Priorclave Tactrol Controller Warning Lights and Fault Codes

Warning Lights

The control panel has a series of 'hidden until active' warning indicators that appear in the black bar beneath the Temperature and Time displays on the control panel.

(Some of these indicators will appear in conjunction with a fault code in the temperature display)

SERVICE 500 cycles, or six months have passed since the autoclave was last serviced. The engineer will cancel the message when the autoclave is serviced. This indicator does **not** signify a machine fault, nor does it affect the Autoclave function.

WATER Indicated along with a Low Water fault code **F004**

O/HEAT Indicates a vessel Over-heat fault along with fault code **F003**

FAULT Indicates a function fault the fault code will be shown in the Red Temperature Display Window.

LOCK This warning will light when the thermal lock key-switch is in the override position.

LOAD Indicates a Load Sense Probe fault along with **F001**

Fault Codes are displayed in the Red Temperature Display Window on the control panel.

Fault Codes

As options are developed new fault codes are added so not all of these codes are applicable dependant on the version of the Tactrol System and the options installed on the autoclave. Fault codes F000 to F012 are common to all versions.

If two or more faults occur at the same time, the one with the highest priority is displayed. (**F000** is the highest priority and **F019** is the lowest.) If a higher priority fault is cleared it will be replaced by the next active fault, unless this too is cleared by the same action.

Note: Some of these fault codes may be cleared as described at the end of this list of codes. If the fault code will not clear, or continues to re-appear then the fault cannot be corrected and you should contact Priorclave Service or your local Priorclave approved service agent for expert assistance.

Note:

Depending on the stage of the cycle when a fault occurs the contents may <u>not</u> have been sterilised. Please check with printer or log records, if available, that the sterilising stage of the cycle has been completed.

If no record is available or if the sterilisation stage has not been completed then the autoclave contents <u>must be considered non-sterile</u> and <u>must be autoclaved again</u>.

Priorclave Tactrol Controller Fault Codes and Warning Lights - from September 2018

Code	Fault	Detail
F000	Measuring system error*	If your autoclave is fitted with the optional self-validation system, fault code F000 highlights that the Tactrol Program software has recognised a temperature issue. Usually this would mean that a critical error has developed in the temperature measurement system, however, as the detection system is extremely sensitive it is possible that it may be triggered by fluctuations in the electrical power supply. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle may not have been completed (see above)**
F001	Load sense probe failure*	This warning is activated in the event of the failure of the load sensing thermocouple. If the autoclave is fitted with load sensed process timing, this should be deselected to enable the autoclave to run without this feature. The thermocouple should be replaced as soon as possible. Great care should be taken to ensure that loads which would ordinarily be autoclaved with load sensed process timing are adequately sterilized.
Fn02	Temperature Sensor failure	In the display n is a number between 1 and 8. This number identifies the sensor that has failed as follows: • F102 Control Sensor Fault • F202 Display Sensor Fault • F302 Load Sense Sensor Fault* • F402 Load Simulator Sensor Fault • F502 Jacket Sensor Fault* • F702 Heater-Over Temp 1 Sensor Fault* • F802 Heater-Over Temp 2 Sensor Fault* **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle may not have been completed.**
F003	Overheat	Indicates that the autoclave temperature sensors have detected a temperature in excess of 142°C such as a failure of the temperature control system or a sensor becoming open circuit. The next attempt to run the autoclave should be closely observed and as the fault(s) are cancelled all the code(s) displayed should be noted. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle may not have been completed.**

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Code	Fault	Detail
F004	Water level alarm* (Dependant on the autoclave settings this may automatically reset when the door is opened and the water level is topped up)	On models fitted with water level probes this shows that the water level has fallen below minimum level and must be topped up before the autoclave can be run. The low water condition may have caused a running cycle to stop, and the load may need to be autoclaved again. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle may not have been completed.**
F005	Temperature fallen below set level during process dwell	The chamber temperature falling below the set temperature by more than 3°C during the process dwell time. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle will not have been completed.**
F006	Power failure or outage	Power to the autoclave being interrupted when a cycle is in the heating or process dwell stage of the cycle. If the failure occurs after sterilization is complete then this fault is not triggered. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle may not have been completed.**
F007	Pre-cycle Vacuum stage timeout. *	The autoclave has not achieved the pre-set level of vacuum during the Pre-cycle vacuum stage during the pre-set timeout period. This usually indicates an issue with the vacuum pump, a blocked pipe, leaks in the system or heating issues. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle will not have been completed.**
F008	Heating stage timeout.	The autoclave has not reached process temperature within the Pre-set time. This usually indicates heater or control issues or overfilling of the autoclave with water. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle will not have been completed.**
F009	Failed to reach post cycle vacuum set point during permitted time*	Indicates that the autoclave has not achieved a low enough level of vacuum during the post cycle vacuum stage (Vacuum Cooling or Drying Cycle). This usually indicates an issue with the vacuum pump, a blocked pipe or leaks in the system. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. Although the **sterilisation stage of the cycle will have been completed** the drying or vacuum cooling process will not have been.

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Code	Fault	Detail
F010	Excess air detected *	Where air detection is activated this alarm indicates the presence of excess air within the autoclave and therefore an incorrect correlation between pressure and temperature which could affect sterilisation. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle may not have been completed.**
F011	Printer Fault Printer Timeout / Malfunction. *	The control system has not received confirmation from the printer within its pre-set timeout. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle may not have been completed.**
F012	Door Fault	Indicates that a door microswitch has opened during a cycle. This can indicate an issue with the switch adjustment as the autoclave components heat up or switch failure. This is cleared in the usual way by means of the setting lock key-switch. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle may not have been completed.**
F013	Jacket Timeout*	Where a steam jacket is fitted this indicates that it has not reached the required temperature within the pre-set time. This would indicate a problem with steam supply, inlet or drain valve operation. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle will not have been completed.**
F014	Jacket over temperature*	Where a steam jacket is fitted this indicates that the temperature has exceeded the pre-set alarm temperature. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle may not have been completed.**
F015	Jacket under temperature*	Where a steam jacket is fitted this indicates that the temperature has fallen below the pre-set operating temperature band. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle may not have been completed.**
F016	Water Fill Timeout*	The upper level water probe level has not been reached within the allowed time for filling and the filling operation has been stopped. This function prevents continuous unsupervised operation of the water fill, which could lead to flooding.
F017	FreeSteam*	Feature no longer in use.

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F018	Thermal Low Water Detection*	On autoclaves without internal water level sensors where low water is detected by sensors attached to one or two of the heaters, this is triggered by one of these sensors detecting an excessive temperature, indicating a probable low water level. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle may not have been completed.**
F019	Internal Steam Generator overheat*	Where an internal steam generator is fitted this indicates an over temperature condition within the steam generator. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle may not have been completed.**
F020	External digital fault.*	If the autoclave has been connected to an external monitoring device this alarm signals an alarm condition from that device. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle may not have been completed.**
F021	Over Pressure fault*	Where the autoclave is fitted with a pressure transducer (vacuum models) this alarm is triggered by an over-pressure reading on the transducer. This alarm function is programmable and is normally not activated. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle may not have been completed.**
F022	Condenser Water Fault*	Where the autoclave is fitted with a drain condenser this fault is triggered by detection of no water or insufficient water supply to the condenser. This acts to protect heat sensitive external drain pipework from exposure to high temperature autoclave exhaust. Activation of this fault would indicate a problem with water supply, water pressure or water inlet valve operation. **Note:** This fault will stop the cycle and the autoclave will remain locked until it reaches its safe door open temperature. **The sterilisation stage of the cycle may not have been completed.**
F023	Unloading End Door not closed* *(Double door models V13.1 and above only)*	This fault is triggered when attempting to start a double door / pass-through autoclave at the "loading" end when the door at the unloading end is not properly closed.

* Optional Feature – when the relevant option is not fitted or selected then this fault code should not appear.

Note: If unexpected fault codes occur please contact Priorclave Service or your local Priorclave approved service agent as this would indicate that the configuration is incorrect or the main board has been corrupted.

Code	Fault	Detail

CANCELING AND CLEARING FAULT MESSAGES

First correct the source of the original fault. The F004 low water fault will reset itself after refilling the autoclave with water but for most other fault messages the system must be re-set as follows:

Single Program machines:

Locate the manual reset button to the rear of the machine / control panel. (shown on the layout diagram in the operation manual)

Press and hold the button for 3-5 seconds. The Autoclave will re-boot and re-set any error messages displayed.

Multi-program machines with a setting lock:

Insert the SETTING key into the Autoclave. Turn the key to position 3, back to position 1, then back to position 3.

The fault messages are cancelled by, then turning the setting lock key switch to the enable position (position 3). If a key switch is not fitted they are cancelled by pressing the reset button.