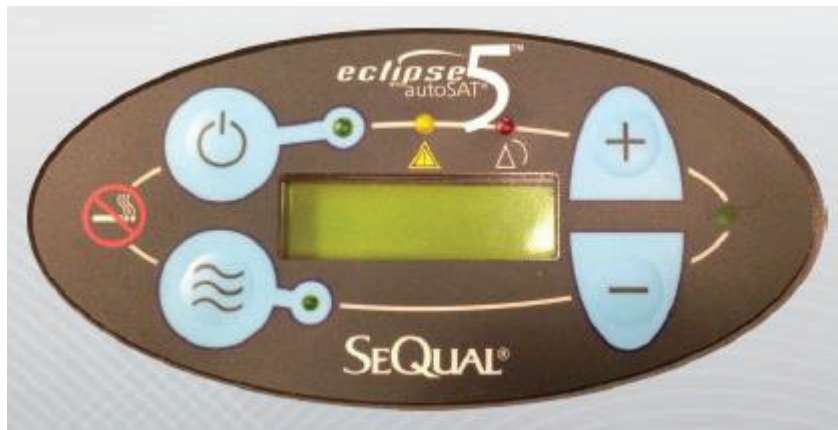# SERVICE BULLETIN

PN: 21220048

DATE: 07/30/2018

MODEL: Eclipse 5 Oxygen Concentrators

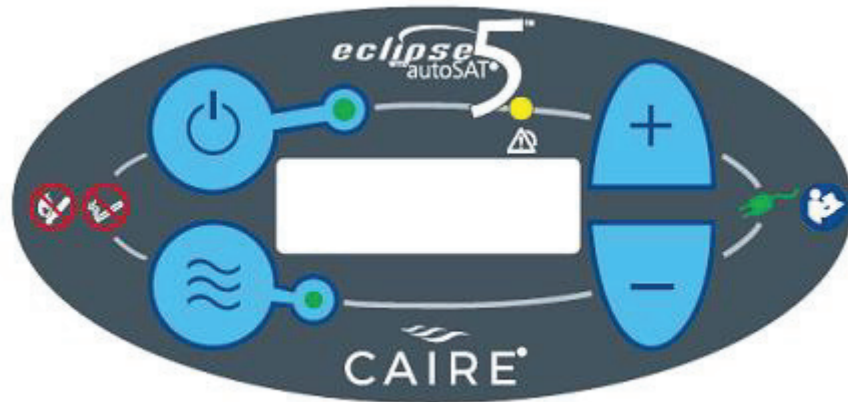**ISSUE:** IEC 80601-2-69 Oxygen Concentrator Particular Standard Compliance

NOTES: To ensure Eclipse devices are compliant with the IEC 80601-2-69 (including IEC 60601-1 edition 3.1 and EMC IEC 60601-1-2 4th edition), coming in 2018 the Eclipse 5 will no longer have a red alarm indication. This change will be accompanied by a revised touch panel, new circuit board part number, and an updated alarm code troubleshooting tables.

The Eclipse 5, including the AC power supply, will be IEC 60529 IP22 compliant rather than IPX1. The AC power supply will be changed to a two pronged cord type, Type II power supply. IEC 60601-1 applied part classification for the device changes from Type B to Type BF. The older Eclipse 5 units can use the new power supply. In order for the new Eclipse 5 to be used with the old power supply, the CSA labeling would need be removed from the unit. The applied part would then change from type BF to type B.

Previous Eclipse 5 Touch Panel

Updated Eclipse 5 Touch Panel

New Alarm Specification Changes

With the new display panel, there will no longer be a red indication for an alarm code. The new panel will display a yellow LED, audible alarm, and an associated fault code.

This is an example of the previous alarm tables (prior to IEC 60601-1 edition 3.1 and EMC IEC 60601-1-2 4th edition compliance) with the Red Light Indicator.

CONDITION	ALARM CODE	ALARM DISPLAY	GREEN INDICATOR	YELLOW INDICATOR	RED INDICATOR	AUDIBLE ALARM
"Warming Up. Please Wait."	4	O2 < 70%	ON	ON	ON	OFF
"Warming Up. Please Wait."	8	O2 < 85%	ON	ON	OFF	OFF
"3.0"(or flow setting)	0	NO ALARM	ON	OFF	OFF	OFF
"Low Power Cartridge"	10	LOW BAT	ON	Flashing	OFF	2 Beeps
"Warm Power Cartridge"	2	WARM BAT	ON	Flashing	OFF	1 Beep
"Low 9V Battery"	-	-	OFF	OFF	OFF	3 Beeps on POST
"O2 Concentration < 85%"	8	O2 < 85%	OFF	Flashing	OFF	OFF
"O2 Concentration < 70%"	4	O2 < 70%	OFF	OFF	Flashing	3 Beeps
"Flow Rate Error / Blocked Flow"	20	FLOWRATE	OFF	Flashing	OFF	1 Beep
"Cannot Charge Power Cartridge"	1	CHARGER	N/A	ON	OFF	OFF
"One Wire Communication Loss"	100	ONEWIRE	N/A	Flashing	OFF	1 Beep

"No Inspiration Detected" (in Pulse Mode only)	200	P <--> C	ON	OFF	OFF	OFF
"Loss of External Power" (without charged Power Cartridge installed)	40	******** (flashing)	OFF	OFF	Flashing	ON for 5 min
"System Fault"	80	FAIL XX	OFF	OFF	ON	ON 10 seconds then silent

Updated Alarm tables (IEC 60601-1 edition 3.1 and EMC IEC 60601-1-2 4th edition compliant model).

Alarm	LCD Text	Yellow	Audio	Code
All OK, warm-up done	NO ALARM	OFF	OFF	0
No breath for 15 seconds	P <--> C	ON	1 beep 200ms, repeat after 20 seconds	200
Warm-up period (0-120 seconds after power on):	O2 < 85%	ON	OFF	8
One wire communication loss	ONE WIRE	ON	1 beep 200ms, repeat after 20 seconds	100
Cannot Charge Battery	CHARGER	ON	1 beep 200ms, repeat after 20 seconds	1
%O_2 < 85%	O2 < 85%	ON	1 beep 200ms, repeat after 20 seconds	8
Flow rate error	FLOWRATE	ON	1 beep 200ms, repeat after 20 seconds	20
Warm battery	WARM BAT	ON	1 beep 200ms, repeat after 20 seconds	2
Low battery	LOW BAT	ON	1 beep 200ms, repeat after 20 seconds	10
Loss of power (No Battery, no external power)	********	ON	1 beep 200ms, repeat after 20 seconds for 200 seconds	40
Malfunction	FAIL XX	ON	1 beep 200ms, repeat after 20 seconds for 200 seconds	80

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