- Installation of the dryer:
  - The dryer should be placed at least 1 cm away from the edges of other furniture.
  - The dryer should be operated in a well ventilated, dust-free environment.
  - The ventilation grills of the dryer should not be covered
  - The dryer can be operated at temperatures between +5°C and +35°C. If the operating conditions fall outside of this range, operation of the dryer will be adversely affected
- Maintenance and cleaning:
  - Is the door filter / are the door filters clean? (in some models, there are 2 nested filters)
  - Is the exchanger clean?
  - If the model has one-door filter, then also check the exchanger foam is clean.
- Usage:
  - Check that the load capacity is suitable for the program (in some programs, capacity is limited)
  - Check that the used program is suitable for the laundry type
  - Understand the user’s problem. Be sure that the clothes were not dried totaly. If the complaint is related with the homogenous drying, then the problem could be related with the customer expectation or the dryness level differences between the thin and thick part of the clothes.
  - Check if the small items are not dried with the large items such as duvet cover. It is recommended to dry large items separately to prevent small items from being rolled up inside the big items and remaining wet.

2.2. Check the below components:

- Check the resistance value of the NTC’s
- Check the capacitor value of the capacitor’s

2.3. Control of the heat pump unit

- Go into the service test mode by plugging the machine via wattmeter.
- Please refer to service manual for service test

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- During the compressor step of the service test, **please check the maximum power until the end of the step**
- At that moment, temperature of the evaporator will start to decrease. Check the temperature of the evaporator with your hand or by a thermometer to control that the temperature is starting to drop.
- If there is a gas leakage problem, the temperature of evaporator side will be same as ambient temperature.

  **! If the evaporator is cooling, then there is no any blockage inside the system.**
- If there is a gas leakage problem, the maximum power **during the compressor step of service test** will no be higher than 250 W.

  **! If the max power during the compressor step of service test is higher than 250W, then there is no any gas leakage inside the system.**
- Check the last error codes which can be seen at the service test. Please check the descriptions of the error codes in the service handbook.

2.4. Detailed inspection of the heat pump unit: If the machine doesn't pass the heat pump unit's controls, do below inspection to find the root cause (It is important providing the result of the following check with your feedback)

- Remove top plate, side walls, back plate, drum, exchanger cover and compressor NTC to reach the heat pump unit.
- Check the welding points of heat pump unit by using a gas detector which is sensitive with the gas type of the machine (you can check the type label of the machine to find out the gas type of the machine)

  **! If the machine has R290 gas, because the R290 gas is flammable gas, the safety precautions should be taken.**
  - **Ventilate the environment well**
  - **Work away from heat, sparks, open flame, and hot surfaces**
  - **Take precautions to prevent skin or eye contact with R290 gas.**
- Take out the heat pump unit (compressor + heat exchangers + pipes) from the chassis.



- Break the service pipe of the heat pump unit and observe whether there is a gas coming out of the pipe.

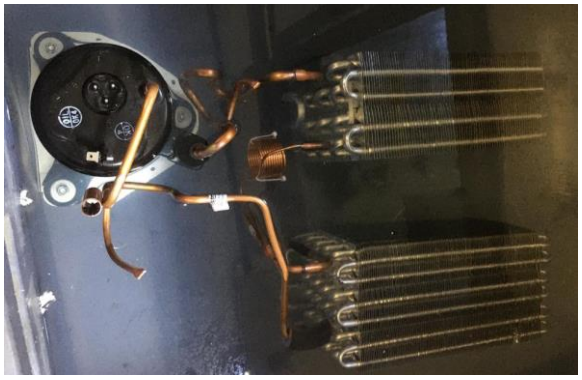


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**! If there is abundant quantity of gas inside it, the problem could be blocked system.**

**! If small amount of gas or no gas comes out of it, there is a gas leak in the system.**

- Apply pressurized nitrogen from the broken service pipe and immerse the system in a water pool.



- Check for any bubbles coming out while it is submerged in the water. Record a video during this step

**! If you observe bubbles, that is the leaking point.**



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