Team Update 12

General

Happy RP Threshold Update Day!

We've added new Ranking Point (RP) thresholds for Regional Championships (RCMP), see below for more details.

Anyone who follows our sport knows that *FIRST* Tech Challenge robots vary widely in their on-field performance. This performance also changes significantly over the course of a season.

As seen in section 10.5.4 of the Competition Manual, *FIRST* adjusts the difficulty of achieving Ranking Points to align with how robot capabilities are evolving. To calculate these adjustments, *FIRST* staff members closely evaluated the data from every DECODE match played each week. We then compared scoring trends with historical patterns. We know robots are going to get better at playing DECODE and can estimate how much they'll improve.

Please see the update to Table 10-3 below for the new GOAL RP and PATTERN RP thresholds which will be used at Regional Championship (RCMP) level events. Other events such as League Meets, or Qualifiers will still use the lower thresholds as shown in the "All Other Events" column of Table 10-3.

(…and we can't wait to see how much further we'll need to raise the RPs at the *FIRST* Championship!)

Competition Manual

10.5 Scoring

10.5.4 Point Values

Table 10-3: DECODE RP thresholds

RP Type	*FIRST* Championship	Regional Championships	All Other Events*
MOVEMENT RP	TBA	21	16
GOAL RP	TBA	42	36
PATTERN RP	TBA	22	18

Team Update 11

General

N/A

Competition Manual

9.8 CLASSIFIER

9.8.3 GATE

> The GATE will take variable amounts of time to close. The GATE closing before all CLASSIFIED ARTIFACTS exit the RAMP is not considered an ARENA FAULT, and teams should be prepared to hold the GATE open to fully clear the RAMP. The GATE not closing immediately when released by the ROBOT(but closing eventually) is not considered an ARENA FAULT. During a MATCH, FIELD STAFF may follow steps in the Field Mitigation Guide to mitigate some FIELD issues during a MATCH. Refer to the Field Mitigation Guide for more guidance on how FIELD STAFF will respond to inconsistent FIELD behavior.

When closed, the height of the contact area of the GATE above the surface of the TILE ranges from approximately 3.75 in. (9.55 cm) to 5.5 in. (14.00 cm) and when open the contact point is approximately 3 in. (7.60 cm) above the TILES (Figure 9 16). The total horizontal displacement required to move the GATE from closed to open is approximately 2 in. (5.10 cm).

> TEAMS are encouraged to design their ROBOTS with a large vertical surface which ensures consistent contact with the GATE arm. It is particularly important that this panel extends up to the high end of the interface range approximately 5.5 in. (14.00 cm) above the TILE surface. This ensures the ROBOT cannot end up “under” the GATE arm and will help prevent ROBOTS from inadvertently damaging the FIELD.

10.8 Other Logistics

SCORING ELEMENTS that leave the FIELD will be returned to the closest ARTIFACT tray or available DRIVER or HUMAN PLAYER at the earliest safe opportunity by FIELD STAFF. Reintroduction of SCORING ELEMENTS must follow rule ~~G433~~ G432.

An ARENA FAULT (an error in ARENA operation described in section 13.3 MATCH Replays) is not called for MATCHES that accidentally begin with damaged SCORING ELEMENTS, the incorrect number of SCORING ELEMENTS, or incorrectly placed SCORING ELEMENTS. Damaged SCORING ELEMENTS are not replaced until the next MATCH reset. DRIVE TEAMS should alert the FIELD STAFF to any missing, incorrectly placed, or damaged SCORING ELEMENTS prior to the start of the MATCH. During a MATCH, FIELD STAFF may follow steps in the Field Mitigation Guide to mitigate some FIELD issues during a MATCH.

11.4 In-MATCH

G402 **No AUTO opponent interference.** During AUTO, FIELD columns A, B, C constitute the blue side of the FIELD, and columns D, E, F (Figure 9 5) constitute the red side of the FIELD. During AUTO, a ROBOT may not:

A. contact an opposing ALLIANCE'S ROBOT which is completely within the opposing ALLIANCE'S side of the FIELD either directly or transitively through an ARTIFACT, or
B. disrupt an ARTIFACT from its pre-staged location on the opposing ALLIANCE'S side of the FIELD either directly or transitively through contact with an ARTIFACT, or by LAUNCHING ~~or rolling~~ an ARTIFACT directly into it.

G412 ***Don't damage the FIELD.** A ROBOT may not damage FIELD elements.

SCORING ELEMENT damage is specifically covered in G407. G407 and G412 do not stack. G412 does not apply to damage caused by normal gameplay actions.

FIELD damage includes, but is not limited to:

- contaminating the FIELD with a liquid or fine solid as in R205,
- damaging TILE in R201,
- causing the GATE to ~~no longer function~~ bend or break off

FIELD damage does not include:

- normal GATE interaction resulting in a GATE that "sticks" open
- normal interaction with the GOAL that causes it to lift off the TILES

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:

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. ROBOTS must be physically constrained to fit within these horizontal limits without the use of software.
B. After the start of the MATCH, ROBOTS may expand vertically up to 18 in. (45.70 cm). ROBOTS may be physically constrained or software limited to fit within this vertical limit.
C. Within the limitations per G415, ROBOTS may expand vertically up to 38 in. (96.50 cm). ROBOTS may be physically constrained or software limited to fit within this vertical limit.

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 (horizontal) extensions and mechanical/software (vertical) extensions. Software limits are not sufficient to demonstrate maximum extensions for horizontal expansion.

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.

…

12.9 OPERATOR CONSOLE

R904 ***OPERATOR CONSOLE physical requirements.** The OPERATOR CONSOLE, including all power sources, must not exceed a volume of 3ft wide, 1ft 2in deep and 2 ft tall (91.4 cm by ~~30.5~~ 35.5 cm by 61.0 cm) excluding any items that are held or worn by the DRIVERS during the MATCH

13.3 MATCH Replays

T301 ***Replays are allowed, but rare**. MATCH replays are only allowed in extreme circumstances due to an ARENA FAULT or for MATCHES which are stopped because FIELD STAFF anticipated FIELD damage or personal injury.
An ARENA FAULT is an error in ARENA operation that includes, but is not limited to:

A. broken FIELD elements due to normal, expected game play, or ROBOT abuse of FIELD elements that affects the outcome of the MATCH for their opponents,

A broken FIELD element caused by ROBOT abuse that affects the outcome of the MATCH for their ALLIANCE is not an ARENA FAULT. The following situations in DECODE are not typically considered ARENA FAULTS:
A. An ARTIFACT jam in the GOAL behind the archway,
B. An ARTIFACT jam on the CLASSIFIER,
C. A GOAL slightly lifts off the TILES , or
D. A GATE temporarily sticks open.

The following situations for DECODE are typically considered ARENA FAULTS:
E. An opponent bends or breaks off a GATE such that it no longer operates normally, or
F. An opponent causes a GATE to stick open for a substantial or impactful portion a MATCH.

B. FIELD elements moving beyond normal tolerances (not as the result of ROBOT interaction)
C. Wide-spread wireless interference affecting multiple ROBOTS typically at the same time and on both ALLIANCES,
D. failure of the MATCH timer display, or
E. errors by FIELD STAFF (except those listed in section 10.8 Other Logistics).

Team Update 10 v2

General

Team Update 10v2 is a revised version of Team Update 10 (TU10).

The initial version of TU10 that was posted on November 13th was found to have error in G432. This update corrects those errors below. Corrections are also reflected in the Competition Manual. We apologize for any confusion this may have caused.

Competition Manual

6.2 Team Judged Award Rules

A201 ***Team PORTFOLIOS have limits.** …

A. …
B. no more than 15 pages of ~~judged~~ content ~~(if printing front and back, 8 sheets of paper, including the cover page)~~,
C. use only US Letter (8.5” x 11”) or A4 (210 x 297 mm) size ~~paper~~ pages,
D. …
E. …

11.1 Personal Safety

G102 ***Be careful when interacting with ARENA elements.**

DRIVE TEAM members may brace the FIELD perimeter at any point during the MATCH. ~~DRIVE TEAM members should not cause the FIELD perimeter to deflect while bracing.~~ Moving the FIELD perimeter out of position is considered a violation of G102.C.

11.4 In-MATCH

11.4.4 ROBOT

G417 **ROBOTS only operate GATES as directed.** ROBOTS may not:

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

Closing force includes any force applied to the GATE in the direction that closes the GATE, even if the GATE is already closed. A ROBOT bumping into a GATE handle which is stuck open to try to get it to close is not considered a closing force.

11.4.5 Opponent Interaction

G427 **BASE ZONE protection.** During the last 20 seconds of the MATCH, a ROBOT may not contact, directly or transitively through a SCORING ELEMENT, an opponent ROBOT while either ROBOT is in the opponent's BASE ZONE, regardless of who initiates contact.

Violation: MAJOR FOUL and opponent ROBOT and any ROBOT fully supported by the contacted ROBOT are ~~is~~ awarded fully returned to BASE points.

11.4.6 Human

G432 **Humans, only 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:~~ introduce ARTIFACTS to, remove ARTIFACTS from, or move ARTIFACTS within the LOADING ZONE and only the LOADING ZONE. Actions must occur:

~~A. only ARTIFACTS that are in the LOADING ZONE, and~~
A. only during TELEOP, ~~and~~
B. without using a tool,
C. without causing an ARTIFACT to enter into the LOADING ZONE from elsewhere on the FIELD, and
D. without causing ~~any~~ an ARTIFACT~~S~~ to leave the LOADING ZONE and enter the rest of the FIELD unless ~~fully supported either directly or transitively~~ the ARTIFACT is CONTROLLED by a ROBOT as follows:
   i. ARTIFACT CONTROL begins when the ROBOT is in the LOADING ZONE, and
   ii. ARTIFACT is still CONTROLLED by the ROBOT when the ROBOT leaves the LOADING ZONE.

Violation: MINOR FOUL per ARTIFACT. MAJOR FOUL per ARTIFACT that enters the open top of the GOAL.

> DRIVE TEAM members may load SCORING ELEMENTS into a ROBOT that is partially or fully in the LOADING ZONE.
>
> 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.

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

~~A. only during TELEOP,~~
~~B. without LAUNCHING, bouncing, or rolling,~~
~~C. without using a tool, 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: MINOR FOUL per ~~ARTIFACT or~~ non-ARTIFACT item entered onto the FIELD. ~~MAJOR FOUL per ARTIFACT that enters the top of the GOAL.~~

~~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.~~

13.7 Playoff MATCHES

13.7.2 Playoff MATCH Bracket

The number of ALLIANCES for an event is determined by the number of teams who are eligible to participate in the Playoffs based on all Qualification MATCH participating teams as shown in Table 13-2.

Teams that sign up for the event but do not show up, and teams that participate in Awards but are not included in the Qualification MATCHES are not included in determining the Playoff MATCH bracket size. Teams that participated in the Qualification MATCHES but don't intend to participate in the Playoff MATCH bracket are included in determining the Playoff MATCH bracket size.

Team Update 09

General

We've had an exciting first few weeks of DECODE! Based on observations and input from key volunteers in the community we've put together a few resources to help ensure consistency at events. While these guides are primarily intended to be used by volunteers at events, they can also be used by teams at home.

The Field Acceptance Checklist is used by event volunteers as a guide to assist in ensuring fields built at events meet the dimensional requirements in the Competition Manual.

In addition, at some events there have been reports of a few situations where the field did not behave as expected. We've published a Field Mitigation Guide to provide guidance on some of these potential issues and the recommended mitigation measures field staff can take if they occur. The intent of this guide is to provide guidance to volunteers and events, so they can ensure a fair and consistent experience for all competing teams.

Competition Manual

9.9 SCORING ELEMENTS

SCORING ELEMENTS are ALLIANCE neutral ARTIFACTS. ARTIFACTS are 5 in. (12.70 cm) nominal Gopher ResisDent™ polypropylene balls in purple (am-3376a_purple) and green (am-3376a_green). There are 24 purple (P) ARTIFACTS and 12 green (G) ARTIFACTS total in a DECODE MATCH.

ARTIFACTS are not perfectly spherical and may vary in size. Teams should plan for this variation when designing their ROBOTS. Based on the specifications provided by the manufacturer, ARTFACTS are specified to be 4.9 in +/- 0.25 in. (12.45 cm +/- 0.65 cm) in diameter at the mold seam.

11.4 In-MATCH

11.4.4 ROBOT

G416 **LAUNCHING in the LAUNCH ZONE only.** ROBOTS may only LAUNCH SCORING ELEMENTS when inside a LAUNCH ZONE or overlapping a LAUNCH LINE.

Violation: MINOR FOUL per LAUNCHED SCORING ELEMENT. MAJOR FOUL per LAUNCHED SCORING ELEMENT if the SCORING ELEMENT enters the open top of the GOAL.

A SCORING ELEMENT is considered LAUNCHED if it is shot into the air, propelled across the floor to a desired location or in a preferred direction, or thrown in a forceful way.

"Bulldozing" (inadvertent contact with a SCORING ELEMENT while in the path of the ROBOT moving about the FIELD) is not considered LAUNCHING

This is not intended to penalize teams with active manipulators which are expelling SCORING ELEMENTS through normal operation, such as:

A. Running an intake in reverse causing a SCORING ELEMENT to travel a short distance from the ROBOT.
B. A ROBOT pushing a SCORING ELEMENT a short distance away in the process of herding it across the FIELD.

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. remove an ARTIFACT from their own RAMP except by operating the GATE, or
B. remove an ARTIFACT from the opponent's RAMP by any means.

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.

Example 3: A red ROBOT contacts and opens the blue GATE, causing 5 ARTIFACTS that were on the blue RAMP to leave the RAMP and return to the FIELD. Red is assessed a total of 6 MAJOR FOULS – 1 under G417.A and 5 under G418.B – in addition to blue being awarded PATTERN RP under G417.A/G418.B.

13.7 Playoff MATCHES

T704 ***During Playoff MATCHES, teams may have more ARENA access.** At the discretion of the Event Director, during the Playoff MATCHES teams may need extra team members to maintain the ROBOT between MATCHES in a timely manner. Each team is permitted to have up to 3 additional pit crew members to help with needed ROBOT repairs. These team members should be granted the same ARENA access as the DRIVE TEAM but may not participate in any MATCH play.

16 Glossary

Term	Definition
LAUNCH/LAUNCHING	An action by a ROBOT in which the SCORING ELEMENT is shot ~~shooting or throwing~~ into the air, propelled across the floor to a desired location or in a preferred direction, or thrown in a forceful way
PIN/PINNING	an action by a ROBOT that is preventing the movement of an opponent ROBOT by contact, either direct or transitive (such as against a FIELD element) ~~Preventing an opposing ALLIANCE ROBOT from moving, accessing, or exiting an AREA for an extended period by obstructing ALL paths of travel this includes the following conditions:~~ ~~A. Limiting the movement of an opponent ROBOT to a small or confined area of the FIELD, approximately one foam TILE or less, without an avenue for escape. If a ROBOT is not attempting to escape, it's not considered a violation.~~ ~~B. Preventing the movement of an opponent ROBOT directly or transitively through contact with the FIELD perimeter, game structure, another ROBOT.~~ ~~C. Controlling an opponent's movements by raising or tilting the opponent's ROBOT off the TILES.~~

Team Update 08

General

N/A

Competition Manual

10.6 Violations

10.6.4 Violation Details

Table 10-6 Violation examples

Example Violation	Expanded Interpretation
MAJOR FOUL plus YELLOW CARD if REPEATED.	Upon violation, a MAJOR FOUL is assessed against the violating team. If the condition "if REPEATED" (e.g., a subsequent violation by the same team in the same MATCH) is met, then the violating team is issued another MAJOR FOUL. If these are the only violations during the MATCH: after the MATCH, the Head REFEREE presents the violating team with a YELLOW CARD for the second violation of this rule. In total, 2 MAJOR FOULS and a YELLOW CARD were assessed during the MATCH.

10.8 Other Logistics

SCORING ELEMENTS that leave the FIELD will be returned to the closest ARTIFACT tray or available DRIVER or HUMAN PLAYER at the earliest safe opportunity by FIELD STAFF. Reintroduction of SCORING ELEMENTS must follow rule G433.

11.4 In-MATCH

11.4.4 ROBOT

G413 ***Watch your ARENA interaction.**

> ROBOTS operating the GATE should make it clear that they do not violate this rule. ROBOTS are expected to push the GATE lever down to open, but no closing force (~~i.e.,~~ e.g., pulling) should be applied.

11.4.5 Opponent Interaction

G420 ***This is not combat robotics.**

> *FIRST* Tech Challenge can be a high-contact competition and may include rigorous gameplay. While this rule aims to limit severe damage to ROBOTS,

teams should design their ROBOTS to be robust. Teams are expected to act responsibly.

An example of a violation of this rule includes, but is not limited to:

A. A ROBOT high-speed rams and/or REPEATEDLY smashes an opponent ROBOT and causes damage. The REFEREE infers that the ROBOT was deliberately trying to damage the opponent's ROBOT.

Examples of functionally impairing another ROBOT include, but are not limited to:

B. disconnecting wires for operation of a component inside the ROBOT CHASSIS.
C. disconnecting the opponent ROBOT'S battery (this example also clearly results in a RED CARD because the ROBOT is no longer able to drive).
D. powering off an opponent's ROBOT using their reasonably well-protected power switch (this example also clearly results in a RED CARD because the ROBOT is no longer able to drive).

Teams should mount their main power switch so it is protected per R609. A team that mounts their ROBOT'S power switch in an exposed location puts themselves at high risk of incidental contact. Powering off an opponent's ROBOT by their exposed power switch during normal interactive gameplay will be considered incidental and not deliberate.

At the conclusion of the MATCH, the Head REFEREE may elect to visually inspect a ROBOT to confirm violations of this rule made during a MATCH and remove the violation if the damage cannot be verified.

"Unable to drive" means that because of the incident, the DRIVER can no longer drive to a desired location in a reasonable time (generally). For example, if a ROBOT can only move in circles, or can only move extremely slowly, the ROBOT is considered unable to drive.

11.4.6 Human

Wording in G432 and G433 have been updated to match changes in prior Team Updates.

G432 **Humans, only 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, and
B. only during TELEOP, and
C. without causing any ARTIFACTS to leave the LOADING ZONE and enter the rest of the FIELD unless fully supported either directly or transitively by a ROBOT.

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.

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

D. only during TELEOP,
E. without LAUNCHING, bouncing, or rolling,
F. without using a tool, and
G. 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~~ MINOR FOUL per ARTIFACT or non-ARTIFACT item entered onto the FIELD. MAJOR FOUL per ARTIFACT that enters the top of the GOAL.

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.

Team Update 07

General

N/A

Competition Manual

11.3 Pre-MATCH

G303 ***ROBOTS on the FIELD must come ready to play a MATCH.** A ROBOT must meet all following MATCH-start requirements:

A. does not pose a hazard to humans, FIELD elements, or other ROBOTS.
B. has passed inspection, i.e., it is compliant with all ROBOT rules.
C. if modified after initial Inspection, it is compliant with I305.
D. is the only team-provided item left ~~on~~ in the FIELD.
E. ROBOT SIGNS must indicate the correct ALLIANCE color (see R101).
F. ROBOT must be motionless following completion of OpMode initialization.

11.4 In-MATCH

G402 **No AUTO opponent interference.**

Navigating into the opposing ALLIANCE'S side of the FIELD during AUTO is a risky gameplay strategy.

LAUNCHED ARTIFACTS which happen to enter the other side of the FIELD after being deflected by another object in the FIELD (e.g., FIELD element, ROBOT) will not be penalized.

Example 1: A red ROBOT LAUNCHES 1 ARTIFACT onto the opponent side of the FIELD. The LAUNCHED ARTIFACT disrupts 2 pre-staged ARTIFACTS on the blue side of the FIELD. Red is assessed 2 MAJOR FOULS under G402.

Example 2: A red ROBOT LAUNCHES 1 ARTIFACT at their GOAL in an attempt to score, but the ARTIFACT misses the open top of the GOAL, deflects off the GOAL structure and rolls into the blue side of the FIELD, disrupting 2 pre-staged ARTIFACTS. No G402 penalties are assessed.

G408 **No more than 3 at a time.**

…

Excessive violations of CONTROL limits include, but are not limited to:
A. simultaneous CONTROL of 5 or more ARTIFACTS, or
B. frequent (i.e., 3 or more separate violations ~~times~~ in a MATCH), greater-than-MOMENTARY CONTROL of 4 or more ARTIFACTS.

11.4.4 ROBOT

G416 **LAUNCHING in the LAUNCH ZONE only.**

Violation: MINOR FOUL per LAUNCHED SCORING ELEMENT. MAJOR FOUL per LAUNCHED SCORING ELEMENT if the SCORING ELEMENT enters the open top of the GOAL.

G420 ***This is not combat robotics.** A ROBOT may not deliberately functionally impair an opponent ROBOT. ~~in either of the following ways:~~

~~A. deliberately.~~
~~B. regardless of intent, by initiating contact, either directly or transitively via a SCORING ELEMENT CONTROLLED by the ROBOT, inside the opposing ROBOT'S CHASSIS.~~

Damage or functional impairment because of contact with a tipped-over or DISABLED opponent ROBOT, which is not perceived by a REFEREE to be deliberate, is not a violation of this rule.

Violation: MAJOR FOUL and YELLOW CARD. MAJOR FOUL and RED CARD if opponent ROBOT is unable to drive.

FIRST Tech Challenge can be a high-contact competition and may include rigorous gameplay. While this rule aims to limit severe damage to ROBOTS, teams should design their ROBOTS to be robust. Teams are expected to act responsibly.

An example of a violation of this rule includes, but is not limited to:

~~A. A ROBOT leaves an arm extended, spins around to change course, and unintentionally hits and damages a COMPONENT inside the CHASSIS of a nearby opponent ROBOT.~~
~~B. A ROBOT, in the process of trying to quickly reverse direction, tips up on a single pair of wheels, lands atop an opponent ROBOT, and damages a COMPONENT inside that opponent's CHASSIS.~~
C. A ROBOT high-speed rams and/or REPEATEDLY smashes an opponent ROBOT and causes damage. The REFEREE infers that the ROBOT was deliberately trying to damage the opponent's ROBOT.

Examples of functionally impairing another ROBOT include, but are not limited to:

D. disconnecting wires for operation of a component inside the ROBOT CHASSIS.
E. disconnecting the opponent ROBOT'S battery (this example also clearly results in a RED CARD because the ROBOT is no longer able to drive).
F. powering off an opponent's ROBOT (this example also clearly results in a RED CARD because the ROBOT is no longer able to drive).

At the conclusion of the MATCH, the Head REFEREE may elect to visually inspect a ROBOT to confirm violations of this rule made during a MATCH and remove the violation if the damage cannot be verified.

"Unable to drive" means that because of the incident, the DRIVER can no longer drive to a desired location in a reasonable time (generally). For example, if a ROBOT can only move in circles, or can only move extremely slowly, the ROBOT is considered unable to drive.

~~For the purposes of this rule, “initiate contact” requires movement towards an opponent ROBOT. In a collision, it’s possible for both ROBOTS to initiate contact.~~

Team Update 06

General

N/A

Competition Manual

1.9 Question and Answer System

Moderators will answer team questions beginning each Monday, and close on Thursday at ~~12:00pm~~ 5:00pm ET.

6.1 Team Judged Awards Overview and Schedule

6.1.1 Sources of Information Considered for Awards

> Per A201.E, progress, challenges, and accomplishments which have taken place since January 1, 2025, can be documented in the team PORTFOLIO and will be considered as part of the current season.

9.1 Dimensions and Accuracy

- The FIELD Acceptance Checklist ~~(coming soon)~~ includes the controlled dimensions (with relevant tolerances) which will be regularly inspected by event staff.

13.8 Dual Division Events

Dual division events will play ~~a 6-ALLIANCE Bracket~~ divisional playoff brackets and then the two ALLIANCES will play as shown in Figure 13-7. The first to win 2 will be the event winner.

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 the~~ir~~ 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.~~
>
> …

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 ALLIANCES'~~ 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.

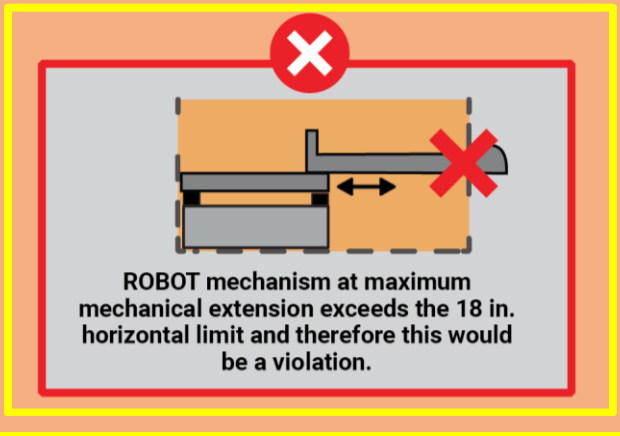
12.1 General ROBOT Design

R105 **There are expansion limits.** …

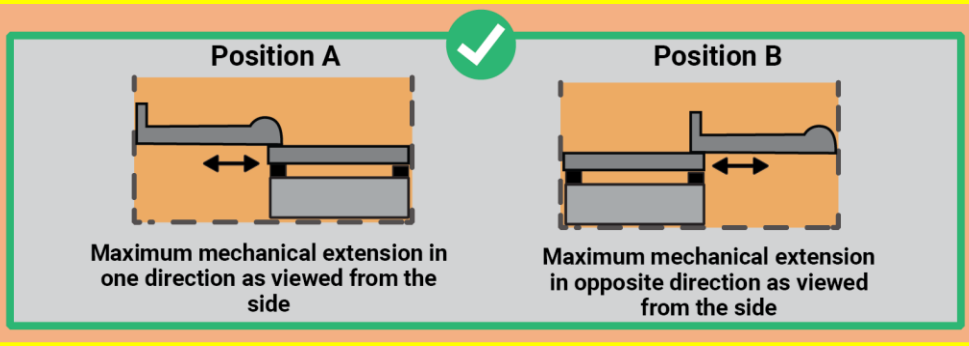
Any extension beyond the maximum expansion limit during ROBOT operation is considered a violation of this rule. This includes flexible extensions (e.g., surgical tubing flappers, star intakes) that cause the ROBOT to exceed the expansion limit.

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.

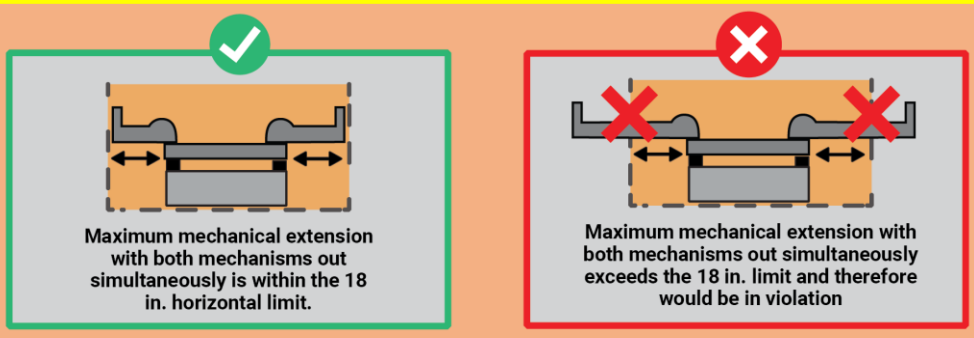
ROBOTS must show their maximum mechanical extensions during the inspection process. A ROBOT that can mechanically exceed the horizontal limit would be in violation even if the ROBOT has software limiting the position of the extension during the MATCH.



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:

A. descore an ARTIFACT from their own RAMP, or
B. descore 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:

A. intentionally place or LAUNCH ARTIFACTS directly onto ~~the~~ their own RAMP, or
B. 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 though 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:

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 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

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 1st place Inspire Award once per season from any Qualifying or League Tournament. ~~Teams who have won 1st place Inspire may not be considered for 1st, 2nd, or 3rd place Inspire at subsequent Qualifying or League Tournaments.~~

> Teams who have won 1st Place Inspire are eligible to win 2nd or 3rd 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

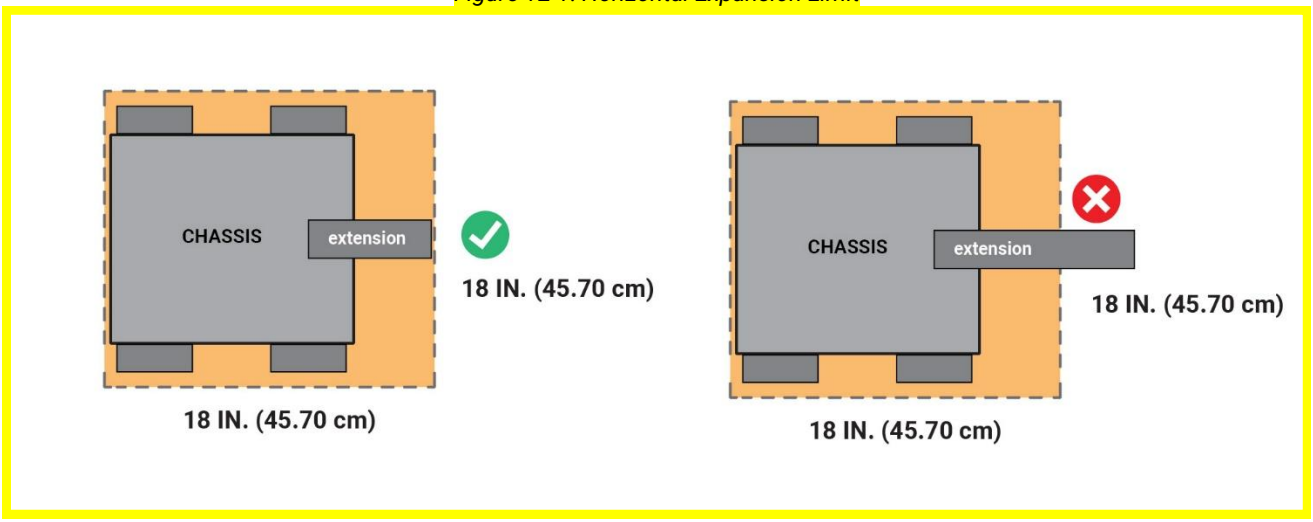
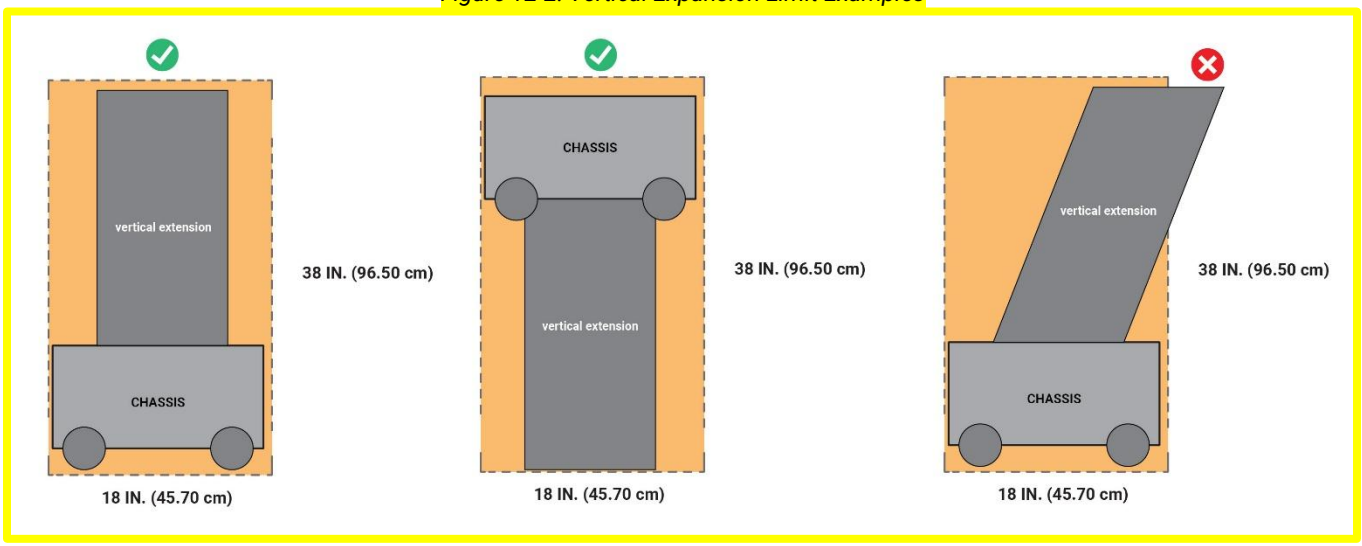


Figure 12-2: Vertical Expansion Limit Examples



12.5 Motors & Actuators

G501 ***Allowable motors.**

Table 12 1: Motor allowances

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

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.