# NRL Safety Inspection Checklist

## 15# Internal Inspection

<table>
<thead>
<tr>
<th>Organization</th>
<th>Inspector</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robot Name</td>
<td>Final PASS Time</td>
</tr>
<tr>
<td>Pit #</td>
<td>Weight</td>
</tr>
</tbody>
</table>

### General Inspection
- Name of Robot on exterior in ½” letters min.
- Appearance is acceptable
- Safety covers installed and secure
- Safety restraints installed and secure
- No disallowed materials
- Restricted material complies with rules

### Electrical Inspection
- Drive switch mechanically shuts off batteries
- Weapon switch mechanically shuts off batteries
- Master switches are 2-position and enclosed
- Master switch access requires no parts removal
- Access to all switches is outside weapon path
- External light for each switch is visible
- Legal Batteries
  - NO Li-Poly!
- Batteries are mounted securely within chassis
- Battery terminals/connections covered/insulated
- All wiring is properly installed and insulated
- Maximum voltage does not exceed limit (28V)

### Powered Weapons
- Weapons are not electrical/electromagnetic
- Weapons do not use heat, fire or explosives
- Weapons are non-fouling
- Weapons/flywheels are securely attached
- Deactivated weapons pose no hazard to people
- Less than 20 minutes to charge modular weapon

### Large Springs
- Deactivated springs have less than 5 lbs. force
- All springs are mounted securely
- Manual safety release design is approved

### Pneumatic System
- Verify that system is completely depressurized
- LPA or CO2 disposable cartridges are allowed
- Tanks have pressure-reliefs or blowout plugs
- Tanks are mounted securely within chassis
- Tanks are properly rated and tested
- Max Capacity limit (8 cu.ft.) at 70 degrees F
- Mark max fill pressure on ALL tanks
- Low pressure shut-off valves meet requirements
- Pressure regulator mounted directly to tank
- Pressure regulator has lock-down mechanism
- Mark max pressure on regulators
- LPA 150psi max at 70 degrees F
- CO2 853psi max at 70 degrees F
- 150psi max on low pressure side
- Armor is required to secure any vessels
- Pneumatic components are correctly rated
- Pneumatic components are mounted securely
- No damage to any pneumatic components
- Pressure purge valves meet requirements
- Purge and shut-offs are outside weapons area
- No heat source close to pneumatic components
- Access for tank filling is safe and stable
- Refilling system approved

### Additional Items
- MultiBot meets all specific requirements
- Any lighting/sound system can be deactivated

### Comments:
- Inspector Signature: ____________________________
- Team Representative: ____________________________

---

FAIL: Items to be Fixed
15# Functional Inspection Checklist

Inspector: ___________________________ Robot Name: ___________________________

☐ Pass ☐ No Pass

Weight: ______________________

Pneumatic System

Verify that system is completely pressurized

☐ Tank pressures do not exceed sticker limits
☐ Regulated pressures do not exceed sticker limits

Add colored tape to top and bottom or Robot

Move the Robot at high speed

Turn transmitter OFF during motion

☐ Power to drive system stops when transmitter is shut off

Powered Weapon Systems Testing

Start EACH weapon system moving

☐ Weapons systems are reliably controlled

Turn transmitter OFF while weapon is on

☐ Power to weapon system stops when transmitter is shut off
☐ Spinning parts come to a FULL stop within 30 seconds after transmitter is shut off
☐ Weapon will NOT cause damage to arena

Motion System Fail-Safe Test

Move the Robot under control

☐ Robot motion control is continuous, not random
☐ Reliable control of the motion-producing parts
☐ Motion speed greater than 1 foot-per-second
☐ Move the Robot at high speed
☐ Turn transmitter OFF during motion

Deactivation of Robot

Turn the transmitter ON

Deactivate the Robot

☐ Deactivation requires no more than 1 person
☐ Person NOT in weapon path during Deactivation
☐ Critical Deactivation Less than 15 seconds
☐ Complete Deactivation LESS than 60 seconds
☐ No panels/parts removal during Deactivation
☐ Deactivation Safety procedure is acceptable

FAIL: Items to be Fixed

Comments:

Inspector Signature: ___________________________

Team Representative: ___________________________