Robot Inspection Checklist



Robot Size & Weight Inspection

- [ ] Robot is presented at inspection with all mechanisms (including all components of each mechanism), configurations, and decorations that will be used on the Robot during the competition.
- [ ] Separately test the Robot in all of its unique starting (pre-match setup) configurations. The Robot fits within the Sizing Tool without exerting undue force on the Sizing Tool sides and top.
- [ ] Robot Motion Warning Label is attached if servo motors move during the Robot initialization.
- [ ] Robot weighs no more than 42 pounds (19.05kg). + .5 pound overage allowance

General Robot Rules

- [ ] Robot does not contain any components that could damage the Playing Field or other Robots.
- [ ] Robot does not contain materials that are hazardous.
- [ ] Robot poses no obvious unnecessary risk of entanglement.
- [ ] Robot does not contain sharp edges or corners.
- [ ] Robot does not contain animal-based, liquid, or gel materials.
- [ ] Robot does not contain materials that would cause a delay of game if released.
- [ ] Robot does not contain elements that electrically ground the Robot frame to the Playing Field.
- [ ] Robot does not contain closed gas devices.
- [ ] Robot does not contain hydraulic devices.
- [ ] Alliance Flag Holder is present and adequately holds the Flag during normal Robot operation.

- [ ] Team number is visible from at least 2 sides (180 deg. apart). Numerals must be at least 2.5 inches (6.35 cm high), at least in 0.5 inches (1.27 cm) stroke width.
- [ ] Energy used by the Robot, (i.e., stored at the start of a Match), shall come only from approved sources.
- [ ] Robot is not capable of launching its own components.

Robot Mechanical Parts and Materials Rules

- [ ] All components on the Robot are from allowable raw materials and Commercial Off The Shelf products.

Robot Electrical Parts and Materials Rules

- [ ] The Main Power Switch is installed properly, labeled, readily accessible, and visible to competition personnel. The TETRIX, REV, and MATRIX switches are the only allowed Main Power Switch.
- [ ] All batteries are securely attached to the Robot in a location where they will not make direct contact with other Robots or the Playing Field.
- [ ] Exactly one (1) Robot Main Battery Pack of an approved type is on the Robot and it is properly connected to the Main Power Switch and either the Core Power Distribution Module or REV Expansion Hub.
- [ ] Where present, fuses must not be replaced with fuses of higher rating than originally installed or according to manufacturer's specifications.
- [ ] Allowed electronic devices are powered by power ports on the Core Power Distribution Module or REV Expansion Hub except as noted in <RE05>a&b, <RE12>, and <RE13>
- [ ] The Core Power Distribution Module or REV Expansion Hub is powered by the Robot main battery. If a hybrid of Modern Robotics modules is used with the REV Expansion Hub, the REV Expansion Hub must be powered from a power port on the Core Power Distribution Module.
- [ ] REV SPARK Mini Motor Controllers are powered by the Robot main battery.
- [ ] Allowed sensors may only receive power from the Core Device Interface Module, and/or the REV Expansion Hub.
- [ ] Light sources (including LEDs) are not focused or directed in any way, except for the REV Robotics 2m Distance Sensor. Light sources are powered by allowed methods.
- [ ] Video recording devices, if used, are powered by an internal battery and their wireless communication capability is turned off
- [ ] The Robot Controller is powered by its internal battery or by the built-in charging feature of the REV Expansion Hub.
- [ ] Exactly one (1) Core Power Distribution Module is mounted on the Robot if any Modern Robotics Core Control Modules are used.
- [ ] No more than two (2) REV Expansion Hubs are mounted on the Robot.
- [ ] No more than two (2) Core Device Interface Modules are mounted on the Robot
- [ ] Robot contains no more than eight (8) DC motors of the allowed models.
- [ ] Robot contains no more than twelve (12) servos. They must be compatible with the attached REV Expansion Hub, REV Servo Power Module, or servo controller and not exceed the manufacturer specifications for the controller.
- [ ] Robot contains only allowed sensors and they are connected only to the REV Expansion Hub or the Core Device Interface

Module.

- [ ] Power and motor control wires must use consistent color coding with different colors used for the positive (red, white, brown, or black with a stripe) and Negative/Common (black or blue) wires.
- [ ] Power, motor control, servo and encoder wires are the correct size.
- [ ] If electronics are grounded to the Robot frame, the only approved method is the REV Robotics Resistive Grounding Strap. If needed, the REV Robotics Anderson Powerpole to XT30 adapter may connect to the Resistive Grounding Strap. No other grounding straps or cables are allowed.
- [ ] Approved electrical and electronic devices may be modified to make them more usable; they may not be modified internally or in any way that affects their safety.

Wheel/Tread Playing Field Damage Test - Optional

- [ ] Robot did not damage the Playing Field tile.

Team Marker Inspection

- [ ] The Team Marker is subject to the Robot Mechanical Parts and Materials Rules in section 8.3.2.
- [ ] Maximum size of the Team Marker is 4 inches (10.16cm) by 4 inches (10.16cm) by 8 inches (20.32 cm). Minimum size of the Team Marker is 3 inches (7.62 cm) by 3 inches (7.62 cm) by 4 inches (10.16cm).
- [ ] Team Markers must be labeled with their Team number (numerals only, for example 12345).

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