Inspection Checklist

Team Number: _____

☑ PASS	Verify Team is Ready for Inspection	Rule #
	Is your ROBOT present and ready for inspection? *Inspector Note: A team may only inspect and play matches with one robot at an event*	I301 E117
	Have you brought every MECHANISM and COMPONENT you might use at this event?	I301
	Do you have ROBOT SIGNS for both ALLIANCE colors? *Inspector Note: Must be able to show 2 Red/Blue (reversible/swappable both allowed).*	R401
	Do you have your complete OPERATOR CONSOLE (DRIVER STATION, gamepads, etc.)?	I301
	Is the ROBOT and DRIVER STATION powered on?	I301

☑ PASS	Control System	Rule #
	Can you show me the ROBOT CONTROLLER device on your robot? *To PASS: Maximum one REV Control Hub OR Android smartphone, and one optional REV Expansion Hub.*	R701
	If you are using a coprocessor or robot vision camera, are you using the manufacturer-installed software without any modifications? *To PASS: Answer YES; Teams are not allowed to modify software on coprocessors (except for LimeLight 3A).*	R702
	Are you using any USB connections on your robot? *To PASS: Only USB webcams, optical vision sensors, USB hubs, USB switches, Android smartphone, or REV Expansion Hubs may be connected via USB.*	R707
	Can you show me your DRIVER STATION device? *To PASS: Maximum one DS device in use (unconnected spares okay). Can be a REV Driver Hub or any Android Device. USB cables/hubs/power banks are okay. No limit on number/type of wired gamepads.*	R901
	Is the OPERATOR CONSOLE touchscreen visible and accessible for FIELD STAFF? *To PASS: Touchscreen must always be accessible to FIELD STAFF during a MATCH.*	R902
	Do the two self-inspect screens on the OPERATOR CONSOLE show any errors? *To PASS: On the Driver Station, tap the options menu (tap upper triple dots, then 'Self-Inspect'). No icons should be red (X) in both the DRIVER STATION and ROBOT CONTROLLER sections. If completing inspection in FTC Live on a device with a camera, scanning the QR code on the self-inspect page is recommended.*	R711

☑ PASS	Sizing	Rule #
	Can you show me your ROBOT's STARTING CONFIGURATION? *To PASS: ROBOT must fit within an 18 in. (45.7 cm) cube. ROBOT should be able to maintain STARTING CONFIGURATION. The ROBOT may use powered servos or software to hold its STARTING CONFIGURATION.*	R102 R103
	Can you show me your ROBOT's maximum mechanical extension? *To PASS: ROBOT must not be capable of extending outside an 18 in. (45.70 cm) by 24 in. (61.0 cm) horizontal by 29 in. (73.65 cm) tall sizing volume. ROBOT should be in a stable/natural position (wheels touching floor)*	R105
	Can you show me your OPERATOR CONSOLE? *To PASS: OPERATOR CONSOLE must stay within 3ft (91.4 cm) wide, 1ft 6in (45.7 cm) deep and 2 ft (61.0 cm) tall. Excludes items held or worn by the DRIVE TEAM during a MATCH.*	R903

☑ PASS	ROBOT Main Power	Rule #
	Do you have exactly one unaltered main battery installed in the ROBOT from the legal list? *To PASS: Battery does NOT need to be securely mounted, but INSPECTOR should warn that if the battery becomes a hazard the ROBOT may be DISABLED during a MATCH (G412.B).*	R601
	Do you have exactly one legal main power switch directly connected to the battery? *To PASS: Switch must be one of the legal Main Power Switches and be safely accessible to the team. It does not need to be accessible to field personnel during the MATCH.*	R603
	Have you replaced the fuses in any of your batteries? *To PASS: If yes, replacement fuses must be the same rating or lower Amperage value than the original (20A). Self-resetting fuses are not allowed.*	R604
	Can you show me the 12V main power line? *To PASS: Positive +12V must be red, yellow, white, brown, or black-with-stripe and negative (common/GND) must be black or blue.*	R610

☑ PASS	Additional Power Sources (conditional)	Rule #
	Do you have any other batteries onboard your ROBOT? ***Rest of section is skipped when this is not checked.***	
	What are the other batteries powering? *To PASS: Other batteries are only allowed for self-contained peripheral devices and LEDs only, with exception for powered USB Hubs and ROBOT CONTROLLER smartphones. No actuators.*	R601
	Can you show me the other batteries? *To PASS: COTS USB battery packs with a capacity of 100Wh or less (27,000mAh at 3.7V), with 5V/5A max output or 12V/5A max output using USB-PD per port, and batteries integral to a self-contained devices such as camera (e.g., GoPro-style camera) may be used*	R602

☑ PASS	Motors, Servos, and Actuators	Rule #
	Can you point out all the motors on your ROBOT? *To PASS: The ROBOT must have no more than eight legal motors.*	R501, R503
	Can you point out all the servos on your ROBOT? *To PASS: The ROBOT must have no more than eight servos that meet specs.*	R502, R503
	Are any of your motors, servos, or actuators modified? *To PASS: Only labels, maintenance, repairs, and specific configuration changes are allowed.*	R504
	What power regulating devices are you using for motors/servos? *To PASS: The only power regulating devices for actuators permitted on the ROBOT are from goBILDA, REV, and Studica. There is a two servo/port load limit.*	R505
	Does your robot use any relays, electromagnets, or electrical solenoid actuators? *To PASS: Cannot use relays, electromagnets, or electrical solenoid actuators.*	R506

☑ PASS	Other Electrical	Rule #
	If you are using any powered USB hubs on your ROBOT, can you show me how they are powered? *To PASS: Must be powered by COTS USB battery pack or 5V auxiliary power port on the REV Expansion Hub or REV Control Hub*	R611
	Can you show me how you are grounding the electronics to the frame, if at all? *To PASS: Approved configuration is REV or Andy Mark resistive grounding strap or SWFYT cable, connected to a fully COTS COMPONENT with a XT30 connector.*	R605
	Do you have any CUSTOM CIRCUITS on your robot? *Inspector note: CUSTOM CIRCUITS could be custom devices (LED controllers), sensors, etc.* *To PASS: CUSTOM CIRCUITS, if they have any power output, may only provide/output more than 5V to other electronics only if they are powering LEDs.*	R607, R612

☑ PASS	Laser Safety (conditional)	Rule #
	Are there any lasers on your robot? *Inspector note: Most Time-of-Flight distance sensors (range sensors) have lasers.* ***Rest of section is skipped when this is not checked.***	
	Is the laser part of a sensor? *To PASS: The laser cannot be a handheld laser pointing device.*	R710.A
	Is the laser rated as IEC/EN 60825-1 "Class I" or IEC/EN 62471 "Exempt"?	R710.B
	Is the laser using non-visible spectrum?	R710.C

☑ PASS	Video Recording (conditional)	Rule #
	Do you have a video recording device on your ROBOT? *Inspector note: GoPro or similar camera.* ***Rest of section is skipped when this is not checked.***	R709
	Does the recording device have all wireless communication turned off or disabled? *To PASS: Wireless communication must be off/disabled (Includes Wi-Fi and Bluetooth).*	R709

☑ PASS	Fair Play & Safety	Rule #
	Does your ROBOT have any COMPONENTS that could harm people, damage the ARENA, or damage other ROBOTS? *To PASS*: Answer NO	R201
	Does your ROBOT or OPERATOR CONSOLE have any COMPONENTS that could be unsafe or interfere with the operations of other ROBOTS or FIELD STAFF? *To PASS: the ROBOT should be safe, not interfere with another team's remote sensing capabilities, or interfere with or distract FIELD STAFF.*	R202
	Does your ROBOT have any game-solving or multiple degree-of-freedom COTS MECHANISMS? *To PASS: Must not have prohibited COTS mechanisms; COTS MECHANISMS included in legal drive CHASSIS kits and official FIRST Tech Challenge StarterBots **are** allowed.*	R301, R303
	Does your ROBOT use any pneumatic devices such as vacuums, high-speed blowers, or pneumatic actuators? *To PASS: Must not use pneumatics; exceptions include COTS closed-air systems which are pre-charged by the manufacturer (such as gas shocks or air-filled wheels)*	R801

☑ PASS	ROBOT SIGN Rules	Rule #
	Can you show me how you attach ROBOT SIGNS on the ROBOT? *To PASS: Signs must be secure and placed on 2 or more locations on the robot, >= 90 degrees apart. Signs should minimally be 6.5 inches (16.5 cm) wide and minimally be 2.5 inches (6.4 cm), but minor variations that do not materially affect the size or visibility of the sign are acceptable. Teams are permitted to have more than 2 ROBOT SIGNS.*	R401
	Is your team number and ALLIANCE color on all ROBOT SIGNS and clearly legible? *To PASS: ROBOT SIGNS must display the correct ALLIANCE color and team number legibly when standing approximately 12 feet (4 meters) from the robot. Reversible or configurable ROBOT SIGNS must not allow the opposite ALLIANCE color to be visible to FIELD STAFF.*	R402, R403

☑	Team Reminders	Rule #
	Be Good People Who Follow The Rules	
	Have Fun	
	Any questions?	
	Good luck	

☐ PASS

☐ INCOMPLETE