



Fresenius Medical Care

SERVICE BULLETIN

Equipment: 2008K Hemodialysis Machines
Bulletin: 04-FRK-004 Rev A
Subject: 2008K Blood Pump Alarm & Error Codes

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1.0 PURPOSE

To provide all Field Service and Technical Support personnel with descriptions of Blood Pump Alarm and Error Codes for the 2008K Arterial Blood Pumps.

2.0 DESCRIPTION

ALARM CODES

Below you will find the descriptions of Alarm Codes. Alarm Codes can be cleared by pressing the RESET keypad. If the Alarm Code returns, use the table below to resolve the alarm condition.

Alarm Code	Cause	Solution
A.11	Pump is not reaching speed.	Check or replace in the following order: <ul style="list-style-type: none">• Rotor Hall Sensor• LP955• LP956
A.13	Pump rotor is turning in the wrong direction.	Check or replace in the following order: <ul style="list-style-type: none">• Rotor Hall Sensor• LP955• LP956
A.16	Key stuck or held in too long.	Check or replace in the following order: <ul style="list-style-type: none">• User holding key too long• BP Keypad• LP955• LP956
A.20	Set speed-read back analog voltage at X348/14 is out of limits (set speed).	Check or replace LP955.
A.21	Actual speed-read back analog voltage at X348/10 is out of limits (actual speed).	Check or replace LP955.

Alarm Code (cont.)	Cause	Solution
A.22	Arterial pressure-read back analog voltage at X348/7 is out of limits.	Check or replace LP955.
A.24	Optical sensor frequency (tach) not in range.	Check or replace in the following order: <ul style="list-style-type: none"> • Motor/Tachometer Assy. • LP955 • LP956
A.25	Pressure increases too quickly when the Level Up key is pressed.	Check or replace in the following order: <ul style="list-style-type: none"> • Vent Valve • LP955 • LP956
A.26	Pressure was adjusted too much in calibration mode.	Check or replace in the following order: <ul style="list-style-type: none"> • Pre/Post Pump set wrong • LP955
A.27	Timeout when receiving Intel-Hex-line or overflowed receive buffer.	Check or replace LP955.
A.28	Error in received Intel-Hex-line.	Check or replace LP955.
A.29	Pump rotor turning when it should not be (first revolution).	Check or replace in the following order: <ul style="list-style-type: none"> • Rotor Hall Sensor • LP955 • LP956

ERROR CODES

Below you will find the descriptions of Error Codes. Error Codes can only be cleared by powering the machine off. Use the table below to resolve the error condition.

Error Code	Cause	Solution
E.01	EPROM CRC error.	Check or replace LP955.
E.02	Flash ROM CRC error.	Check or replace LP955.
E.03	RAM check error.	Check or replace LP955.
E.04	Reference Voltage error.	Check or replace LP955.
E.05	Serial EEPROM error.	Check or replace LP955.
E.06	Watchdog timeout.	Check or replace LP955.
E.07	+ 12 volts is outside the allowable range of 10.8 to 13.2 volts.	Check or replace in the following order: <ul style="list-style-type: none"> • Machine voltage (+12V) • Ribbon cable from machine • LP955

Error Code (cont.)	Cause	Solution
E.08	+ 24 volts is outside the allowable range of 22.8 to 28.0 volts.	Check or replace in the following order: <ul style="list-style-type: none"> • Machine voltage (+24V) • Ribbon cable from machine • LP955
E.09	- 12 volts is outside the allowable range of -9.6 to -13.2 volts.	Check or replace LP955.
E.10	+ 5 volts is outside the allowable range of 4.75 to 5.25 volts.	Check or replace LP955.
E.14	50 ms time period exceeded.	Check or replace LP955.
E.15	Software task was not completed correctly.	Check or replace LP955.
E.23	Pump rotor turning when it should not be (second revolution).	Check or replace in the following order: <ul style="list-style-type: none"> • Rotor Hall Sensor • LP955 • LP956
E.97	Error copying data into Flash ROM.	Check or replace LP955.
E.98	Error erasing Flash ROM.	Check or replace LP955.
E.99	Transmit error during Flash update.	Check or replace LP955.

RED LED

The large red LED is next to the blood pump display. It will light if the door is open longer than the preset time of 15 or 30 seconds. This is set using dip-switch 4 on the LP955 board. The default setting is 30 seconds.

LED	Cause	Solution
RED LED LIT	Pump door is open longer than 30 seconds.	Check or replace in the following order: <ul style="list-style-type: none"> • Door Hall Sensor • LP955 • LP956

Note: Additional Blood Pump Dip-Switch settings can be found in the Arterial Pressure Calibration section of the 2008K Calibration Procedures booklet (P/N 507296).

If there are any questions regarding this bulletin, contact Fresenius Technical Support at 800-227-2572 x7003.