

# MEGALODON PRE DIVE CHECK LIST (APECS 2.0)

Name: \_\_\_\_\_ Date of pre-dive: \_\_\_/\_\_\_/\_\_\_  
 Rig ID: \_\_\_\_\_ Sensor S/N: (1) \_\_\_\_\_ (2) \_\_\_\_\_ (3) \_\_\_\_\_

<b>BATTERY DATA:</b>	<b>PRIMARY</b>	<b>SECONDARY</b>
<b>DATE INSTALLED</b>		

**Table 1**

Pre-dive start time: \_\_\_\_\_ Stop time: \_\_\_\_\_

**Initials** **Note:** Initial only when task has been performed.

- \_\_\_ 1. Inspect all parts for dirt, deterioration, damage, and lubrication during assembly.
  - \_\_\_ 2. Charge O<sub>2</sub> and diluent cylinders. Analyze Oxygen \_\_\_\_\_ (98.0% Minimum).
  - \_\_\_ 3. Analyze diluent and bailout/deco cylinders if using mixed gas. Dil \_\_\_\_\_ (O<sub>2</sub>/HE) Bailout/deco 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_
  - \_\_\_ 4. Install O<sub>2</sub> and diluent 1st stage assemblies and mount cylinders if necessary
  - \_\_\_ 5. Install BC bladder.
  - \_\_\_ 6. Install back plate assembly.
  - \_\_\_ 7. Mount counterlungs to back plate assembly.
  - \_\_\_ 8. Install ADV, low pressure supply hoses to counterlungs and secure all hoses to harness assy.
  - \_\_\_ 9. Conduct a breathing check on check valves in DSV assembly.
  - \_\_\_ 10. Install DSV assembly to counterlungs.
  - \_\_\_ 11. Record accumulated service time on CO<sub>2</sub> absorbent: \_\_\_\_ min. (\_\_\_\_:\_\_\_\_)
  - \_\_\_ 12. Fill scrubber canister, if fresh scrubber needed.
  - \_\_\_ 13. Install gas plenum canister moisture pads.
  - \_\_\_ 14. Install CO<sub>2</sub> canister.
  - \_\_\_ 15. Inspect CO<sub>2</sub> canister mating O-ring on sensor carriage.
  - \_\_\_ 16. Inspect sensors and sensor wires.
  - \_\_\_ 17. Install sensor moisture pad.
  - \_\_\_ 18. Install sensor carriage assembly.
  - \_\_\_ 19. Positive pressure test sensor carriage assembly (one-way water check valve).
  - \_\_\_ 20. Negative pressure test sensor carriage assembly.
  - \_\_\_ 21. Inspect lid assembly for waterproof integrity (O-rings, and all fixed components).
  - \_\_\_ 22. Inspect battery connectors and battery housings.
  - \_\_\_ 23. Power on primary and secondary power supplies.
  - \_\_\_ 24. Check O<sub>2</sub> PRIMARY sensor mv in ambient air in system monitor S-1 \_\_\_\_\_ S-2 \_\_\_\_\_ S-3 \_\_\_\_\_
  - \_\_\_ 25. Check O<sub>2</sub> SECONDARY sensor mv in ambient air in system monitor S-1 \_\_\_\_\_ S-2 \_\_\_\_\_ S-3 \_\_\_\_\_
  - \_\_\_ 26. Conduct "air point" of calibration if necessary (See operation manual).
  - \_\_\_ 27. Verify solenoid operation and display operation (Disregard if calibrating).
  - \_\_\_ 28. Install lid assembly to gas plenum canister and latch down.
  - \_\_\_ 29. Secure remaining breathing hoses to head assembly.
  - \_\_\_ 30. Install HUD (Only for C2R with option).
  - \_\_\_ 31. Inspect all hand tight fittings.
  - \_\_\_ 32. Perform positive pressure test (Vent valve).
  - \_\_\_ 33. Open O<sub>2</sub> and diluent cylinder valves.
  - \_\_\_ 34. Verify O<sub>2</sub> and diluent bypass valve operation.
  - \_\_\_ 35. Verify automatic diluent addition valve operation (Only for C2R with option).
  - \_\_\_ 36. Record cylinder pressures (PSI/BAR) O<sub>2</sub>: \_\_\_\_\_ Diluent: \_\_\_\_\_
  - \_\_\_ 37. Close O<sub>2</sub> and diluent valves. Wait 2 min. then record pressures: (PSI/BAR) O<sub>2</sub>: \_\_\_\_\_ Diluent: \_\_\_\_\_
  - \_\_\_ 38. Perform negative pressure test (30 sec. test).
  - \_\_\_ 39. Complete calibration if necessary (See operation manual). (Note highest sensor mv for final O<sub>2</sub> flush)
  - \_\_\_ 40. Install O<sub>2</sub> supply hose to O<sub>2</sub> supply intake.
  - \_\_\_ 41. Perform breathing test to verify set point operation (0.7).
  - \_\_\_ 42. Verify PRIMARY no load voltage \_\_\_\_\_ Load voltage \_\_\_\_\_ SECONDARY No-Load voltage \_\_\_\_\_.
- Insure appropriate power for duration of planned dive. Replace batteries BEFORE DIVING if batteries are at 5.0 volts or less. DO NOT DIVE with low batteries.**
- \_\_\_ 43. Secure displays to back plate assembly.
  - \_\_\_ 44. **Note: If the performance of any of the above tasks is in question or the performance/operation of the C2R is in question, do not dive the C2R! Consult the operation manual or call ISC.**
  - \_\_\_ 45. Remarks (continue on rear in remarks section if insufficient space).

**Diver:** \_\_\_\_\_

# MEGALODON POST DIVE CHECK LIST (APECS 2.0)

Date of post-dive: \_\_\_/\_\_\_/\_\_\_  
 Post dive start time: \_\_\_\_\_ Stop time: \_\_\_\_\_

**Initials** **Note:** Initial only when task has been performed.

- \_\_\_ 1. Rinse C2R in fresh water.
  - \_\_\_ 2. Record cylinder pressures O<sub>2</sub>, \_\_\_\_\_ PSI/BAR Diluent: \_\_\_\_\_ PSI/BAR
  - \_\_\_ 3. Secure O<sub>2</sub> and diluent cylinders and bleed down system via bypass valves.
  - \_\_\_ 4. Disconnect all L.P. hoses, ADV, and displays from various assemblies.
  - \_\_\_ 5. Remove DSV assembly from counterlungs and gas plenum canister. Rinse and disinfect.
  - \_\_\_ 6. Remove moisture pads from counterlungs. Hang to dry. (Optional component)
  - \_\_\_ 7. Rinse counterlungs and disinfect. Hang to dry upside down.
  - \_\_\_ 8. Remove back plate assembly and BC.
  - \_\_\_ 9. Remove lid assembly from gas plenum canister.
  - \_\_\_ 10. Remove scrubber canister and moisture pads and dry.
  - \_\_\_ 11. Remove sensor moisture pad and wring out. Hang to dry.
  - \_\_\_ 12. Wipe down lid assembly and set down so sensors face down.
  - \_\_\_ 13. Rinse/disinfect inside of gas plenum canister.
  - \_\_\_ 14. Remove and fill O<sub>2</sub> and diluent cylinders.
  - \_\_\_ 15. Record accumulated CO<sub>2</sub> scrubber absorption time in Table 2.
  - \_\_\_ 16. If scrubber absorbent service time expired, remove scrubber and dump. Rinse scrubber canister  
 If necessary.
  - \_\_\_ 17. Record Scrubber and battery operational time in Table 2.
  - \_\_\_ 18. Record maximum depth \_\_\_\_\_ (ft/m) and total runtime \_\_\_\_\_ min (or \_\_\_\_:\_\_\_\_) since pre-dive.
  - \_\_\_ 19. Log PRIMARY no load voltage \_\_\_\_\_ Load voltage \_\_\_\_\_ SECONDARY No-Load voltage \_\_\_\_\_.
- Replace batteries BEFORE THE NEXT DIVE if batteries are at 5.0 volts or less. DO NOT DIVE with low batteries.**
- \_\_\_ 20. Power off the primary and secondary electronics.

Accumulated Time:	Previous	This Dive	Total Used	Time Allowed	Time Remaining
<b>Primary Battery</b>					
<b>Secondary Battery</b>					
<b>CO<sub>2</sub> Scrubber</b>					

**Table 2**

**Remarks:**

**Diver:** \_\_\_\_\_