820 Not Ready Messages

This section lists Not Ready messages according to the type of condition the GC has detected. The GC does not provide a popup message when a component is not ready; instead, the not ready LED blinks and the run simply does not begin. The messages discussed in this section correspond to those you see when you press the [Status] key. Not Ready messages fall into these categories:

- Oven temperature not ready
- Temperature zones not ready
- Pressure or flow not ready
- Detector not ready
- GC in diagnostic mode
- Inlet purging
- Valves not ready
- External devices not ready
- Power failure

Oven temperature not ready

Status message: Oven temp

The GC will becomes ready to begin a run when the oven temperature remains within 1°C of the setpoint for the equilibration time. The oven must be turned on.

❒ The instrument is not ready until the oven is turned on and reaches its setpoint. If the oven is unable to reach the setpoint, the GC will remain not ready indefinitely unless the oven temperature is out of the oven range, which will cause a shutdown.

Temperature zone not ready

The GC has a number of heated zones in addition to the oven. These are inlets, detectors and auxiliary, or “aux,” zones. The GC is ready to start a run when all the zones are within 1°C of the setpoint *and* have maintained the setpoint temperature for 30 seconds. A zone that is turned off is considered ready.

If a temperature zone is unable to reach the setpoint, the GC will remain not ready indefinitely. The instrument will not shut down unless a temperature is out of the range for the zone.

Temperature Zone Not Ready status messages:

- Front inlet temp
- Back inlet temp
- Front det temp
- Back det temp
- Aux 1 temp
- Aux 2 temp

Pressure and/or flow not ready

A run will not start until all pressurized areas have reached their setpoints and maintained them for 6 seconds. The acceptable pressure range of a pressurized area will be between 0.05 and 0.5 psi, depending on its type of sensor.

Similarly, the GC will not be ready to begin a run until flows are within 1 mL/min of the setpoint range and remain in the range for 6 seconds. Pressure zones that are turned off are considered ready.

If the zone does not become ready within a specified time, the GC goes into the shutdown mode. See Section 840, Shutdowns, for more information.

Table 820-1 Pressure and/or Flow Not Ready Messages

Status message	Comments
Front/Back inlet pressure	Pressure not at setpoint
Front/Back inlet flow	Flow not at setpoint
Front/Back det air flow	For FID, NPD or FPD—Gas supply turned off (manual) or not at setpoint (EPC)
Front/Back det ref flow	For TCD—Gas supply turned off (manual) or not at setpoint (EPC)
Front/Back det anode gas	For ECD or µ-ECD—Gas supply turned off (manual) or not at setpoint (EPC)
F/B det makeup gas	Gas supply turned off
Front/Back det H_2 flow	Gas supply turned off
Aux 3/4/5 pressure	Pressure not at setpoint
Gas saver	One of the inlets is in gas saver mode. Press Prep Run to clear.

Detector not ready

Some not ready conditions are specific to detectors. These are:

- The detector temperature is below the minimum temperature for igniting.
- The detector is igniting.
- The detector offset is adjusting.
- The detector is equilibrating.
- The detector's pneumatics failed.

Front det waiting
Back det waiting

Status message: Front det waiting or Back det waiting

To prevent condensation, the FID and FPD temperatures must be at least 150°C before they can ignite.The NPD must be at least 150°C before the bead voltage is applied. The TCD must be at 100°C to turn on the filament, because at lower temperatures the filament sags. If the temperatures are below the minimum, the GC will not be ready.

Usually, the detector will reach the setpoint temperature and become ready. However, if the detector is unable to reach a temperature high enough for ignition or turn on, the instrument will remain not ready indefinitely.

❒ Make sure that the detector temperature setpoint is high enough. Raise it if it is too low.

❒ If the detector temperature setpoint is high enough but the detector is unable to reach it, the detector heater may have failed or the sensor or mainboard may be bad.

Front det igniting
Back det igniting

Status message: Front det igniting or Back det igniting

The GC is not ready while the FID or FPD is going through the flame ignition sequence. The messages will clear if the detector is turned off.

If the FID is unable to ignite, there may be a problem, and the detector may eventually shutdown.

Front det adjusting
Back det adjusting

Status message: Front det adjusting or Back det adjusting

The GC will be not ready because the NPD or ECD is adjusting its baseline to reach the offset (NPD) or output (ECD) setpoint. The ECD's adjustment is usually complete in 30 seconds. The NPD may take longer.

It is possible that the NPD will be unable to reach the setpoint if there is contamination in the system (for example, if the gas is not pure enough or the bead is damp) or if the bead is worn out. If the NPD cannot reach the setpoint, you will not receive an error message; the GC will simply not become ready.

Turn the detector off to clear the message.

Front det equib time
Back det equib time

Status message: Front det equib time or Back det equib time

The NPD has completed adjusting the offset and is now waiting for the value to remain at the setpoint for the equilibration time. Equilibration time can be changed from the Detector control menu.

The NPD may not be able to equilibrate if the system is contaminated or the bead is worn out. In addition, changes in the room temperature could prevent equilibration. The GC will become ready if the detector is turned off.

Front detector shutdown
Back detector shutdown

Status message: Front det shutdown or Back det shutdown

The detectors will shut down if they experience a pneumatics failure or if the TCD experiences a filament failure.

The GC will not be ready until the detector with the failure is turned off. Turning off the FID or FPD turns off the igniter, hydrogen flow, and air flow. Turning off the NPD turns off bead voltage, hydrogen flow, and air flow. Turning off the TCD turns off filament voltage and reference flow.

Valve not ready

Some valve conditions can put the GC in a not ready state.

Multiposition valve

Status message: Multiposition valve

The multiposition valve is causing the GC to be in a not ready state for one of the following reasons:

- The multiposition valve is not at the setpoint position. The instrument will be not ready until the valve reaches the setpoint.
- The BCD cable is missing or not plugged into the receptacle. If the cable is missing, the valve will never become ready.
- The BCD setpoint is incorrect for the valve's BCD output polarity. The valve will most likely shutdown with Illegal Position or Not Switching shutdown errors.
- If the valve is plugged or the sample is viscous, the switching time may not allow adequate time for the valve to switch. Increase the switching time.

24 volt valve drive

Status message: 24 V pneu valve drive

This Not Ready state indicates that the +24 V supply to the pneumatics valves is actually less than +16.5 V. All the valves are disabled to prevent improper operation. When the full voltage is restored, the GC will become ready.

This Not Ready state could indicate a hardware problem.

Gas sampling valve n

Status message: Gas sampling valve n

The GC is not ready because the inject time or load time has not elapsed.

- The GC will become ready as soon as the specified load or inject time has passed.

Miscellaneous messages

GC in diagnostics mode

Status message: Diagnostics mode

The GC is not ready when it is in diagnostics mode. The instrument will be in diagnostics mode whenever a Diagnostics control table has been accessed through the [Options] key.

You must exit the Diagnostics section for the GC to become ready.

Inlet purging

Status message: Front inlet purging or Back inlet purging

This condition applies only if you have a split/splitless inlet. The message appears if you try to start a run while the inlet purge valve is still in the split mode.

The inlet will remain not ready and continue purging until you press the Prep Run key. Pressing Prep Run closes the valve (it also turns off the gas saver mode and increases pressure for a pressure pulse, if selected).

Host system not ready

Status message: Host system

The GC will be in a Not Ready state if the integrator, ChemStation, or another controlling device is not ready to begin a run.

External device not ready

Status message: External device

An instrument that is part of the start/stop bus is not ready. For example, the automatic liquid sampler is not ready to begin injecting.

❒ The GC becomes ready when the other instruments on the bus are ready.

Power failure

Status message: Power on in progress

This message appears when power is:

- Restored after the GC experiences a power failure during a run or while the oven was turned on while the GC was not performing a run.
- Turned on again after a user turned it off.

The GC will heat all the other thermal zones and then heat the oven. When the oven temperature stays at the setpoint for the equilibration time, the GC will become ready.

If the power failure occurred during a run, upon power restoration the GC will heat all the thermal zones and oven and then automatically perform a blank run. When the blank run is completed, the GC will become ready.