

ISC Megalodon Troubleshooting (Apecs)

Problem	Possible Causes	Diagnosis	Action
1. Cell Discrepancy	<ul style="list-style-type: none"> <li>• Calibration error</li> <li>• Water on cell</li> <li>• Slow reacting or failing cell</li> </ul>	i. Manual setpoint ii. ADV/DIL Flush iii. Confirm PPO2 at target depth a) 2 cell correct b) 1 cell correct	a) Monitor voting logic b) Voting logic incorrect: Bailout Manual fly using single sensor (switch low setpoint).
2. Electronic Failure (Primary)	<ul style="list-style-type: none"> <li>• Battery connection</li> <li>• LCD</li> <li>• Cable cut</li> <li>• Stuck button in sleep mode</li> <li>• Frozen display</li> <li>• Flooded electronics</li> </ul>	i. Active menu ii. Listen for solenoid	a) Switch to secondary, manually fly CCR.
3. Electronic Failure (Secondary)	• Same as above	Same as above	Continue using primary display
4. Electronic Failure (Both Handsets)	• Same as above	Same as above	SCR mode or bailout
5. High PPO2	<ul style="list-style-type: none"> <li>• Fast decent</li> <li>• Manual injector leak</li> <li>• Solenoid leak</li> <li>• Calibration error</li> </ul>	i. Close O2 tank ii. Flush with DIL iii. Disconnect manual add iv. Pressurize O2 (On/Off) & watch needle: a) Needle static - is manual injector failure. b) Needle drop - is solenoid failure.	a) Stay on CCR. b) Have buddy disconnect solenoid feed or plug in off-board O2 supply and manually add O2
6. Low PPO2	<ul style="list-style-type: none"> <li>• Out of O2</li> <li>• Solenoid closed</li> <li>• Low battery</li> <li>• Fast ascent</li> <li>• Solenoid feed disconnected</li> </ul>	i. Check O2 pressure Tank valve ii. Check battery voltage iii. Buddy check feed hose	a) Manual add O2 b) SCR mode or bailout

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7. Flooding	<ul style="list-style-type: none"> <li>• Counterlung rupture</li> <li>• Hose connection loose</li> <li>• Tam mouthpiece</li> <li>• O-ring failure</li> </ul>	i. DIL flush ii. Vent water through OPV	a) Bailout
8. HP/LP Hose, SPG, 1st stage Failure	<ul style="list-style-type: none"> <li>• Burst hose</li> <li>• Failed O-ring</li> <li>• Pressure Gauge</li> <li>• Overpressure relief valve</li> </ul>	i. Close tank ii. Check gauges a) O2 b) DIL	a) Bailout or off-board manual add b) Open O2 - Monitor PPO2  Note: Lost BC/drysuit/ADV Plug in off-board DIL option
9. Manual O2 addition Open/Close	<ul style="list-style-type: none"> <li>• Button stuck</li> <li>• Schrader valve</li> </ul>	i. Close O2 tank ii. Disconnect	a) Continue using solenoid b) Add from off-board gas
10. ADV Failure Open/Close	<ul style="list-style-type: none"> <li>• Schrader valve</li> <li>• Pressing on counterlung</li> <li>• Isolator</li> </ul>	i. Check LP connector ii. Check supply tank open	a) Leaking - isolate ADV b) Plug in off-board gas
11. BCD Failure	<ul style="list-style-type: none"> <li>• Loss of buoyancy positive</li> <li>• Loss of buoyancy negative</li> <li>• Failed power inflator</li> <li>• Failed relief valve</li> <li>• Hose connection</li> <li>• Punctured bladder</li> </ul>	i. Positive buoyancy Bubbles ii. Negative buoyancy	a) Disconnect LPI b) Use redundant buoyancy device  Note: excessive negative buoyancy ditch equipment.
12. Scrubber Failure	<ul style="list-style-type: none"> <li>• O-rings</li> <li>• Over used absorbent</li> <li>• Wet scrubber</li> <li>• Incorrect packing</li> </ul>	i. Perform DIL flush ii. Check breathing/Relax	a) Bailout
13. Other considerations:	<ul style="list-style-type: none"> <li>• Loss of bailout/deco gas</li> <li>• Regulator free flow</li> <li>• Loss of dive computer</li> <li>• Fail/loss of SMB</li> <li>• Lost mask</li> </ul>		