

CentriMag Primary Console Alarm and Alert Guide

No.	Alarm/Alert	Text Message	System Status & Operator Response
1	Alarm	POWER ON TEST FAIL	<p>The system will not start.</p> <p>An audible alarm will sound, which cannot be muted.</p> <p>Switch the console OFF and ON again. If the alarm re-appears, switch to the backup system, record the alarm message and contact your Thoratec representative.</p>
2	Alarm	SYSTEM FAULT (Run-Time System Failure)	<p>The blood pump will stop.</p> <p>An audible alarm will sound, which cannot be muted.</p> <p>Clamp the return tubing and switch to the backup system. Record the alarm message and contact your Thoratec representative.</p>
3	Alarm	BATTERY BELOW MINIMUM	<p>The blood pump will stop.</p> <p>An audible alarm will sound, which can be muted for 60 seconds.</p> <p>Clamp the return tubing and switch to the backup system. Resume support.</p> <p>Recharge the Primary Console.</p>
4	Alarm	MOTOR STOPPED	<p>The blood pump will stop.</p> <p>Audible alarm can be muted for 60 seconds.</p> <p>Clamp the return tubing and switch to the backup system. Resume support. Record the alarm message and contact your Thoratec representative.</p>
5	Alarm	MOTOR DISCONNECTED	<p>The blood pump will stop. Audible alarm can be muted for 60 seconds.</p> <p><u>During setup of the system:</u> Press the alarm acknowledge button and check that the motor connector is fully inserted into the back of the console. If problem persists switch the console OFF and ON again. If the alarm re-appears, switch to the backup system</p> <p><u>During support:</u> Press the alarm acknowledge button and check that the connector of the motor is fully inserted into the back of the console. If resolved, resume support. If not resolved and the visual alarm message remains, clamp the return tubing and switch to the backup system. Resume support. Record the alarm message and contact your Thoratec representative.</p>
6	Alarm	PUMP NOT INSERTED	<p>System will not start.</p> <p>Audible alarm can be muted for 60 seconds.</p> <p>Press the alarm acknowledge button. Insert or re-insert the pump and secure it with the locking screw.</p> <p>If the alarm repeats, switch to backup system.</p>
7	Alarm	MOTOR ALARM	<p>An audible alarm will sound which cannot be muted and the system will continue to operate.</p> <p>Press the alarm acknowledge button, if the visual alarm message remains, clamp the return tubing, stop the pump and switch to the backup system. Resume support. Record the alarm message and contact your Thoratec representative.</p>

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CentriMag Primary Console Alarm and Alert Guide (Continued)

No.	Alarm/Alert	Text Message	System Status & Operator Response
1	Alert	SET PUMP SPEED NOT REACHED	Check the pump flow: If pump flow is satisfactory; reduce set speed while insuring that flow is maintained. Press the alarm acknowledge button. If the alert repeats, clamp the return tubing, stop the pump and switch to the backup system. Resume support. Record the alert message and contact your Thoratec representative. If the pump flow is <u>not</u> satisfactory, clamp the return tubing and switch to the backup system. Resume support. Record the alert message and contact Thoratec representative.
2	Alert	FLOW PROBE DISCONNECTED	Check the flow probed connection on back of console. If necessary, reconnect the flow probe connector to the back of the console. Press the alarm acknowledge button. Switch to the back-up flow probe, if the alert message repeats.
3	Alert	SELF TEST FAIL (Run-Time Diagnostics)	Press the alarm acknowledge button, if the message does not disappear, clamp the return tubing, stop the pump and switch to the backup system. Resume support. Record the alarm message and contact your local Thoratec representative.
4	Alert	FLOW SIGNAL FAIL (Flow rate sensor error)	Manually disconnect, reposition and reconnect the flow probe transducer to the tubing. Press the alarm acknowledge button. Switch to the back-up flow probe, if the alert message repeats.
5	Alert	FLOW BELOW MINIMUM (Low Flow)	Check for physiologic cause or circuit obstruction. Check minimum flow set point. Do not increase RPM without confirming adequate blood volume is available. Common cause of this alert is inadequate blood volume at the drainage cannula site for the desired pump flow.
6	Alert	FLOW ABOVE MAXIMUM	Reduce Pump speed and check for cause.
7	Alert	MOTOR OVER TEMP	Switch to backup system according to the procedure described in Section. Verify that the backup motor stands free and is not covered (e.g. blankets).
8	Alert	BATTERY CHARGE FAIL	Press the alarm acknowledge button. If the alert message repeats, switch to backup system.
9	Alert	BATTERY MAINTENANCE REQUIRED	Do not use the Console. Perform battery maintenance.
10	Alert	LOW BATTERY	Plug the console into AC power outlet to charge battery. If no AC outlet is available, switch to back-up system. Resume support.
11	Alert	ON BATTERY	Verify that the user wants the console to be on battery. If so, carefully monitor the status of the battery charge indicator, while using the system on battery. Re-connect to AC-outlet, as soon as possible.

CentriMag Procedure for Emergency Switch to Back-Up

