Quality Management System Instruction Form

Cook® Medical Incorporated

Title: **Laser Service Report**

Document Number:	QMSI18_09-F06	Original Date:	30Sep2016
Version Number:	4	Effective Date:	18Aug2017
CR Number:	CMI-17-187	Checked By:	AB 16Aug2017

Laser Serial Number: 28020-GHGRD Date: 20/ Sep /18

Please fill out as much information as possible in the form below.

General Information and Background

Laser System Type: ☑ Odyssey ☐ H-30

Laser Owner (Hospital):	Centromed	Under Warranty?	☐ Yes ☐ No
Customer Number:		Phone Number:	
Contact Person:		Technician:	Andres Yaser
Email:		When was the laser last serviced?	
By whom was the laser last serviced?		Under Service Contract?	☐ Yes ☐ No
Current Service Location:		Installation Date:	
Plug Type:			

Any unusual environmental condition? ☐ Yes ☑ No If yes, explain:

Any information to reasonably suggest laser caused or contributed to illness or injury to patient or user? ☐ Yes ☑ No If yes, explain:

Was laser used for treatment or diagnosis? ☐ Yes ☑ No

Additional comments: *(Note any recent issues and their resolutions.) Note: Only enter information if additional information is applicable, otherwise leave blank.*

If this Section does not apply check box ☑

Laser Use Information at Occurrence

Pulse Width Mode:	☐ Short ☐ Long	Repetition Rate (Hz):	☐ 5 ☐ 8 ☐ 10 ☐ 12 ☐ 15 ☐ 20
Pulse Energy:		Fiber Size(s) Used (µm):	☐ 150 ☐ 200 ☐ 273 ☐ 365 ☐ 550 ☐ 940
Total Energy Delivered:	Total Time:		

In what operational state(s) was the laser when the issue occurred? ☐ Standby ☐ Transition ☐ Ready ☐ Preparatory ☐ Lasing

If this Section does not apply check box ☐

Note any error code(s) that was present:

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General Description of Issue:

EQUIPO FUNCIONANDO CON PROBLEMAS DE CALIBRACION Y POTENCIA

Work Performed (Include Troubleshooting)

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List Calibrated Equipment, Tools or Test Equipment Used

+	PART NUMBER/CPN	I.D. NUMBER	CALIBRATION DUE DATE
	Gentec "Maestro" Power Meter		
	Gentec "Maestro" Target		
	BC Medical SA-2001 Safety Analyzer		
-			

Service Manual Revision Number:

Were replacement parts used? ◯ Yes ◯ No

+	PART NUMBER/CPN	LOT NUMBER	DESCRIPTION
-			

Defective Part Disposition: Disposed of _____ Returned to COOK Capital Equipment _____

Final Resolution

Equipo Calibrado.
Mantencion Completa Realizada.
Potencias optimas.

Equipo 100% Operativo.

Cook welcomes your feedback at capitalservice@cookmedical.com

If this Section does not apply check box ☑

Calibration

VALUE	INITIAL VALUE	E1	E2	FINAL VALUE	E1	E2
PHD OFFSET (10Hz, 0.5J)		MIN:	MAX:		MIN:	MAX:
PHD POTENTIOMETER/COARSE (10HZ, 3.0J)		INT:	EXT:		INT:	EXT:
PHD FULLSCALE/FINE (10 HZ, 3.0J)		INT:	EXT:		INT:	EXT:
PHD SHUTTER CLOSED		OPEN:	CLOSED:		OPEN:	CLOSED:

Notes (calibration, tuning, centration, alignment, etc.) Note: Only enter information if additional information is applicable, otherwise leave blank.

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PHD Calibration Verification (data can be replaced with external data sheets, if desired)

CAL	SHORT PW				LONG PW			
RATE	PHD ADJ LOW	PHD ADJ HIGH	E_{MIN}	E_{MAX}	PHD ADJ LOW	PHD ADJ HIGH	E_{MIN}	E_{MAX}
5 Hz			0.5	3.5			0.5	3.0
8 Hz			0.5	3.0			0.5	2.5
10 Hz			0.5	3.0			0.5	2.5
12 Hz			0.5	2.5			0.5	2.0
15 Hz			0.5	1.5			0.5	1.5
20 Hz			0.5				0.5	

Final Steps

Attach pictures of DAC values and plot from CAL menu, if voltage values changed.

If this Section does not apply check box ☐

Short PW Calibration Table (record average output values in User mode) with a 550 µ fiber.

ENERGY	TOLERANCE	REP. RATE: 5 Hz	8 Hz	10 Hz	12 Hz	15 Hz	20 Hz
0.5 J	0.45 - 0.55	0.56	—	0.48	0.50	0.49	0.46
0.6 J	0.54 - 0.66						
0.7 J	0.63 - 0.77						
0.8 J	0.72 - 0.88						
1.0 J	0.90 - 1.10					1.05	
1.2 J	1.08 - 1.32						
1.5 J	1.35 - 1.65				1.45	1.57	
2.0 J	1.80 - 2.20	2.10	—	1.99			
2.5 J	2.25 - 2.75				—		
3.0 J	2.70 - 3.30		—	2.85			
3.5 J	3.15 - 3.85	—					

If this Section does not apply check box ☐

Long PW Calibration Table (record average output values in User mode) with a 550 µ fiber.

ENERGY	TOLERANCE	REP. RATE: 5 Hz	8 Hz	10 Hz	12 Hz	15 Hz	20 Hz
0.5 J	0.45 - 0.55	0.51	—	0.49	0.49	0.49	—
0.6 J	0.54 - 0.66						
0.7 J	0.63 - 0.77						
0.8 J	0.72 - 0.88						
1.0 J	0.90 - 1.10					1.02	
1.2 J	1.08 - 1.32				1.22		
1.5 J	1.35 - 1.65		—	1.49		1.51	
2.0 J	1.80 - 2.20	2.11			2.02		
2.5 J	2.25 - 2.75		—	—			
3.0 J	2.70 - 3.30	—					

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ELECTRICAL SAFETY TEST		UNITS	TOLERANCE	MEASURED	PASS	FAIL
Ground Resistance		OHMS	≤ 0.27			
Unit OFF	Forward Leakage	NAμA	≤450			
	Reverse Leakage	NAμA	≤450			
Unit ON	Forward Leakage	NAμA	≤450			
	Reverse Leakage	NAμA	≤450			

Note: If any item of Electrical Safety fail, contact service department immediately. Do not put H30 System back into operation mode. System may need to be returned to service department for service.

Form Submitted By: Andres Yañez - Date: 20/Sept/18

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Area Informática
CENCOMEX S.A.
20/09/18