



E for L Aim Public Company Limited

บริษัท อี ฟอร์ แอล เอ็ม จำกัด (มหาชน)

HAMILTON-C1 Test Report Calibration

Customer Name : คณะทันตแพทยศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย

Date: 27/9/2025

Serial Number : 32503

CER No: 245098-001

Software Version : 2.2.10

Service Manual Versions : 624338

คำเตือน ก่อนที่จะดำเนินการทดสอบหรือเปลี่ยนชิ้นส่วนอะไหล่ ควรทำการบันทึก Instrument report ก่อนทุกครั้ง และ
ภายหลังเมื่อดำเนินการเปลี่ยนอะไหล่ใหม่แล้วควร Update ข้อมูลใน Instrument report ด้วยทุกครั้ง และบันทึกลง Flash drive

Component Replacement

	Yes	No	Not applicable	
Oxygen sensor replaced ?	☐	☒	☐	(สมควรเปลี่ยนทุก 1-2 ปี)
Air Intake Dust Filter cleaned or replaced ?	☒	☐	☐	(สมควรเปลี่ยนทุก 1 ปี)
O2 Inlet Filter replaced ?	☐	☒	☐	(สมควรเปลี่ยนทุก 1-2 ปี)
HEPA Filter replaced ?	☐	☒	☐	(สมควรเปลี่ยนทุก 1-2 ปี)
Batteries calibrated (%error > 5%) ?	☐	☒	☐	
Batteries replaced if State of Health(SoH < 20 %	☐	☒	☐	
Blower Module Replaced (ebt > 100%) ?	☐	☒	☐	(เปลี่ยนเมื่อ Blower Timer มากกว่า = 100%)

Visual inspection: ventilator and trolley

	Yes	No	Not applicable
Are all marks, symbols, and labels related to safety complete and legible?	☒	☐	☐
Ventilator: all screws accessible from outside are tight (e.g., rear cover, filter cover, battery cap, option board).	☒	☐	☐
The ventilator is not damaged or dirty nor are the cables.	☒	☐	☐
Trolley: the wheels and brakes are properly functioning. All screws are tight.	☒	☐	☐
Apply thread lock to screws where applicable (e.g., screws for mounting standard rails).	☐	☐	☐

Service software

	Yes	No	Not applicable
Is the latest software version installed on the HAMILTONC1 ventilator?	☐	☒	☐
We recommend that you install the latest software version.	☒	☐	☐
Ventilator information: check and verify the status of the Technical state, Service, and Real Time Clock (RTC) shows OK for each parameter on the display.	☒	☐	☐
Adjustments / Calibration: check and verify the status of the Touchscreen, Pressure, Exp. valve, O2 sensor, Flow sensor calibrated shows OK for each parameter on the display.	☒	☐	☐
Component tests: check and verify the status of the Electronics, User I/F, Pneumatics 1, and Pneumatics 2 shows OK for each parameter on the display.	☒	☐	☐
System tests: check and verify the status of the Pressure, Flow, O2 mixer, Tightness, and Alarming shows OK for each parameter on the display.	☒	☐	☐
NEONATAL Adjustments / Calibration: check and verify the status of the Exp. valve, Flow sensor calibrated shows OK for each parameter on the display.	☐	☐	☒
NEONATAL Component tests: check and verify the status of the Exp. valve (Pexpvalve and pressure test) shows OK for each parameter on the display.	☐	☐	☒

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Additional checks after assembly of the ventilator

CER No: 245098-001

NOTICE! The following tasks are only required if you disassembled and assembled the ventilator after a service activity.

	Yes	No	Not applicable
Fan Check: Does the fan blow into the ventilator?	☒	☐	☐
Tightness check of Nebulizer tube connection: is the nebulizer tube connection tight?	☒	☐	☐
Exp. prop.valve exhaust tubing check: does the ventilator generate alarm, with the status message "Exhalation obstructed" shown on the display?	☒	☐	☐
NFC and Wi-Fi antennas functional test successfully performed?	☐	☐	☒

Additional checks after assembly of the ventilator

	Yes	No	Not applicable
AC to battery test successfully performed?	☒	☐	
Power loss test : Does the buzzer sounds for at least 2 minutes?	☒	☐	
Is the latest firmware version installed on the HamiltonConnect Module?	☐	☐	☒
Communication interface RS-232 test performed success-fully?	☐	☐	☒
Nurse call functional test performed successfully?	☐	☐	☒
Hamilton-H900 (humidifier) communication and func-tional tests successfully performed?	☐	☐	☒
CO2 accuracy in range?	☐	☐	☒
SpO2 check performed successfully?	☐	☐	☒
Visually check that the battery charge indicator is green.	☒	☐	
Preoperational checks performed.	☒	☐	
Alarm tests performed.	☒	☐	
Electrical safety tests performed successfully?	☒	☐	

Task	Yes	No	Not applicable
Technical state, Instrument report, Event Log, and ServiceLog download performed and archived?	☒	-	-

Comments: O2 SENSOR เสื่อมสภาพ

SOH=14.8% ต่ำกว่ามาตรฐาน สมควรเปลี่ยน

Status : Pass

Service Required



Served By : Mr.Narathip Cordsombut

Approved By :

() Mr.Sunthorn Deechanuan

(/) Mr.Pantawich Chotwattanasirikul