CLAIMS

1. A vacuum pump comprising:

an internal device located in a vacuum pump main body;

a controller for controlling the vacuum pump, wherein the controller executes:

controlling an operating state of the internal device;

collecting state information of the vacuum pump main body at a point in time at which the operating state of the internal device is switched; and

recording, in a non-volatile memory, the collected state information, wherein the internal device includes at least one of a heater and a cooling valve,

when the internal device is the heater,

the state information includes a heater temperature and a heater on/off state,

the time includes time at which the operating state of the heater is switched from an on state to an off state and time at which the operating state of the heater is switched from the off state to the on state,

when the internal device is the cooling valve,

the state information includes a cooling temperature and a cooling valve open/closed state,

the time includes time at which the operating state of the cooling valve is switched from an open state to a closed state and time at which the operating state of the cooling valve is switched from the closed state to the open

state.

2. The vacuum pump claim 1, wherein the controller executes (a) recording, in a storage region of a predetermined size in the non-volatile memory, the state information and (b) using the storage region as a ring buffer to record the state information.

3. The vacuum pump according to claim 1 or 2, wherein the controller executes collecting the state information of the vacuum pump main body at activation of the vacuum pump.

4. The vacuum pump according to any one of claims 1 to 3, wherein the controller executes monitoring, from activation of the vacuum pump, whether the operating state of the internal device is switched and, without periodically collecting the state information of the vacuum pump main body, collecting the state information of the vacuum pump main body at a point in time at which the operating state of the internal device is switched.

5. A controller for controlling an internal device located in a vacuum pump main body, wherein
the controller executes:

controlling an operating state of the internal device;

collecting state information of the vacuum pump main body

at a point in time at which the operating state of the internal device is switched; and

recording, in a non-volatile memory, the collected state information,

wherein the internal device includes at least one of a heater and a cooling valve,

when the internal device is the heater,

the state information includes a heater temperature and a heater on/off state,

the time includes time at which the operating state of the heater is switched from an on state to an off state and time at which the operating state of the heater is switched from the off state to the on state,

when the internal device is the cooling valve,

the state information includes a cooling temperature and a cooling valve open/closed state,

the time includes time at which the operating state of the cooling valve is switched from an open state to a closed state and time at which the operating state of the cooling valve is switched from the closed state to the open state.