

O2ptima Classic Assembly Guide Checklist

Date _____ Dive Location _____ Dive Buddy _____

1. ___ Fill oxygen, diluent, and bailout cylinders if needed.
2. ___ Analyze gas: Oxygen _____% O₂, Diluent _____% O₂ / _____% He,
Bailout 1 _____% O₂ / _____% He, Bailout 2 _____% O₂ / _____% He
3. ___ Analyze CO: Oxygen _____ PPM, Diluent _____ PPM, Bailout 1 _____ 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 Int. _____ V Change setpoint to .19.
6. ___ Check HUD O₂ sensor display in ambient air and ensure that the reading agrees with the handset.
7. ___ Mount oxygen and diluent cylinders, attach regulators, and route hoses.
8. ___ Steramine and rinse canister, lid, loop, and counterlungs unless completed before storage.
9. ___ Inspect canister, head, and lid. Is scrubber: EAC _____ Sorb _____ (type: _____)
New _____ Used _____ (_____ min)
10. ___ If using sorb, pack scrubber canister.
11. ___ Install canister.
12. ___ Lube head o-rings and flat seal as necessary. Confirm o-ring is in place on premix tube and install head.
13. ___ If using EAC, inspect cartridge for damage, mark/note cartridge direction and install cartridge.
14. ___ Inspect bore plug and confirm that it is installed in correct orientation.
15. ___ Confirm water trap is installed in lid. Lube lid o-rings and flat seal as necessary. Install lid.
16. ___ Confirm solenoid oxygen supply hose is securely attached and electronics canisters are plugged in.
17. ___ Pressure test canister. If good, ensure hoses are routed correctly and install back cover and trim weights if needed.
18. ___ Install calibration caps, connect O₂ hose, turn on controller, and flush with oxygen until PPO₂ readings stabilize.
19. ___ Check and record mV readings while filled with O₂. Minimum 40 mV. Check for stability.
1) _____ 2) _____ 3) _____
20. ___ Turn on HUD to check operation at 1.0 PPO₂. Calibrate controller and/or HUD if required.
21. ___ Inspect loop, fittings, o-rings, and counterlungs. Lube as needed. Install counterlungs. Assemble loop hoses to T-pc and ADV and attach to counterlungs.
22. ___ Attach ADV, BC, and manual add feeds.
23. ___ Inspect and test DSV directional valves and mouthpiece. Attach DSV to loop, close DSV, turn off in-line shutoffs, close counterlung exhaust valve and confirm correct flow direction through loop.
24. ___ Connect loop to scrubber canister. Double check all loop fittings for tightness. Cover canister fittings with neoprene covers and route controller and HUD cables.
25. ___ Perform negative pressure test for a minimum of 30 seconds.
26. ___ Perform positive pressure test for a minimum of 2 minutes.
27. ___ Turn on oxygen and diluent cylinders, open counterlung exhaust valve, and turn on inline shutoffs. Check ADV, manual add valves, trim pillow inflator, BC inflator and exhaust valves/OPVs for proper operation.
28. ___ Record oxygen and diluent cylinder pressures: Oxygen _____ bar, Diluent _____ bar
Turn off cylinders and perform a leak down check.
29. ___ Turn oxygen and diluent cylinders back on, change setpoint to 0.5, and perform a 5 minute pre-breath confirming correct solenoid operation.
30. ___ Confirm correct onboard & bailout gases are configured and selected in computers and that they are set to CCmode.
31. ___ Check bailout regulator hoses, mouthpieces, and hose fitting tightness. Install bailout regulators. Confirm IP as needed.