

Company Name: \_\_\_\_\_

Company Number: \_\_\_\_\_

**2024 MATE ROV COMPETITION. Observing Our Oceans: Understanding Our World And Creating Our Future  
NAVIGATOR CLASS SAFETY INSPECTION CHECKLIST**

Companies must bring this check list, the ROV, tether, surface controls, and any other item used in the deployment and operation of the ROV; they will all be inspected as part of the safety check. In addition, the SID, must be made available to the Safety Inspectors during the inspection process.

<b>1.0 Initial Safety Inspection</b>		<b>4.0. Pneumatic / Hydraulic (if applicable)</b>	
	Fluid power approved? Fluid power used? If yes to both, see Section 4.0 Pneumatics / Hydraulics		Passed fluid power quiz.
	Laser approved? Laser used? If yes to both, see attached laser safety inspection sheet.		Pneumatic or hydraulic diagram (SID) present.
<b>2.0 ROV Physical</b>			Water is used as the hydraulic fluid.
	All items attached to ROV are secure.		All pressure lines have a minimum pressure rating of 100 PSI (pneumatic) or 300 PSI (hydraulic) stamped on the line or verified with specifications.
	Hazardous items are identified and protection provided.		Valves meet the minimum pressure rating of 100 PSI (pneumatic) or 300 PSI (hydraulic)
	<b>ALL propellers are completely shrouded to IP-20 standards. Mesh size is less than 12.5 mm.</b>		Attachment to the pressure source is secure.
	No sharp edges or elements of the ROV design that could cause injury to personnel or damage the pool surface.		Pressure is regulated to: 40 PSI max for pneumatics 150 PSI max for hydraulics
<b>3.0 ROV Electrical</b>			Pressure vessels have a stamped pressure rating or verification by inspection.
	Tether is properly secured at the ROV.		Pressure vessels have a current inspection sticker.
	No exposed motors. Brushless motors are considered exposed unless electrically sealed after purchase. Companies should provide proof of sealing procedure.		Pressure vessels can be secured on the pool deck.
	No exposed copper or bare wire.		Company fabricated pressure accumulator test results are provided (if used).
	All wiring securely fastened and properly sealed.*		No hydraulic fluids are leaking.
	Any splices in tether are properly sealed.*		Pneumatics utilize compressed air or inert gas.
<b>3.1 Surface Controls Electrical &amp; Physical</b>			
	Single attachment point to the power source.		
	Anderson powerpole attachment to power source.		
	15 amp (or less) single inline <b>ATO</b> or <b>MINI</b> fuse within 30 cm of power supply attachment point.		
	The surface control station is built in a neat and workmanship like manner. No loose components or unsecured wires. All electrical components are covered inside an enclosure.		
	No exposed copper or bare wire.		
	if used, 120VAC wiring is separated from the DC wiring.		
	If used, 120VAC wiring must be clearly identified from the DC and control voltages with signage and/or wire color schemes. If the color scheme is used, a key must be provided for identification.		
	All wires entering and leaving the surface control station must have adequate strain relief and wire abrasion protection as the wires pass through the enclosure.		
	Cameras operate off the MATE 12VDC power supply through the single attachment point to the power source.		
* Properly sealed means that the wires cannot be exposed to water. Tape only sealing will allow the conduction of electricity through water.			
At minimum, joints must be soldered, sealed with a proper waterproof sealant, and covered in tape or shrink wrap. For in water taping, silicone self-vulcanizing tape is preferred over thermoplastic tape. Cables with exposed male connections on both ends are not allowed.			

  

<b>SAFETY INSPECTION #1</b>	<b>PASSED: 10 POINTS</b>
Failed: Items to correct noted on rear of this sheet.	
<b>SAFETY INSPECTION #2</b>	<b>PASSED: 10 POINTS</b>
Failed: Items to correct noted on rear of this sheet.	
<b>SAFETY INSPECTION #3</b>	<b>PASSED: 10 POINTS</b>
Failed: Reason / details are noted on rear of this sheet.	
<b>Total Safety Points:</b>	
<b>On Site Inspection</b>	
0 or 10 points	

**Inspection #1: Items to address**

**Judge:** \_\_\_\_\_


**Inspection #2: Items to address**

**Judge:** \_\_\_\_\_


**Inspection #3: Reason**

**Judge:** \_\_\_\_\_
