

## Team Update 05

### General

N/A

### Competition Manual

#### 6.1 Team Judged Awards Overview and Schedule

All award winners chosen by the JUDGES are recognized as being positive examples of the award **guidelines criteria**, not necessarily the “best” team. **JUDGES will only consider the published award criteria in section 6.3 Team Judged Award Descriptions.**

##### 6.1.2 Structured Interview

Teams are encouraged to review the [Judge Interview Question Bank](#) (~~link coming soon~~) prior to their judging interviews to understand the type of questions that may be asked by the JUDGES.

##### 6.1.3 Pit Interview(s)

JUDGES may read additional information during pit interviews but will not bring back additional printed content to be referenced as part of the JUDGE deliberations.

#### 6.2 Team Judged Award Rules

**A210 \*No Photos, Video or Audio recording during structured interview.** In addition to the restrictions of [E117](#), teams may not record any **no recording of** video or audio, **or photos may be taken** during their structured interview.

#### 9.3 Areas, Zones, & Markings

*Figure 9-2 has been adjusted to more clearly indicate that DEPOT lines are also LAUNCH LINES.*

#### 10.5 Scoring

##### 10.5.2 PATTERN Scoring Criteria

*Figure 10-5 has been adjusted to remove the word “CLASSIFIED” to reflect changes made in Team Update 04.*

## 11.4 In-MATCH

### 11.4.2 TELEOP

**G404** **\*ROBOTS are motionless at the end of TELEOP.** ROBOTS must no longer have powered movement after the end of TELEOP until the Head REFEREE or their designee signals that teams may retrieve their ROBOTS.

*Violation: MINOR FOUL. MAJOR FOUL per ARTIFACT if ROBOT LAUNCHES an ARTIFACT such that it enters the open top of a the GOAL after the end of TELEOP. MAJOR FOUL or if ROBOT contacts a GATE after the end of TELEOP.*

## 12.2 ROBOT Safety & Damage Prevention

**R207** **\*No air power on the ROBOTS don't use air.** ROBOTS are restricted in their use of air in the following ways:

- A. ROBOTS may not use any closed air devices such as but not limited to pneumatic solenoids or cylinders, gas storage vessels, gas springs, compressors, or vacuum generating devices. Air-filled (pneumatic) wheels are exempt from this rule.
- B. ROBOTS may not use any device which creates high-speed airflow, except COTS computing devices manufactured with integrated cooling fans.

Examples of a "device which creates high-speed airflow" include but are not limited to a fan designed to move SCORING ELEMENTS on the FIELD.

High-speed flywheels or rollers used for manipulating SCORING ELEMENTS would not on their own be considered a high-speed airflow device.

## 13.2 General Tournament Rules

**T205** **\*During optional FIELD measurement and calibration time(s) ROBOTS may not practice on the FIELD.** During any period when the ARENA is open for measurement, ROBOTS may run OpModes but cannot move the ROBOT (e.g., CHASSIS) under its own power around the FIELD.

*Violation: VERBAL WARNING. YELLOW CARD if subsequent violations occur during the event.*

...

Subsequent or egregious violations of this rule will be considered egregious behavior under [G211](#).

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## Team Update 04

### General

N/A

### Competition Manual

#### 3.3 MATCH Eligibility Rules

An [Inspection Checklist](#) (link coming soon) is available to help teams self-inspect their ROBOT before their event. Teams are strongly encouraged to self-inspect prior to their event.

#### 6 Awards

Teams may also read the [Judge and Judge Advisor Manuals](#) to gain more insight into the complete judging process. Teams are also encouraged to review the [Outreach Terms and Definitions Document](#) to ensure all teams can clearly communicate with judges and our community the great things they do to grow FIRST.

##### 6.1.4 Sustained Outreach and Demonstrating Impact by Numbers

Teams are encouraged to review the [Award-Outreach Terms and Definitions Document](#) to understand the requirements behind specific terms (starting a FIRST team, running an event, reaching x number of people). JUDGES may ask specific questions when a specific term listed in this document is mentioned in a team's PORTFOLIO or during an interview.

#### 10.5.4 Point Values

Table10-2: DECODE point values

		MATCH points		RANKING POINTS
		AUTO	TELEOP	
PATTERN	CLASSIFIED ARTIFACT matches MOTIF	2	2	

#### 11.4.6 Human

##### G431 \*DRIVE TEAMS, watch your reach. ...

Exceptions are granted in cases concerning safety and for actions that are inadvertent, MOMENTARY, and inconsequential.

For [G431.A](#), the penalty is applied to the DRIVE TEAM member regardless of whether the DRIVE TEAM member or ROBOT initiates contact. to the team which:  
A. the ROBOT involved belongs, if the contact occurs in the LOADING ZONE, or  
B. the human involved belongs, if the contact occurs outside the LOADING ZONE.

Impacting ARTIFACT scoring includes, but is not limited to:

A. Contacting an ARTIFACT LAUNCHED by the opponent within the FIELD

- B. Contacting an ARTIFACT in the opponent's GOAL
- C. Disrupting the scoring of an ARTIFACT on the opponent's RAMP or by operating the opponent's GATE
- D. A DRIVE TEAM member LAUNCHING an ARTIFACT into a GOAL

**G432** Humans, only ~~take from~~ meddle with ARTIFACTS in the LOADING ZONE. DRIVE TEAM members may only retrieve ARTIFACTS from the FIELD or move ARTIFACTS within the FIELD as follows:

- A. only ARTIFACTS that are in the LOADING ZONE,
- B. only during TELEOP, and
- C. without causing any ARTIFACTS to leave the LOADING ZONE and enter the rest of the FIELD.

*Violation: MINOR FOUL per ARTIFACT.*

**G434** The ALLIANCE AREA has a storage limit. During TELEOP, each ALLIANCE may not store more than 6 ARTIFACTS off the FIELD out of play. DRIVE TEAM members making a good-faith effort to immediately enter additional ARTIFACTS into the FIELD back into play is an exception to this rule.

*Violation: MINOR FOUL per ARTIFACT over the limit and an additional MINOR FOUL per ARTIFACT over the limit for every 3 seconds in which the situation is not corrected.*

The intent of this rule is to prevent an ALLIANCE from starving the FIELD of ARTIFACTS during TELEOP.

Examples of "out of play" include, but are not limited to:

- A. A DRIVE TEAM member holding an ARTIFACT inside or outside of the FIELD
- B. A DRIVE TEAM member storing an ARTIFACT outside the FIELD

During AUTO and transition, this rule is not enforced. Upon the start of TELEOP, DRIVE TEAM members must make a good-faith effort to immediately enter ARTIFACTS into the FIELD until compliant with [G434](#).

Teams will not be in violation of this rule if FIELD STAFF return ARTIFACTS to the DRIVE TEAM that have left the FIELD per section [10.8 Other Logistics](#) such that the ALLIANCE holds a number of ARTIFACTS over the limit. However, if the DRIVE TEAM does not then make a good-faith effort to immediately enter ARTIFACTS into the FIELD until compliant with [G434](#), they will be in violation of this rule.

DRIVE TEAM members must keep ARTIFACTS accessible. DRIVE TEAM members intentionally losing access to ARTIFACTS, e.g., by purposefully removing them from the FIELD and ALLIANCE AREA, will be considered egregious behavior and handled per [G211](#).

## Team Update 03

### General

N/A

### Competition Manual

## 6.3 Team Judged Award Descriptions

### 6.3.4 Reach Award

Table 6-5 Reach Award Criteria

Reach Award Criteria		
Required	1	Team must discuss, describe, display, or document their outreach objectives and how their outreach activities support the FIRST community.

## 10.8 Other Logistics

SCORING ELEMENTS that leave the FIELD will be returned to the closest available DRIVER or HUMAN PLAYER DRIVE TEAM member at the earliest safe opportunity by FIELD STAFF. Reintroduction of SCORING ELEMENTS must follow rule [G433](#).

## 11.2 Conduct

**G202 \*DRIVE TEAM Interactions.** Opposing ALLIANCE'S DRIVE TEAM members cannot distract/interfere with the opposing ALLIANCE. This includes taunting or other disruptive behavior.

## 11.4 In-MATCH

### 11.4.1 AUTO

**G402 No AUTO opponent interference.** ...

Violation: MAJOR FOUL per instance of ROBOT contact in G402.A and MAJOR FOUL per ARTIFACT in G402.B.

### 11.4.4 ROBOT

**G417 ROBOTS only operate GATES as directed. may not contact the opposing ALLIANCE'S GATE.** ROBOTS may not:

- A. contact, either directly or transitively through a SCORING ELEMENT, an opposing ALLIANCE'S GATE, or
- B. apply any closing force to either GATE.

Violation: MAJOR FOUL and the opposing ALLIANCE is awarded the PATTERN RP if G417.A.

### 11.4.6 Human

**G433 Humans may not yeet SCORING ELEMENTS.** DRIVE TEAM members may only enter ARTIFACTS onto the FIELD as follows:

- A. only during TELEOP,
- B. without LAUNCHING, **bouncing**, or rolling,
- C. without using a tool ~~unless allowed under G302~~, and
- D. only ~~via the LOADING ZONE~~ by either:
  - i. directly placing the ARTIFACT into the LOADING ZONE **such that it does not leave the LOADING ZONE before coming to rest**, or
  - ii. into a ROBOT that is in the LOADING ZONE such that the ARTIFACT is fully supported **either directly or transitively** by the ROBOT.

*Violation: MAJOR FOUL per ARTIFACT.*

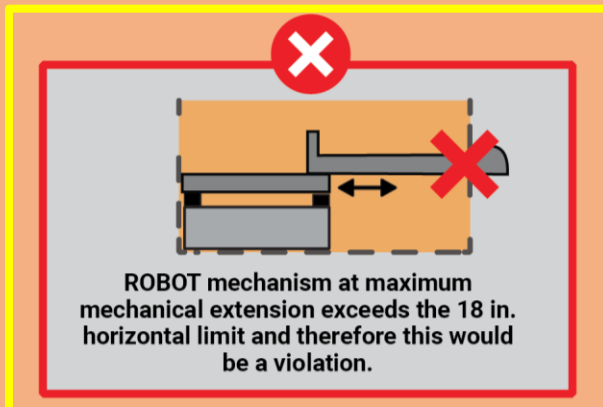
## 12.1 General ROBOT Design

**R105 There are expansion limits. ...**

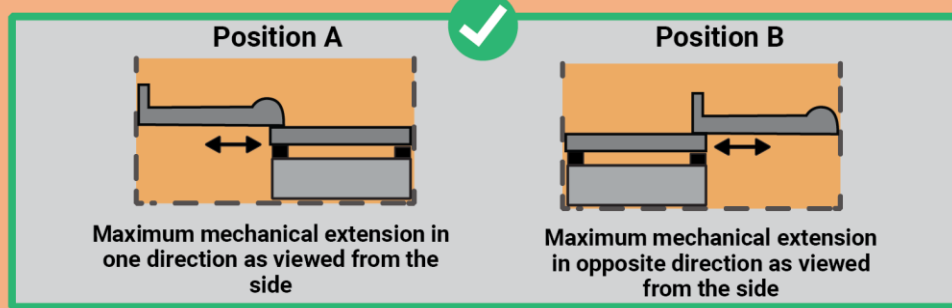
Any extension beyond the maximum expansion limit during ROBOT operation is considered a violation of this rule. This includes flexible extensions (e.g., surgical tubing flappers, star intakes) that cause the ROBOT to exceed the expansion limit.

Teams should be prepared to show compliance with this rule and demonstrate their ROBOT expansions during the inspection process. During inspection, each team will be asked to show the ROBOT'S STARTING CONFIGURATIONS and additionally its configurations at maximum mechanical extensions. Software limits are not sufficient to demonstrate maximum extensions.

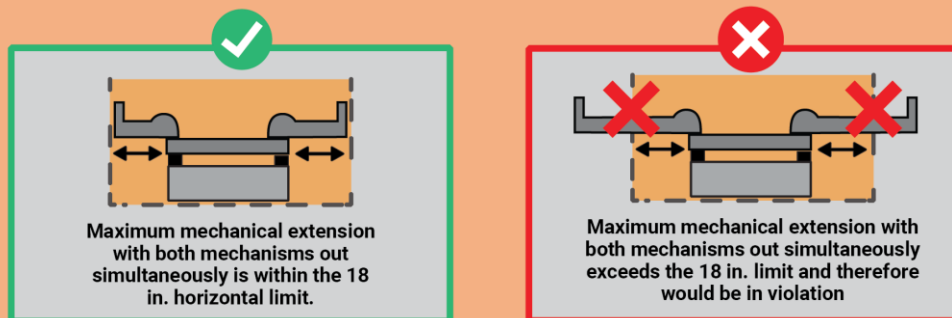
**ROBOTS must show their maximum mechanical extensions during the inspection process. A ROBOT that can mechanically exceed the horizontal limit would be in violation even if the ROBOT has software limiting the position of the extension during the MATCH.**



**A ROBOT with a single mechanism that can extend out of both sides of a ROBOT would be allowed as long as the overall horizontal dimension at maximum mechanical extension does not exceed 18 in.**



A ROBOT with multiple mechanisms that are not mechanically linked that can extend out of both sides of a ROBOT simultaneously would NOT be allowed if the overall horizontal dimension at maximum mechanical extension exceeds the 18 in. limit.



At maximum extension, a ROBOT in compliance will not exceed the maximum allowable vertical extension of 38 in. (96.50 cm) in one direction while maintaining the horizontal expansion requirements of 18 in. (45.70 cm) length and width perpendicular to the vertical height.

Teams are responsible for maintaining compliance with expansion limits and subject to penalties listed in [G414](#) and [G415](#) for any violations during the MATCH.

## Team Update 02

### General

#### Animation Awards Blog and Information

2025-26 season information about the Digital Animation Award sponsored by Worcester Polytechnic Institute (WPI) and the Safety Animation Award sponsored by UL Solutions has been published. For more details see additions to the Competition Manual in section 6.6 Project-Based Global Awards as shown below and read the [Animation Awards for the FIRST AGE Season Blog](#).

### Competition Manual

#### 6.6 Project-Based Global Awards

##### 6.6.1 Digital Animation Award sponsored by Worcester Polytechnic Institute (WPI)

This award, sponsored by Worcester Polytechnic Institute (WPI), celebrates STEAM (Science, Technology, Engineering, Art, and Mathematics) and emphasizes the ability to tell a story through animation that integrates technological, social, and humanistic concepts.

The 2026 Digital Animation Award is offered to help encourage students to cultivate skills in design and creation of animation while telling a story about the impact of technology on society. This award is open to all FIRST Robotics Competition teams and FIRST Tech Challenge teams and is optional. More information can be found on the [Digital Animation Award webpage](#).

Specific award criteria and deadlines will be available after Kickoff. Check out [last year's submission requirements](#) and the [2025 Digital Animation Award Winners](#) to learn more about this award.

##### 6.6.2 Safety Animation Award sponsored by UL Solutions

The 2025-26 theme for the Safety Animation Award, sponsored by UL Solutions, is: Unearth Safety! For this animation teams are invited to dig deep to uncover impactful ways to implement safe and sustainable practices. Use bold storytelling and imaginative artistry to create a memorable message that inspires responsible exploration and careful stewardship of our resources. More information can be found on the [Safety webpage](#).

**NEW!** For the 2025-26 Season, each FIRST Tech Challenge team will also be able to submit for the Safety Animation Award sponsored by UL. Specific submission details will be available after Kickoff.

To learn more now, check out the [2025 FIRST Robotics Competition Safety Animation Award](#) winner details.

#### 9.10 AprilTags

Figure 9-18 has been adjusted to correct error in TAG ID from 33 -> 23.



### 11.3 Pre-MATCH

#### G301 \*Be prompt. ...

...

In general, good faith efforts to quickly become MATCH ready are entirely for the purposes of transitioning the ROBOT into a MATCH ready state (i.e., not attempts to significantly alter a ROBOT'S capabilities.) Examples of good faith efforts to quickly become MATCH ready include but are not limited to:

- A. walking safely towards the FIELD with a ROBOT that a team is not actively modifying.
- B. applying quick fixes such as tape or cable ties to make the ROBOT compliant with STARTING CONFIGURATION requirements.
- C. waiting for a DRIVER STATION device to boot.
- D. actively working with field technical staff, including the FTA, to resolve an issue in a reasonable amount of time.
- E. performing a MOMENTARY "wiggle test" to confirm communication between the DRIVER STATION and the ROBOT CONTROLLER. The ROBOT should not drive or interact with SCORING ELEMENTS (except contact with pre-loaded ARTIFACTS) while performing this test.

#### 11.4.4 ROBOT

**G418 ROBOTS may not meddle with ARTIFACTS on RAMPS.** ROBOTS may not contact, either directly or transitively through a SCORING ELEMENT CONTROLLED by the ROBOT, ARTIFACTS on a RAMP, including their own RAMP. Additionally, ROBOTS may not:

- A. ~~descore~~ remove an ARTIFACT from their own RAMP except by operating the GATE, or
- B. ~~descore~~ remove an ARTIFACT from the opponent's RAMP.

*Violation: MAJOR FOUL per ARTIFACT, and the ALLIANCE is ineligible for the PATTERN RP if [G418.A](#), or the opposing ALLIANCE is awarded the PATTERN RP if [G418.B](#).*

**G432 Humans only take from the LOADING ZONE.** DRIVE TEAM members may only retrieve or move ARTIFACTS from the FIELD as follows:

- A. only ARTIFACTS that are in the LOADING ZONE, and
- B. only during TELEOP.

*Violation: MINOR FOUL per ARTIFACT.*

DECODE is a fast-paced game and teams should practice coordination and communication between the DRIVE TEAM members to avoid unintentional contact between the ROBOT and any humans in violation of [G431.A](#).

This violation can stack. A DRIVE TEAM member that retrieves an ARTIFACT from outside the LOADING ZONE during AUTO would receive 2 MINOR FOULS.

**G433** **Humans may not yeet SCORING ELEMENTS.** DRIVE TEAM members may only enter ARTIFACTS onto the FIELD as follows:

- A. only during TELEOP,
- B. without LAUNCHING or rolling,
- C. without using a tool unless allowed under [G302](#), and
- D. only via the LOADING ZONE by either:
  - i. directly placing the ARTIFACT into the LOADING ZONE, or
  - ii. into a ROBOT that is in the LOADING ZONE such that the ARTIFACT is fully supported by the ROBOT.

Violation: MAJOR FOUL **per ARTIFACT**.

DRIVE TEAM members may load SCORING ELEMENTS into a ROBOT. DECODE is a fast-paced game and teams should practice coordination and communication between the DRIVE TEAM members to avoid unintentional contact between the ROBOT and any humans, in violation of [G431.A](#).

~~This violation can stack. A DRIVE TEAM member that enters an ARTIFACT into the FIELD outside the LOADING ZONE during AUTO would receive 2 MAJOR FOULS.~~

**G434** **The ALLIANCE AREA has a storage limit.** **During TELEOP**, each ALLIANCE may not store more than 6 ARTIFACTS off the FIELD. DRIVE TEAM members making a good-faith effort to immediately enter additional ARTIFACTS into the FIELD is an exception to this rule.

Violation: MINOR FOUL per ARTIFACT over the limit and an additional MINOR FOUL per ARTIFACT over the limit for every 3 seconds in which the situation is not corrected.

The intent of this rule is to prevent an ALLIANCE from starving the FIELD of ARTIFACTS during TELEOP. **During AUTO and transition, this rule is not enforced.** Upon the start of TELEOP, DRIVE TEAM members must make a good-faith effort to immediately enter ARTIFACTS into the FIELD until compliant with G434.

Teams will not be in violation of this rule if FIELD STAFF return ARTIFACTS to the DRIVE TEAM that have left the FIELD per section [10.8 Other Logistics](#) such that the ALLIANCE holds a number of ARTIFACTS over the limit. However, if the DRIVE TEAM does not then make a good-faith effort to immediately enter ARTIFACTS into the FIELD until compliant with [G434](#), they will be in violation of this rule.

DRIVE TEAM members must keep ARTIFACTS accessible. DRIVE TEAM members intentionally losing access to ARTIFACTS, e.g., by purposefully removing them from the FIELD and ALLIANCE AREA, will be considered egregious behavior and handled per [G211](#).

## Team Update 01

### General

N/A

### Competition Manual

#### 9.3 Areas, Zones, & Markings

- **BASE ZONE:** an 18 in. +/- 0.125 in. (45.70 cm +/- 0.30 cm) wide by 18 in. +/- 0.125 in. (45.70 cm +/- 0.30 cm) deep infinitely tall volume bounded by ALLIANCE colored tape. The BASE ZONE is an ALLIANCE specific zone belonging to the matching color ALLIANCE. **The BASE ZONE includes the tape lines (Figure 9-3).**

#### 10.5.2 PATTERN Scoring Criteria

The randomization of the OBELISK during AUTO **prior to the start of the MATCH** selects the MOTIF which is repeated 3 times to define the PATTERN colors for each of the 9 indices on the RAMP (Figure 10-4).

#### 11.4.4 ROBOT

**G418 ROBOTS may not contact meddle with ARTIFACTS on RAMPS.** ROBOTS may not contact, either directly or transitively through a SCORING ELEMENT CONTROLLED by the ROBOT, ARTIFACTS on a RAMP, including their own RAMP. ~~Exceptions are granted for inconsequential and inadvertent contact while operating a GATE.~~ **Additionally, ROBOTS may not:**

- descend an ARTIFACT from their own RAMP, or**
- descend an ARTIFACT from the opponent's RAMP.**

*Violation: MAJOR FOUL per ARTIFACT, **and the ALLIANCE is ineligible for the PATTERN RP if G418.A, or the opposing ALLIANCE is awarded the PATTERN RP if G418.B.***

Exceptions are granted for inconsequential and inadvertent contact made by a ROBOT while operating a GATE.

Example 1: A red ROBOT that contacts an ARTIFACT on the blue RAMP is in violation of this rule and is assessed 1 MAJOR FOUL under G418.

Example 2: A red ROBOT that LAUNCHES an ARTIFACT at an ARTIFACT on the red RAMP, removing it from the RAMP is in violation of this rule. The red ALLIANCE is assessed 1 MAJOR FOUL and is ineligible for the PATTERN RP under G418.A.

**G419 ROBOTS only score LAUNCH into the their own GOAL.** ROBOTS may not:

- intentionally place or LAUNCH ARTIFACTS directly onto the their own RAMP, or**
- place or LAUNCH ARTIFACTS into the opponent's GOAL or onto the opponent's RAMP.**

*Violation: MAJOR FOUL **and the opposing ALLIANCE is awarded the PATTERN RP if G419.B.***

The game intent is for ROBOTS to score by LAUNCHING into the open top of the **their own GOAL**. Attempts to intentionally score points with actions that enter the

ARTIFACT further down on the RAMP are considered violations of this rule. Attempts to score points for the opponent either through the opponent GOAL or with actions that enter an ARTIFACT further down on the opponent RAMP are also considered violations of this rule.

There is no violation for scoring in an opponent's DEPOT.

**G425** **Keep out of opponent's SECRET TUNNEL** A ROBOT in the opponent's SECRET TUNNEL ZONE may not contact, directly or transitively through a SCORING ELEMENT, an opponent ROBOT while in the opponent's SECRET TUNNEL ZONE, regardless of who initiates contact.

## 12.1 General ROBOT Design

**R105** **There are expansion limits.** After the MATCH has started, ROBOTS may expand beyond the STARTING CONFIGURATION but are still subject to sizing constraints relative to the ROBOT, based on the initial STARTING CONFIGURATION. ROBOTS must be physically constrained to fit within these limits without the use of software. The sizing constraints are:

- After the start of the MATCH, ROBOTS may expand horizontally but must remain within a fixed 18 in. (45.70 cm) by 18 in. (45.70 cm) when fully expanded per [G414](#).
- After the start of the MATCH, ROBOTS may expand vertically up to 18 in. (45.70 cm).
- Within the limitations per [G415](#), ROBOTS may expand vertically up to 38 in. (96.50 cm).

Any extension beyond the maximum expansion limit during ROBOT operation is considered a violation of this rule. This includes flexible extensions (e.g., surgical tubing flappers, star intakes) that cause the ROBOT to exceed the expansion limit.

Teams should be prepared to show compliance with this rule and demonstrate their ROBOT expansions during the inspection process. During inspection, each team will be asked to show the ROBOT'S STARTING CONFIGURATIONS and additionally its configurations at maximum mechanical extension. Software limits are not sufficient to demonstrate maximum extensions.

At maximum extension, a ROBOT in compliance will not exceed the maximum allowable vertical extension of 38 in. (96.50 cm) in one direction while maintaining the horizontal expansion requirements of 18 in. (45.70 cm) length and width perpendicular to the vertical height.

Teams are responsible for maintaining compliance with expansion limits and subject to penalties listed in [G414](#) and [G415](#) for any violations during the MATCH.

## Team Update 00

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### General

Team Update 00 is provided as a quick reference of evergreen rule changes from last season, and updates from the V0 Preview Release.

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 Competition 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 view existing questions and answers and to ask thoughtful and informed questions through the [official Q&A system](#) opening September 22, 2025, 12:00p.m. ET. Before asking a question, please review section 1.9 in the Competition Manual for information on what types of questions should be asked.

### Notable Changes from Last Season:

#### Advancement

- New points-based advancement model in Competition Manual section 4 – Advancement. See the [Advancement & FIRST Championship blog](#) for details

#### Awards

- The Formal or Presentation Interview has been renamed to the Structured Interview. The format of the interview has not changed.
- The Motivate Award has been retired. It is replaced by the Reach Award and the Sustain Award.
- PORTFOLIOS for this season may only include content from January 1, 2025 or later.
- A204-C Allows for “show and tell” demonstration items which may include the team’s ROBOT
- Updated descriptions and criteria for other awards

#### Robot Construction Rules

- Maximum number of allowed servos reduced to 10
- Expansion limits are back. See details in R105, G414, and G415.

### Changes from V0 Preview:

#### Section 4 Advancement

- Changed “Qualification Round” Terminology to “Qualification Phase” for clarification
- Corrected references to “ALLIANCE lead”
- Corrected references to “structured interview”

## 6.2 Team Judged Award Rules

**A214** \*Teams cannot win the Inspire Award at multiple Qualifying or League Tournaments. Teams are only eligible to win 1<sup>st</sup> place Inspire Award once per season from any Qualifying or League Tournament. Teams who have won 1<sup>st</sup> place Inspire may not be considered for 1<sup>st</sup>, 2<sup>nd</sup>, or 3<sup>rd</sup> place Inspire at subsequent Qualifying or League Tournaments.

Teams who have won 1<sup>st</sup> Place Inspire are eligible to win 2<sup>nd</sup> or 3<sup>rd</sup> place Inspire Award at subsequent Qualifying or League Tournaments.

## 12.1 General ROBOT Design

Details about DECODE expansion limits have been added. Additional expansion rules G414 and G415 are located in section 11 Game Rules (G).

**R105** **There are expansion limits.** After the MATCH has started, ROBOTS may expand beyond the STARTING CONFIGURATION but are still subject to sizing constraints relative to the ROBOT, based on the initial STARTING CONFIGURATION. The sizing constraints are:

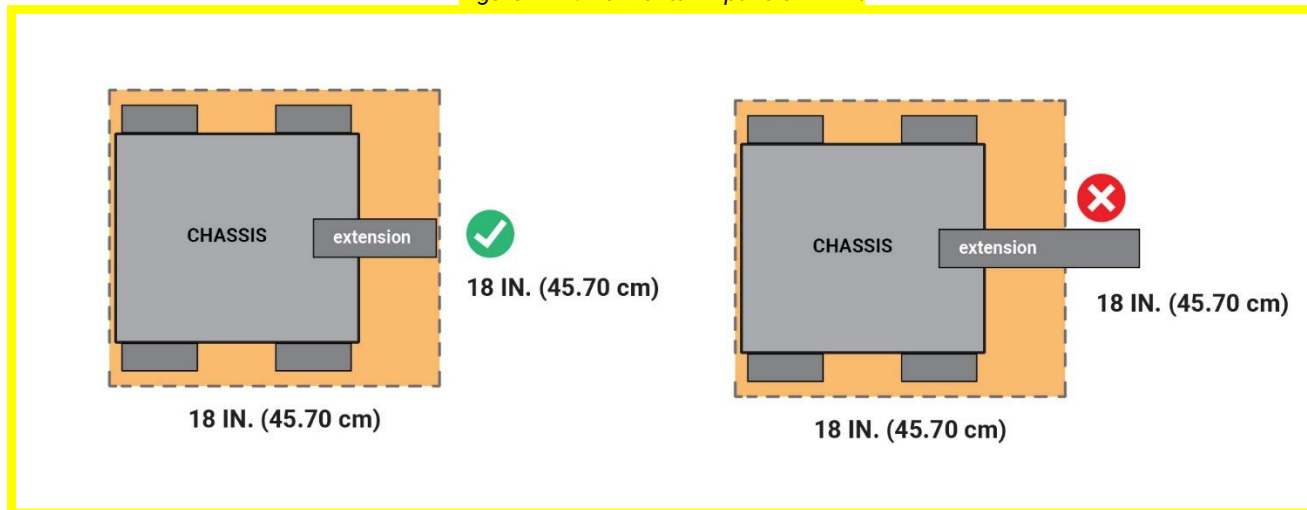
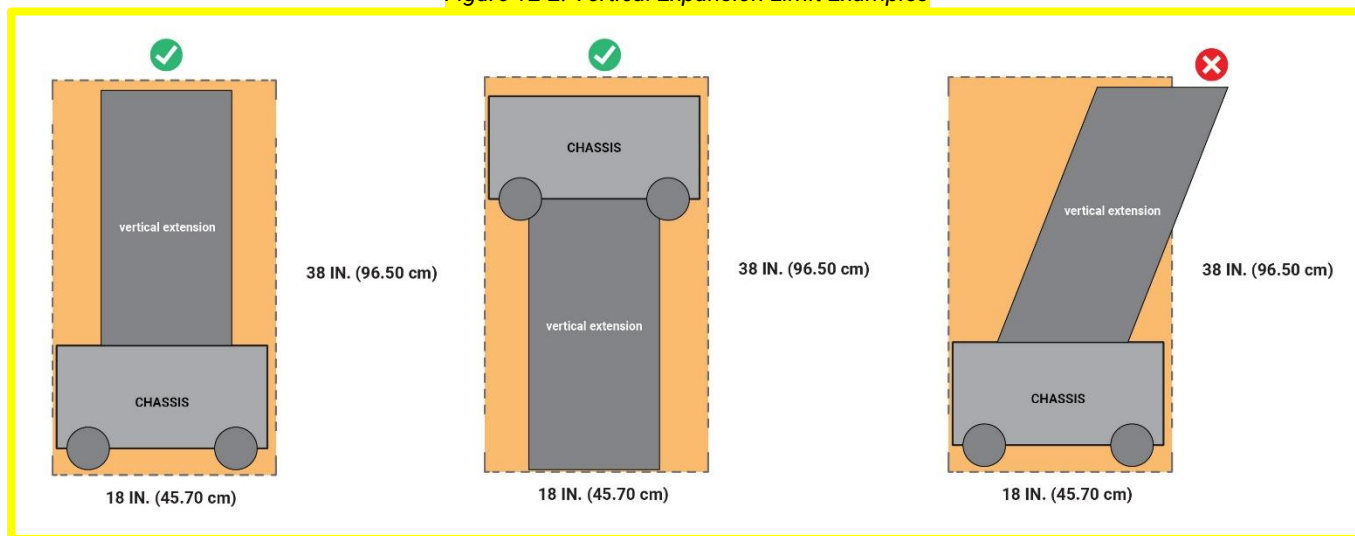
- A. After the start of the MATCH, ROBOTS may expand horizontally but must remain within a fixed 18 in. (45.70 cm) by 18 in. (45.70 cm) when fully expanded per [G414](#).
- B. After the start of the MATCH, ROBOTS may expand vertically up to 18 in. (45.70 cm).
- C. Within the limitations per [G415](#), ROBOTS may expand vertically up to 38 in. (96.50 cm).

Any extension beyond the maximum expansion limit during ROBOT operation is considered a violation of this rule. This includes flexible extensions (e.g., surgical tubing flappers, star intakes) that cause the ROBOT to exceed the expansion limit.

Teams should be prepared to show compliance with this rule and demonstrate their ROBOT expansions during the inspection process. During inspection, each team will be asked to show the ROBOT'S STARTING CONFIGURATIONS and additionally its configurations at maximum extensions.

At maximum extension, a ROBOT in compliance will not exceed the maximum allowable vertical extension of 38 in. (96.50 cm) in one direction while maintaining the horizontal expansion requirements of 18 in. (45.70 cm) length and width perpendicular to the vertical height.

Teams are responsible for maintaining compliance with expansion limits and subject to penalties listed in [G414](#) and [G415](#) for any violations during the MATCH.

**Figure 12-1: Horizontal Expansion Limit**

**Figure 12-2: Vertical Expansion Limit Examples**


## 12.5 Motors & Actuators

### G501 \*Allowable motors.

**Table 12 1: Motor allowances**

Motor Name	Part Numbers Available	Notes
<b>NFR Products</b> Yuksel 12V DC	<b>NFR-600-100-000</b>	
<b>SWYFT Robotics</b> SWYFT Spike Motor	<b>SR-MOTOR-DC-01</b>	



## 12.6 Power Distribution

**R601** \*Battery limit – everyone has the same main ROBOT power.

Table 0-1: Legal ROBOT Main Power Battery Packs

Battery Pack	Part Number	Notes
WATTOS 12V Battery	WT-NMH1230	

**R609** \*Connect the ROBOT battery though the Main Power Switch.

Table 0-2: Legal Power Switches

Power Switch	Part Number
goBILDA Floodgate Power Switch	3103-0005-0001
WATTOS Power Switch Kit	WTS-SW1220

**R615** \*Use appropriately sized wire.

In order to show compliance with these rules, teams should use wire with clearly labeled sizes if possible. If unlabeled wiring is used, teams should be prepared to demonstrate that the wire used meets the requirements of this rule (e.g., wire samples and evidence that they are the required size).

Combining multiple smaller wires in parallel cannot be used to create an equivalent larger wire which meets minimum wire cross section requirements.