O2ptima CMCL Assembly Guide Checklist

Date_____ **Dive Location** _____ **Dive Buddy** _____

1. ____ Fill oxygen and bailout/diluent cylinders if needed.
2. ____Analyze gas: Oxygen _____% O2 , Bailout 1 (Diluent) _____% O2 / _____% He ,
   Bailout 2 _____% O2 / _____% He
3. ____Analyze CO: Oxygen _____PPM , Bailout 1 (Diluent)_____PPM , Bailout 2_____PPM
4. ____Turn on handset and check O2 sensor display in ambient air. Record mV readings: 1) _____ 2) _____ 3) _____
   Readings should be between 8 and 14 mV.
5. ____Change to low setpoint to fire O2 solenoid. Check voltage: Ext. _____ V (min 7.6V) Int. _____ V (min depends on type of battery used) Change setpoint back to .19.
6. ____Check HUD O2 sensor display in ambient air and ensure that the reading agrees with the handset.
7. ____Steramine and rinse canister, lid, loop hoses, DSV, and counterlungs unless completed before storage.
8. ____Inspect canister, head, and lid. Is scrubber: EAC _____ Sorb _____ (type:_____)
   New _____ Used _____ (_____ min)
9. ____If using sorb, pack scrubber canister. If using EAC, inspect cartridge for damage, mark/note cartridge direction and install cartridge. Inspect bore plug and confirm that it is installed in correct orientation.
10. ____ Lube head O-rings and flat seal as necessary. Confirm O-ring is in place on premix tube and install head onto canister.
11. ____Confirm water trap is installed in lid. Lube lid O-rings and flat seal as necessary. Install lid onto canister.
12. ____Pressure test canister.
13. ____Confirm water trap tubes are installed into counterlungs.
14. ____Set the scrubber canister into place, attach solenoid oxygen supply hose and plug in electronics canisters.
15. ____Install calibration caps, connect O2 hose, turn on controller, and flush with oxygen until PP02 readings stabilize.
16. ____Check and record mV readings while filled with O2. Minimum 40 mV. Check for stability.
    1) _____ 2) _____ 3) _____
17. ____Turn on HUD to check operation at 1.0 PPO2. Calibrate controller and/or HUD if required.
18. ____Install assembled canister onto counterlungs. Ensure cables are routed correctly and clip and tighten canister cover.
19. ____Mount oxygen cylinder, attach regulator, and route hoses.
20. ____Attach oxygen hose to "Y" block and manual add feed to Oxygen MAV. Make sure that the inline shutoff is turned on and locked open using the lock clip.
21. ____Inspect loop, fittings and O-rings. Connect loop hoses to counterlungs.
22. ____Inspect DSV and mouthpiece. Confirm flow direction and attach DSV to loop hoses.
23. ____ Double check all loop fittings for tightness. Route controller and HUD cables stowing excess in counterlung pockets.
24. ____Perform negative pressure test for a minimum of 30 seconds.
25. ____Perform positive pressure test for a minimum of 2 minutes.
26. ____Turn on oxygen and record oxygen cylinder pressure: _____bar
27. ____Turn off cylinder and perform a leak down check.
28. ____Turn oxygen cylinder back on, open counterlung exhaust valve, change setpoint to 0.5, and perform a 5 minute pre-breath confirming correct solenoid operation.
29. ____Confirm correct onboard & bailout gases are configured and selected in computers and that they are set to CCmode.
30. ____Check bailout regulator hoses, mouthpieces, and hose fitting tightness. Install bailout regulators. Confirm IP as needed.
31. ____Prior to beginning the dive, connect diluent ADV/MAV feed line and confirm ADV/MAV and OPV operation.