

## Team Update 00

### General

Team Update 00 is provided as a quick reference of evergreen rule changes. The approach taken in this Team Update is to describe changes to content only. Editorial changes to verbiage, rule and section references, game specific examples that relate to evergreen content, and formatting changes are not described.

As always, it's important to read the whole manual at least once and become an expert on sections of the manual that directly relate to your role and responsibilities on your team. Teams are welcome to ask (thoughtful, informed) questions through the [official Q&A system](#), opening at noon (Eastern time) on January 8<sup>th</sup>, 2025.

### Game Manual

#### General Updates

- The terminology for FOUL has been updated to MINOR FOUL, TECH FOUL has been updated to MAJOR FOUL, and GAME PIECE has been updated to SCORING ELEMENT to better align terminology between *FIRST* Tech Challenge and *FIRST* Robotics Competition.
- The terminology for FRAME PERIMETER has been updated to ROBOT PERIMETER.
- Violation wording style has been updated. Violations are stated in the first sentence. Any exceptions or additions to the first violation are noted with in subsequent sentences. All violations are per instance unless otherwise noted.
- Changes to evergreen content (i.e. rules with green headlines) are described below. Sections are presented according to the 2025 manual presentation, and rule references present the 2025 rule number first followed by the 2024 rule number as a reference.

#### Section 6 Game Details

- **Section 6.6** Table 6-3 Rule Violations has been updated and VERBAL WARNING added
- **Section 6.6.2 YELLOW and RED CARD application** card application timing has been consolidated prior to Qualification MATCHES.

#### Section 7 Game Rules

- **G203 → G203, Asking other teams to throw a MATCH – not cool.**  
**G204 → G204, Letting someone coerce you into throwing a MATCH – also not cool.**  
**G205 → G205, Throwing your own MATCH is bad.**
  - The violation changed from “Verbal warning, plus YELLOW CARD if subsequent violations during the event” to “**VERBAL WARNING. RED CARD if subsequent violations during the event**”
- **G206 → G206, Don't violate rules for RPs.**
  - Rule language has been updated to prohibit teams from colluding with *any* other team.
- **G207 → G207, Don't abuse ARENA access.**
  - The violation changed from “YELLOW CARD” to “**VERBAL WARNING. YELLOW CARD if subsequent violations during the event.**”
- **G208 → G208, Show up to your MATCHES.**

- Figure 7-1 has been updated to match the change made to I102.
- **G210 → G211, Don't expect to gain by doing others harm.**
  - The violation changed from “FOUL, plus TECH FOUL if REPEATED.” to “**MAJOR FOUL. YELLOW CARD if REPEATED.**”
- **G303 → G303, Start your ROBOTS.**
  - Violation has been updated from “If fix is a quick remedy, the MATCH won't start until all requirements are met. If it is not a quick remedy, DISABLED and, at the discretion of the Head REFEREE, must be re-inspected. If a ROBOT not compliant with part B participates, its ALLIANCE receives a RED CARD. If a ROBOT not compliant with part C participates, its team receives a RED CARD.” to “If fix is a quick remedy, the MATCH won't start until all requirements are met. If it is not a quick remedy, DISABLED and, at the discretion of the Head REFEREE, must be re-inspected. If a ROBOT not compliant with part B or C participates, its team receives a RED CARD.”
- **G407 → G406, Keep SCORING ELEMENTS in bounds.**
  - Violation has been updated from “TECH FOUL per NOTE” to “**MINOR FOUL. If REPEATED, MAJOR FOUL.**”
- **G425 → G420, There's a 3-count on PINS.**
  - Rule language and violation has been updated to change 5 seconds to 3 seconds.
- **N/A → G434, COACHES, SCORING ELEMENTS are off limits.**
  - This rule has been readded for the 2025 season.

## Section 8 ROBOT Construction Rules

- The terminology for FRAME PERIMETER has been updated to ROBOT PERIMETER.
- **Section 8.4 BUMPER Rules** has been re-written to attempt to make BUMPERS easier for teams to construct and provide options to increase protection. For more information about the motivation behind these changes, see [this document previously shared in a blog](#).
- **R101, ROBOT PERIMETER must be fixed.**
  - Example updated to a more realistic robot
- **R103, ROBOT weight limit.**
  - Robot weight reduced from 125 lbs. to 115 lbs.
- **R302, MAJOR MECHANISM, from this year only.**
  - This rule has been re-written from prohibiting FABRICATED ITEMS created before Kickoff with limited exceptions to only prohibiting MAJOR MECHANISMS created before Kickoff.
- **R304, During an event, only work during pit hours.**
  - Exceptions modified to be stated directly rather than referring to R302 where they no longer appear
- **R501, Allowable motors.**
  - Added CTR Electronics Minion, West Coast Products Kraken x44. These motors were also added to the table in **R505**.
  - Servo requirements changed from <\$75 to rotational servos with stall current ≤ 4A and mechanical output power ≤ 8W at 6V. Linear servos with max stall current ≤ 1A at 6V.
  - Electrical solenoid actuators and electromagnet requirements updated to allow any device downstream of a 20A breaker. These items were combined with the linear actuator line.
- **R504, Power (most) actuators off of approved devices**

- Added Koors40, TalonFXS, and Thrifty Nova motor controllers. Added REV Servo Hub servo controller, and to the list in **R506**.
- **Section 8.6 Power Distribution**
  - Rules updated throughout to include the CTR Electronics PDP 2.0
- **R602, Other batteries for cameras or computers only.**
  - Battery restrictions modified to 100Wh or less (27000mAh at 3.7V) with 5V/5A max output or 12V/5A max output using USB-PD per port. Batteries for powering CMOS/RTC feature no longer required to be coin cell.
- **R609, Connect main power safely.**
  - Updated to permit SB120 to SB50 adapters
- **R614, No high voltage allowed**
  - Updated to specify only measurable voltages are limited to 24V and to allow COTS Power over Ethernet devices as an exception.
- **R619, Only use specified circuit breakers in PDP/PDP2.0/PDH.**
  - Updated to permit ATM circuit breakers with values equal or less than the fuses permitted in R620.
- **Section 8.7 Control, Command & Signals System**
  - Rules **R702 to R704** updated to reflect the use of the Vivid Hosting VH-109 radio at most events and the OpenMesh OM5P radios at limited events.
  - Includes an increase in bandwidth limit to 7Mbps/second for events using VH-109 radios
- **R701, Control the ROBOT with a roboRIO.**
  - Updated to reflect current season roboRIO image 2025\_v2.0
- **R707, Limited wireless allowed**
  - Updated to allow RFID or NFC devices completely within the robot
- **R716 → N/A, Connect the PDP/PDH to the roboRIO CAN bus.**
  - Removed
- **R901, Use the specified Driver Station Software.**
  - Updated to the 2025 Driver Station version, 25.0
- **R907, No AC inverters**
  - New rule prohibiting AC inverters on OPERATOR CONSOLES

## Section 9 Inspection & Eligibility

- **I102 → I102, Get Inspected before playing a Qualification/Playoff MATCH**
  - Violation has been updated from “If prior to the start of the MATCH, the team is DISQUALIFIED and not eligible to participate in the MATCH. If after the start of the MATCH, the entire ALLIANCE receives a RED CARD for that MATCH.” to “If prior to the start of the MATCH, the team is DISQUALIFIED and not eligible to participate in the MATCH. If after the MATCH, the team receives a RED CARD and the MATCH may be replayed per T201”.

## Section 10 Tournaments

- **Section 10.6.1 ALLIANCE Selection Process** has been updated as announced in [this blog](#).

## Section 11 District Tournaments

- **Section 11.3** has been updated to clarify that the process for assigning teams to divisions balances need for accessible seating between divisions.

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## Section 12 Regional Tournaments

- **Section 12** is new and describes the new process for Regional teams advancing to the *FIRST* Championship as announced in [this blog](#).

## Section 13 *FIRST* Championship

- **Section 13** has been updated to clarify that the process for assigning teams to divisions balances need for accessible seating between divisions.

## Section 14 Event Rules

- **E116** is a new rule outlining that only COTS batteries are allowed at events.
- **G209 → E117 Enter only 1 ROBOT.**
  - This rule has been moved to the event rules section.
- **E304** has been removed.
- **E403 → E403, Load-In Restrictions**
  - Rule language has been updated to allow ROBOT and BUMPER weighing to the permitted activities (if available at your event).
- **Section 14.6 Practice Areas** is an entirely new section with rules for using Practice Areas at events.
  - **E601 → E117 Inspection for Practice Fields.**
  - **E602 → E107 Practice Only when/where permitted.**
    - These rules have been moved to the new section.