

Company Name: _____

Company Number: _____

2021 MATE ROV COMPETITION. Excite, Educate, Empower: Students Engineering Solutions to Global Problems
SCOUT 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.

1.0 Initial Safety Inspection

Fluid power approved? Fluid power used?
 If yes to both, see Section 4.0 Pneumatics / Hydraulics

2.0 ROV Physical

All items attached to ROV are secure.
 Hazardous items are identified and protection provided.
 ALL propellers are completely shrouded or are enclosed inside the frame of the ROV.
 No sharp edges or elements of the ROV design that could cause injury to personnel or damage the pool surface.

3.0 ROV Electrical

Tether is properly secured at 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.
 15 amp (or less) single inline 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.
 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.
 No AC power sources
 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.

4.0. Pneumatic / Hydraulic (if applicable)

Pneumatic or hydraulic diagram (SID) present.
 Uses air for pneumatics or water for hydraulics.
 No electrical pumps allowed. Manual (and or foot pumps only!)
 No pressure accumulators (pressure inside a container should never be higher than ambient pressure).
 Any container that air is being pumped into is vented to the pool with vent holes at least 1/4-inch (6.35 mm) diameter.

5.0 Lasers

No lasers present (lasers are not allowed in the NAVIGATOR class).

SAFETY INSPECTION #1 **PASSED: 10 POINTS**
 Failed: Items to correct noted on rear of this sheet.

SAFETY INSPECTION #2 **PASSED: 10 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 or 10 points

Inspection #1: Items to address

Judge: _____

Inspection #2: Items to address

Judge: _____

Inspection #3: Reason

Judge: _____
