

4 DIAGNOSTICS AND REPAIRS

4.1 Introduction

The C3i centrifuge has some built-in functional tests which facilitate checks such as for the tachometer generator and lid lock solenoid.

In case of anomaly the display shows error codes combined with an audible alarm.

4.2 Messages

At power on:

- The "TIME" display shows the CENTRIFUGE MODEL (C3i)
- The "SPEED" display lights all the segments (88888).
- The "TEMPERATURE" display shows the PROGRAM -EPROM REVISION (A, B, C....).

4.3 Error codes and messages

When a problem is detected an error code (combined with audible alarm) is displayed. According to the severity of the anomaly the run can be aborted, in this case the centrifuge stops automatically. For the details refer to the following table:

CODES	REASON	COMMENTS/EXIT
E 01	Speed = zero During rotation the speed has been suddenly measured zero	The information from tachometer is considered unreliable. The cycle stops without braking.
E 02	Speed error. Values of successive speed measurements are too different	The information from tachometer is considered unreliable. The cycle stops without braking.
E 03	--	--
E 04	Rotor is spinning. At power on the motor has been found in rotation.	The lid can be open when rotor speed is zero. Press any key to clean the message.
E 05	--	--
E 06	Lid unlocked during a run	Run stops. Operations are not allowed until the motor speed is zero. Press any key to clear the message
E 07	--	--
E 08	Motor over-temperature (above 130°C) Solenoid error (reed relay)	The run is interrupted. It is not possible to restart until the error condition is removed. Note: wait for motor cooling down.
LID	Lid unlocked. At centrifugation start the lid has been found open or unlocked	It is impossible to START. Close the lid or check if the lid is properly locked, the message will be automatically cleared
IMBAL	Imbalance detected	Run stops. Operations are not allowed until the motor is stopped. Press any key to clear the message. Check the rotor load.
---	Programmed speed is wrong The programmed speed is over the maximum speed allowed for the rotor in use	Speed digits are blinking + audible alarm Speed limit are at: 4.100 rpm or 10.000 rpm or 14600 rpm