



2026 MATE ROV Competition
Pushing Performance: Science, Technology, & Discovery in Harsh Environments
Onsite Safety Inspection Score Sheet
PIONEER

Company Number:

Class: PIONEER

Company Name:

Judge Name:

Companies must bring this check list, the ROV, tether, surface controls, and any other item used in the deployment and operation of the ROV to the safety inspection; they will be all be inspected as part of the safety/workmanship check. If a company built a float, that must be brought to the safety/workmanship check as well. In addition, the SID, company safety review, technical documentation, and any additional documentation needed to verify compliance must be made available to the Safety Inspectors during the inspection process.

1.0 Initial Safety Inspection

	Fluid power approved? Fluid power used? If yes to both, see Section 4.0 Pneumatics / Hydraulics
	Laser approved? Laser used? If yes to both, see attached laser safety inspection sheet.
	JSEA and SID present at safety inspection

2.0 ROV Physical

	All items attached to ROV are secure.
	Hazardous items are identified and protection provided.
	ALL propellers are completely shrouded to IP-20 standards. Mesh size is less than 12.5 mm.
	No sharp edges or elements of the ROV design that could cause injury to personnel or damage the pool surface.
	Any gear assemblies / gear pinch points are shrouded to IP-20 standards.
	No glass on the ROV or pool deck. This includes monitors with glass face plates.

3.0 ROV Electrical

	PIONEER 48V system only: No power conversion before the ROV.
	No exposed motors. Brushless motors are considered exposed unless electrically sealed after purchase. Companies should provide proof of sealing procedure.
	No exposed copper or bare wire.
	All wiring securely fastened and properly sealed.*
	Any splices in tether are properly sealed.*

3.1 Surface Controls Electrical & Physical

	Single attachment point to the power source.
	Anderson powerpole attachment to power source. SBS50 (48V system) or red/black connectors (12V system).
	Properly sized ATO or Mini Blade fuse (12V system) or Littelfuse (48V system) within 30 cm of power supply attachment point. Fuse size based on full load amps measurement.
	No exposed copper or bare wire. Connections in the control box shielded or covered to IP-30 standards.
	All connectors utilized are properly rated for their application. AC only rated connectors cannot be used for DC.

* 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.

* Properly sealed means that the wires cannot be exposed to water. Tape only sealing will allow the conduction of electricity through water.

4.0. Pneumatic / Hydraulic (if applicable)

	Passed fluid power quiz.
	Pneumatic or hydraulic diagram (SID) present?
	Hydraulics utilize water. Pneumatics utilize compressed air or inert gas. All pressure lines have a minimum pressure rating of 100 PSI (pneumatic) or 300 PSI (hydraulic) stamped on the line or verified with specifications.
	Valves meet the minimum pressure rating of 100 PSI (pneumatic) or 300 PSI (hydraulic)
	Attachment to the pressure source is secure.
	Pressure is regulated to: 40 PSI max for pneumatics 150 PSI max for hydraulics
	Company fabricated pressure accumulator test results are provided (if used).
	No hydraulic fluids are leaking.

SAFETY INSPECTION #1

PASSED: 30 POINTS

Failed: Items to correct noted on rear of this sheet.

SAFETY INSPECTION #2

PASSED: 20 POINTS

Failed: Items to correct noted on rear of this sheet.

SAFETY INSPECTION #3

PASSED: 10 POINTS

Failed: Reason / details are noted on rear of this sheet.

Total Safety Points:

On Site Inspection

0 to 30 points

