

# Q&A

## VIQC 2021-2022: Pitching In

Welcome to the official VEX IQ Challenge Question & Answer system, where all registered teams have the opportunity to ask for official rules interpretations and clarifications. This Q&A system is the only source for official VIQC **Pitching In** rules clarifications, and the clarifications made here from the Game Design Committee (GDC) are considered as official and binding as the written [Game Manual](#) itself.

Please review the [Q&A Usage Guidelines](#) before posting. This system is only intended for specific VIQC Pitching In rules questions.

- For event, registration, or other competition support questions, please contact your [REC Foundation Manager](#).
  - For VEX technical support, contact [support@vex.com](mailto:support@vex.com) or [sales@vex.com](mailto:sales@vex.com).
- For game questions, suggestions, or concerns outside of specific and official rules questions, contact [GDC@vex.com](mailto:GDC@vex.com)

## Index

[<G12> Robot swings on low bar at the end of the game](#)

[Can students use the plastic sheet to help with high hang?](#)

[Ball placement under the bar clarification](#)

[Starting Position during Teamwork Challenge](#)

[Teamwork Matches Robot Starting Positions.](#)

[<G4> Pre-match setup - Is a spinning motor pre-match legal?](#)

[Can the sizing requirements rotate with the bot?](#)

[Is the robot tilt legal?](#)

[G8B to G6B Clarification](#)

[?G6?more than two drivers in a competition](#)

[Enforcement of the blue box under <G8>b](#)

[Clarification on R1](#)

[R14 - non damaging and detachable parts](#)

[Rope / String use on a IQ Robot](#)

[<R7> Is 228-3201-1934 Legal?](#)

[Legal rubber band sizes](#)

[Legal Rubber Bands](#)

[Rubber band size](#)

[Starting positions in RSC7 "Handling Robots during a Programming Skills Match"](#)

[Driver skills-driver movement](#)

[RSC7 Can drivers move freely around the field during driver skills match?](#)

[Clarification of RSC7 for programming skills matches](#)

[<T15> Students must be accompanied by an Adult Question](#)

[Scoring in the Basket](#)

[Starting positions have balls in them in LRT](#)

[Balls Busting](#)

[Scored in Low Goal and touching floor outside Low Goal](#)

[Are omni wheels legal?](#)

[Clearing Corral](#)

[Ball in the air at the sound of the buzzer](#)

[Clarification on Definition of Hanging, either Low or High](#)

[Driver Positions for Teamwork Match](#)

[LRT Scoring according to the definitions of "Scored", "Cleared", and "Corral" along with the field setup according to LRT5](#)

[<LRT5> One starting corral in LRT](#)

[Driver Positions in LRT](#)

[<LRT5> Clearing the corral in LRT](#)

[LRT scoring - is there a maximum of 22 balls that can score?](#)

[Low Goal Definition & Scoring](#)

[Computer Generated Alliance Pairing](#)

[Rescuing a robot from Corral that has control of a ball](#)

[High Hang Definition\(s\)](#)

[Driving Station at Worlds](#)

[Consent form](#)

[Coaches confused about G8](#)

[Autonomous](#)

[Clearing Corral \(The Return\)](#)

[Clarification of RSC7 \(Handling Robots during a Programming Skills Match\)](#)

[Elementary Team wishes to Play Up mid-season.](#)

[Clarification of Starting Position concerning rule RSC7](#)

[Starting placement of balls](#)

[Hangs requiring driver control](#)

[Measuring Tool During Skills](#)

[Robot touching a low hanging robot](#)

[Driver skills](#)

[Virtual Skills](#)

[Ball scored in low goal scoring question \(picture included\)](#)

[IQ Starting Position Volume](#)

[Can balls be launched simultaneously, OR ONLY one at a time?](#)

[RULE <G19> CLARIFICATION](#)

[G8b at tournaments and WC](#)

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## 922: <G12> Robot swings on low bar at the end of the game

9-Nov-2021

G12

<G12> states \*When it's over, it's over. Scores will be calculated for all Matches immediately after the Match is complete, and once all Robots and Balls on the Field come to rest. \*We have a case that the robot was hanging on the low bar, but due to fast motion, the robot will continue swinging after the buzzer, however, it may touch the field while swinging, but it will eventually settle to a stop with a legal low hang. The entire process was not pre-programmed routine.

The question is whether the robot will be considered low hang in such case?

### Answered by committee

Yes, this would be considered a Low Hang.

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## 827: Can students use the plastic sheet to help with high hang?

24-Jul-2021

G14

<G14> Don't damage the Field. Robots may not grasp, grapple, or attach to any Field Elements other than the Hanging Bar. Strategies with mechanisms that react against multiple sides of a Field Element in an effort to latch or clamp onto said Field Element are prohibited. ... b. While the Hanging Bars are excluded from this rule, their supporting structures are not. Incidental contact with other Field Elements while Hanging will not be penalized, but Teams are not permitted to grapple, clamp, or attach to any Field Elements other than the Hanging Bars while Hanging. ... BLUE BOX: The key words in this rule are "clamping" or "anchoring". The intent of this rule is to prevent Robots from actions which could unintentionally damage the Field during standard gameplay. Passive contact that does not cause damage, such as bumping into the clear plastic sheet or using Field Elements for alignment, are fine.

I have seen some damage happening to the plastic sheet when students attempt to high hang. While the blue box refers to anchoring, the word isn't found in the rule. Are students allowed to anchor their bot on the plastic sheet while attempting to high hang?

### Answered by committee

Are students allowed to anchor their bot on the plastic sheet while attempting to high hang?

It is impossible to provide a blanket answer that will encompass all possible hypothetical Robot mechanisms, interactions with the clear plastic sheet, and levels of damage.

The intent of G14 is to prohibit Robots from causing excessive or intentional damage to the Field. It is expected that Robots in the act of Hanging will bump in to, lean on, or otherwise react against the clear plastic sheets found near the Hanging Bars; this type of interaction is explicitly referenced in G14's blue box as an example of legal contact. Any "clamping" mechanisms must only interact with the Hanging Bars.

That being said, "damage" is not solely limited to clamping mechanisms. If a given Team is consistently found to be causing excessive damage to any Field Element, it may still be considered a minor violation of the rule, and Teams may be warned accordingly.

Minor violations of this rule that do not affect the Match will result in a warning. Offenses which improve the score will result in a Disqualification. Teams that receive multiple warnings may also receive a Disqualification at the Head Referee's discretion.

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## 1074: Ball placement under the bar clarification

20-Feb-2022

G16

There is a discrepancy between the game manual and the field assembly instructions regarding the positioning of the balls that are under the bar. The game manual shows in Fig 2, 16, 17 & 18 the center of the ball in line with the edge of the bar. The field assembly instructions show the center of the bar in line with the center of the ball.

I am aware that <G16> Be prepared for minor field variance. Field tolerances may vary by as much as  $\pm 1$ " unless otherwise specified. Teams must design Robots accordingly.

However since the field assembly instructions and the game manual seem to disagree, I would appreciate if you could clarify the intended precise position of the ball.

### Answered by committee

In short - the two images are depicting the same setup, and Balls are intended to be placed directly underneath the Hanging Bar. The two images were made using slightly different camera angles / rendering styles, and we apologize for any confusion this may have caused.

For stylistic reasons, the images in the the Game Manual are rendered with a slight amount of camera lens "perspective". The images found in the Field Appendix and Field Assembly Instructions are more "engineering"-style images, with a true perpendicular camera angle.

In most cases, this slight difference is unnoticeable / irrelevant. However, when comparing the two side-by-side (such as Figure 17 in the Game Manual, compared to page 67 of the Field Assembly Instructions), the following visual differences can be seen:

- Whether or not you can see the inside edges of field walls
- Whether or not you can see the inside edges of the panels surrounding the Low Goal
- Whether or not you can see the inside edge of the brackets holding the Hanging Bar to the Field Perimeter

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## 884: Starting Position during Teamwork Challenge

16-Oct-2021

G4

I am looking for confirmation on how we are reading the definition of "Starting Position" and <G4> Pre-Match setup, at the beginning of a match. "Any one of the designated 11x19" volumes of the field where robots must start the match." No mention, in the definition or in <G4>, is made about robots needing to be on opposite sides or opposite halves (divided by the Low Bar).

The confusion is that all images of robots in starting positions in the game manual show the two teamwork robots starting along opposite long sides and on different sides (not on the same side of Low Bar). We believe that the images are NOT to be interpreted as a requirement or limitation for where each team may choose to start the match.

Meaning, let us consider Starting Positions to be named #1 - #8. If Team #1 chooses to setup their robot in Spot #1, Team #2 could choose to setup their robot in any of the other 7 "Starting Position"(s), including the spot that may be adjacent to Spot #1 where Robot #1 choose to start.

Is this reading of the rules correct?

### Answered by committee

The confusion is that all images of robots in starting positions in the game manual show the two teamwork robots starting along opposite long sides and on different sides (not on the same side of Low Bar). We believe that the images are NOT to be interpreted as a requirement or limitation for where each team may choose to start the match.

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Is this reading of the rules correct?

Yes, this is correct, in a Teamwork Challenge Match. The examples shown in the field images are just meant to represent one possible starting configuration.

As a side note, however, please note that this is only true for the Teamwork Challenge. When competing in a Live Remote Tournament, rule LRT4 applies:

<LRT4> At the beginning of a Live Remote Match, the setup criteria listed in rule <G4> still applies. However, only one Robot from the Alliance may start in each pair of the Starting Position options depicted in Figure 22; one Robot must start on the "audience side", and one Robot must start on the "Driver Station side".

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## 957: Teamwork Matches Robot Starting Positions.

7-Dec-2021

G4

Our question is regarding the starting positions of the robots in Teamwork Matches. We are an event partner and many teams were asking about starting positions for their robot. In the game manual, It does address robot starting positions for Live Remote Matches in rule <LRT6> along with figure 23. But there is no such rule for on-site teamwork matches. The only documentation that addresses starting positions is on page 8 of the game manual (Starting Position) where the Figure 17 shows 2 robots on opposite sides of the field, but the actual wording doesn't state that robots must start on opposite sides of the field. Thus, the item in question is whether alliances can start both robots on the same side of the field. Thank you!

Robots must begin Live Remote Matches, in one of the highlighted Starting Positions depicted below. In addition, only one Robot from the Alliance may start on a given side of the field, as shown in Figure 23; i.e. one Robot must start on the "audience side", and one Robot must start on the "Driver Station side"

### Answered by committee

Please review the [Q&A Usage Guidelines](#) before posting, specifically point 2, "Read and search existing Q&As before posting". We believe the following previously answered post answers your question; if it does not, please feel free to rephrase and re-submit.

<https://www.robotevents.com/V1QC/2021-2022/QA/884>

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## 964: <G4> Pre-match setup - Is a spinning motor pre-match legal?

8-Dec-2021

G4

G4 shows the pre-match setup rules as follows:

<G4> Pre-Match setup. At the beginning of a Match, each Robot must meet the following criteria:

1. Only be contacting the Floor and / or the Field perimeter (i.e. not contacting any Balls, other Field Elements, or other Robots).
2. Fit within an 11" x 19" (279.4mm x 482.6mm) area, bounded by one of the Starting Positions.
3. Be no taller than 15" from the Floor.

There is no mention of motor run status in this rule, based on this absence, can you please confirm that a motor *is allowed to spin pre-match* as long as the full text of G4 is otherwise followed? Examples included 'spinning up' a ball collector, flywheel, conveyor belt, etc.

### Answered by committee

No, this would not be permissible.

Although rule G12 primarily refers to the end of a Match, part "c" and the Note can be applied to further understand this ruling:

c. This rule's intent is for Driver inputs and Robot motion to cease at the end of the Match. A pre-programmed routine which causes the Robot to continue moving after the end of the Match would violate the spirit of this rule. Any Scoring which takes place after the Match due to Robots continuing to move will not count.

Note: Using a motor's built-in "Hold" function, such as to remain Hanging, is permissible.

Generally speaking, any time outside of the 60-second Match should be viewed as a "disabled" period, wherein the Robot is not moving and/or responding to any input from its Drivers.

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## 828: Can the sizing requirements rotate with the bot?

25-Jul-2021

G5

The rule in question is G5:

G5 Expansion is limited during a Match. During the Match, Robots may not expand beyond the following restrictions: a. Horizontally, beyond an 11" x 19" (279.4mm x 482.6mm) area. b. Vertically, beyond 19" (482.6mm) high. This is the same height as the top of the teal T-shaped VEX IQ parts in the center of the Field. This expansion limit does not require that the Robot stay in the same configuration as it was when it began the Match. It simply means that, at any given moment during the Match, it should be able to fit within an 11" x 19" x 19" (279.4mm x 482.6mm x 482.6mm) rectangular prism. Robots will be tested for compliance with this rule, alongside rule R6, during inspection.

Is height always measured perpendicular to the field? Or, can the 11x19x19 rectangular prism twist with the robot if it attempts to switch its length and height?

### Answered by committee

Is height always measured perpendicular to the field? Or, can the 11x19x19 rectangular prism twist with the robot if it attempts to switch its length and height?

Height should always be measured perpendicular to the field.

The "blue box" in rule G5 states the following:

The intent of testing compliance with this rule during inspection is to reduce the need for judgment calls during a Match. The 19" height restriction is not a "virtual ceiling"; for example, it is legal for a portion of the Robot to extend beyond the T-shaped VEX IQ markers while Hanging, **so long as it never momentarily extends beyond 19" along the way**. If a Head Referee is unsure of a Robot's compliance with this rule, they may request a field-side height check for the configuration that was seen momentarily during the Match.

A more verbose way of clarifying the bolded portion would be as follows:

"...so long as a measurement taken from the "top" of the Robot to the "bottom" of the Robot never exceeds 19", where "top" and "bottom" represent the portions of the Robot which are farthest from and nearest to the Floor, respectively."

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## 849: Is the robot tilt legal?

20-Aug-2021

G5

If the robot tilts during driving and its diagonal exceeds 19 inches, will it violate the G5 rule?

<https://www.bilibili.com/video/BV1Bb4y1r7LG?from=search&seid=15436717150755639022>

### Answered by committee

Please see the answer posted in this similar Q&A: <https://www.robotevents.com/VIQC/2021-2022/QA/828>

If this does not answer your question, please feel free to rephrase and re-submit.

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## 1007: G8B to G6B Clarification

19-Jan-2022

G6 G8

Teams that exhibit the following behaviors may be in violation of <G8b>, and/or the RECF Code of Conduct, and should be prepared to share relevant health guidelines with RECF staff upon request:

Utilizing two drivers in Qualification matches, but utilizing only one Driver in Finals Matches or Robot Skills Matches.  
Utilizing only one Driver in Matches, but permitting interactions in the pit area between multiple Students similar in nature to interactions that would occur between two Drivers in the Driver Station. Meeting outside of the event setting in a manner consistent with interactions that occur between two Drivers in the Driver Station, yet only utilizing one Driver in Matches.

If I attend an event with multiple teams from my organization where 1 team has a single driver following the rules laid out in G8. Can the EP/Head referee give the option of G6B or a mandated 35 second single driver (G8A) if the organization does not accept G6B?

G6B-If a Team attends an event with only one driver in attendance, then that team is granted an a  
Would the team need to find another person with in the organization or a team outside the organiz

## Answered by committee

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It is difficult to provide a direct answer to this question as it is currently worded.

If a Team has only one Driver at an event, then that means they are doing so for one of two reasons.

1. The Team usually has two Drivers, but one of them was unable to make it to the event due to illness or other reasons (i.e. G6-B). Yes, in this situation, Teams have the option to choose whether they drive for 0:35 or find a qualified Driver from another Team.
2. The Team is operating under health and safety guidelines that prohibit them from allowing two Students to stand next to each other in the Driver Station (i.e. G8-B). It would stand to reason that a Team who is in this situation, and stating that their Driver is unable to stand next to a teammate in the Driver Station, would also not be able to exercise G6-B and stand next to a Student from another Team.

Teams do not really get to make a "choice" between these two scenarios, as these are both situations that are outside of a Team's control.

If the Team is utilizing a single Driver but doing so for strategic reasons, not health reasons, then they would not be operating under G8-B. The blue box in G8 provides some guidelines / examples for behaviors which would indicate this situation.

Would the team need to find another person with in the organization or a team outside the organization at the event?

In the context of the Game Manual, Teams from the same multi-Team organization are still considered separate Teams. In other words, the fact that two Teams come from the same multi-Team organization has no bearing on how to apply Team-related rules such as G6, G8, R1, or R2. To answer this specific question - yes, a Student from another Team within the same organization could be used to fulfill G6-b, provided that the rule is followed in its entirety.

Within a single event, a Driver may only drive for one (1) Team. If a Team attends an event with only one (1) Driver in attendance, then that Team is granted an allowance to use another qualified Driver from the Event. This substitute Driver is given an exemption for this event and may only Drive for this one Team at that event. Once the event is over, the substitute Driver will go back to his or her original Team. This exception is only granted if a Team has one (1) Driver in attendance due to reasons outside of the Team's control, such as illness.

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## 1047: ?G6?more than two drivers in a competition

10-Feb-2022

G6

For example, if we have three team members, can all three of them take turns being the driver in a competition?

(ex) Student A is a builder and driver, Student B is a programmer and driver, Student C is a designer and driver

## Answered by committee

Yes. Per the following portion of G6, this is legal.

Students may have more than one role on the team, e.g. the Designer can also be the Builder, the Programmer and a Driver.

## 870: Enforcement of the blue box under <G8>b

27-Sep-2021

G8

What should Event Partners or Head Refs do to make sure that this rule isn't being exploited for strategic gain, especially if a team only show up with one team member?

<G8> Drivers switch Controllers midway through the Match. ... b. For the 2021-2022 season, Teams may elect to have one Driver in the Driver Station, instead of two. If only one Driver is present in the Driver Station, they may drive for the full Match, and a controller switch is not required. It is at the Team's discretion whether they wish to have one Driver or two. If two Drivers are present in the Driver Station, the controller switch rules in <G8a> would then apply. ... Blue Box: The intent of point "b" in this rule is to provide flexibility for Teams who are unable to meet in a traditional capacity due to local health guidelines. As noted in the definition of "Team", teamwork is a core tenet of the VEX IQ Challenge, and the two-Student drive team is intended to be a fundamental application of this skill. If a Team has the capacity to include multiple Students, it should also be expected that they will not take advantage of this single-Driver exception for strategic gain.

### Answered by committee

Throughout the Game Manual, "blue box" clarifications are included to provide additional "intent of the rule" context for both Teams and Head Referees beyond the "black-and-white" verbiage of the rules themselves.

Rule G8-b was intentionally written such that the only black-and-white requirement is as follows: *"It is at the Team's discretion whether they wish to have one Driver or two."*

As noted in the blue box, the intent of this is *"to provide flexibility for Teams who are unable to meet in a traditional capacity due to local health guidelines"*. It would be impossible to expect an Event Partner to have an in-depth knowledge of all health guidelines imposed on all Teams at their event, whether they are governmental, school-specific, club-specific, or at the request of a Student's parents. With this in mind, we would strongly advise Event Partners and coaches to be cautious about making any assumptions regarding a Team's circumstances when G8-b has been utilized in a tournament. We will not be implementing, requiring, or endorsing any specific "validation tests", as it is ultimately at the Team's discretion whether they wish to have one Driver or two.

With that in mind, as noted in the last line of the blue box, *"it should also be expected that they will not take advantage of this single-Driver exception for strategic gain."* This intention should be regarded similarly to rules like G1, G2, G6, R1-a, R1-b, and R1-c. That is to say - whether it is "caught" during an event or not, a Team who has exploited this rule for strategic gain has knowingly violated several points of the [Code of Conduct](#) and/or the [Student-Centered Policy](#). These violations are addressed through an official COC resolution process; Event Partners who have questions about this process should contact their [REC Foundation Event Engagement Manager](#) for more information.

- Act with integrity, honesty, and reliability
- Behave in a respectful and professional manner with event staff, volunteers, and fellow competitors
- Exhibit maturity and class when dealing with difficult and stressful situations
- Respect individual differences
- Follow all rules as listed in the current game manual(s)
- Student-centered teams with limited adult assistance

- Safety as a top priority
- Good sportsmanship, which includes supporting your alliance partners

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## 934: Clarification on R1

18-Nov-2021

R1

According to <R1> teams may not have more than one robot. Additionally, in <R1a> teams may not participate with one robot while another is being modified or assembled. The clarification refers to use of a second robot diminishing "the efforts of a team that has spent extra design time making sure their one Robot can accomplish all of the game's tasks."

If iterative design and improvement is the goal, would teams be allowed to have a second robot at all? Is there a difference between what is allowed for "practice purposes" as opposed to during competition? Would creating and practicing with a second robot diminish the efforts of a team carefully assessing improvements, evaluating risk and potential benefit?

### Answered by committee

The full text of the "blue box" at the end of <R1> reads as follows, with a portion bolded for emphasis:

The intent of <R1a>, <R1b>, and <R1c> are to ensure an unambiguous level playing field for all Teams. Teams are welcome (and encouraged) to improve or modify their Robots between events, or to collaborate with other Teams to develop the best possible game solution.

However, **a Team who brings and / or competes with two separate Robots at the same tournament** has diminished the efforts of a Team who spent extra design time making sure that their one Robot can accomplish all of the game's tasks. Similarly, a multi-team organization that shares a single Robot has diminished the efforts of a multi-team organization who puts in the time, effort, and resources to undergo separate individual design processes and develop their own Robots.

To help determine if a robot is a "separate Robot" or not, use the Subsystem definitions found in <R1>. Above that, use common sense as referenced in <G3>. If you can place two complete and legal Robots on a table next to each other, then they are two separate Robots. Trying to decide if changing a pin, a wheel, or a motor constitutes a separate Robot is missing the intent and spirit of this rule.

Most Robot rules, including <R1>, are intended to apply within the context of a competition event. For example, <R1-a> is intended to prohibit competing with one Robot in a Match while a second Robot is being assembled in the Team pit area.

There are no rules prohibiting the use of a separate "practice Robot" between events, provided that no other rules are violated (namely, <R1-c>, <R2>, <G2>, etc).

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## 1008: R14 - non damaging and detachable parts

19-Jan-2022

R14

In the final moments of the match, before a low hang, a triangle plate on the robot would get intentionally knocked off of the robot by running into the low bar. This action would allow for the hanging mechanism to engage and work properly.

According to R14, the intentional detachment of the triangle plate would be legal because it is NOT prohibited. We have confirmed through testing that this action poses no risk of damage to field elements or balls, can not damage other robots and can not entangle other robots. Are we reading this correctly?

Further, according to inspection checklist, the R14 question asks if you have any intentionally detachable parts. By answering YES, would this FAIL INSPECTION or should this robot with the detachable (non damaging part) triangle plate be legal and pass inspection?

### Answered by committee

R14 reads as follows:

<R14> Prohibited items. The following types of mechanisms and components are NOT allowed:

- a. Those that could potentially damage Field Elements or Balls.
- b. Those that could potentially damage other Robots.
- c. Those that pose an unnecessary risk of entanglement.

Please also see rule G13, quoted here for reference, with a portion bolded for emphasis:

<G13> Keep your Robot together. **Robots may not intentionally detach parts or leave mechanisms on the Field during any Match. If an intentionally detached component or mechanism affects game play, the Team may be Disqualified at the Head Referee's discretion.** Parts that become unintentionally detached from the Robot are no longer considered to be part of the Robot and can be either left on the Field, or collected by a Driver (utilizing <G18>).

Although detachable parts are not, by themselves, considered a violation of R14, this question is asked during the inspection process to assist Teams in identifying potentially illegal mechanisms before entering the field. A mechanism which detaches from the Robot in order to aid in Hanging would be considered "affecting gameplay", and therefore a violation of G13.

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## 983: Rope / String use on a IQ Robot

21-Dec-2021

R7 R8

Can a student use rope or string on their IQ robot? I see that these parts are approved through Vex this year 228-2500-430 12x Pitch Rope, 228-2500-436 20x Pitch Rope, 228-2500-438 24x Pitch Rope and 228-2500-448 120x Pitch Rope but can the students use non official vex IQ parts like R8 e. from the V5 rule book be used? (An unlimited amount of rope / string, no thicker than 1/4" (6.35mm)).

Thank you for your help with this matter.

### Answered by committee

can the students use non official vex IQ parts like R8 e. from the V5 rule book be used? (An unlimited amount of rope / string, no thicker than 1/4" (6.35mm)).

No.

As noted in your question, the [VIQC Legal Parts Appendix](#) provides a comprehensive list of legal VEX IQ parts. Furthermore, rule R8 (quoted below) lists all legal non-VEX IQ components. Rope/string is not included in this list; therefore, it is not legal.

<R8> Non-VEX IQ components. Robots are allowed to use the following additional "non-VEX IQ" components:

- a. Appropriate non-functional decorations, provided that these do not affect the Robot performance in any significant way or affect the outcome of the Match. These decorations must be in the spirit of the event. Inspectors will have the final say in what is considered “nonfunctional” and “appropriate”.
- i. Any decorations must be backed by legal materials that provide the same functionality, (For example, if your Robot has a giant decal that prevents Balls from falling out of the Robot, the decal must be backed by VEX IQ material that also prevents the Balls from falling out).
- ii. The use of non-toxic paint is considered a legal non-functional decoration. However, any paint being used as an adhesive or to impact how tightly parts fit together would be classified as functional.
- b. Rubber bands that are identical in length and thickness to those included in the VEX IQ product line (#32 & #64).
- c. ?” metal shafts from the VEX V5 product line.

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## 989: <R7> Is 228-3201-1934 Legal?

1-Jan-2022

R7

The part is not in either the legal parts, nor the illegal parts list. A similar item is found in legal parts listed as 228-2500-1934, we would assume 228-3201-1934 should be legal as it's just different color of the legal version. But an official clarification would be appreciated.

### Answered by committee

Yes, this is legal.

The Legal Parts Appendix includes the following introduction on page 2:

Because VEX IQ parts come in many colors, any colors depicted in the renderings below may not necessarily reflect the colors of the final physical products.

This also means that if a part has the same Unique Part Identifier (i.e. last 3-4 digits) as a part listed in this Appendix, but a different Color SKU Identifier, then it is still considered legal. This article explains the VEX IQ part number system in more detail: <https://kb.vex.com/hc/en-us/articles/360044274672-Color-Part-Number-Info-for-VEX-IQ>

We will be sure to clarify this further in a future VIQC Legal Parts Appendix update.

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## 1000: Legal rubber band sizes

8-Jan-2022

R7 R8

Relevant rules: R7 j : A comprehensive list of legal parts can be found in the VEX IQ Challenge Legal Parts Appendix, at <https://www.vexrobotics.com/iq/competition/viqc-current-game> . This Appendix is updated as needed if / when new VEX IQ parts are released, and may not coincide with the scheduled Game Manual updates in G20.

R8 : Non-VEX IQ components. Robots are allowed to use the following additional “non-VEX IQ” components: b : Rubber bands that are identical in length and thickness to those included in the VEX IQ product line (#32 & #64).

The following document has all the legal parts for VEX IQ: <https://content.vexrobotics.com/docs/21-22/pitching-in/LegalParts.pdf>

There are rubber bands available in the legal parts appendix that aren't #32 or #64. 228-2500-470 Silicone Rubber Band #117B 228-2500-1225 2x30 mm Square Silicone Belt

If teams want to use these on their robot, would they need to source them from kits or could they buy them from other sources as long as they are the same size?

#### Answered by committee

228-2500-470 is similar to a standard #117B rubber band. We will add this size to R8-b in a future Game Manual update, and it can be treated the same as a #32 or #64 rubber band (i.e. non-VEX sources are permissible).

228-2500-1225 is considered a belt, not a rubber band. It is similar to 228-2500-221, -222, -223, and -224. It will not be added to R8-b; therefore, non-VEX sources are not permitted.

---

## 808: Legal Rubber Bands

12-Jun-2021

R8

&lt;R7> VEX IQ product line. Robots may be built ONLY from Official Robot Components from the VEX IQ product line, unless otherwise specifically noted within these rules.

a. Official VEX IQ products are ONLY available from VEX Robotics & official VEX Resellers. To determine whether a product is "official" or not, consult [www.vexiq.com](http://www.vexiq.com).

If there are commercially available rubber bands that are identical to VEX IQ rubber bands, would those be legal for competition? If not, what are the best practices for inspection to ensure the the rubber bands were purchased from VEX?

#### Answered by committee

Please see rule R8-b, as updated in version 0.2 of the Game Manual:

<R8> Non-VEX IQ components. Robots are allowed to use the following additional "non-VEX IQ" components:

[...]

b. Rubber bands that are identical in length and thickness to those included in the VEX IQ product line (#32 & #64).

---

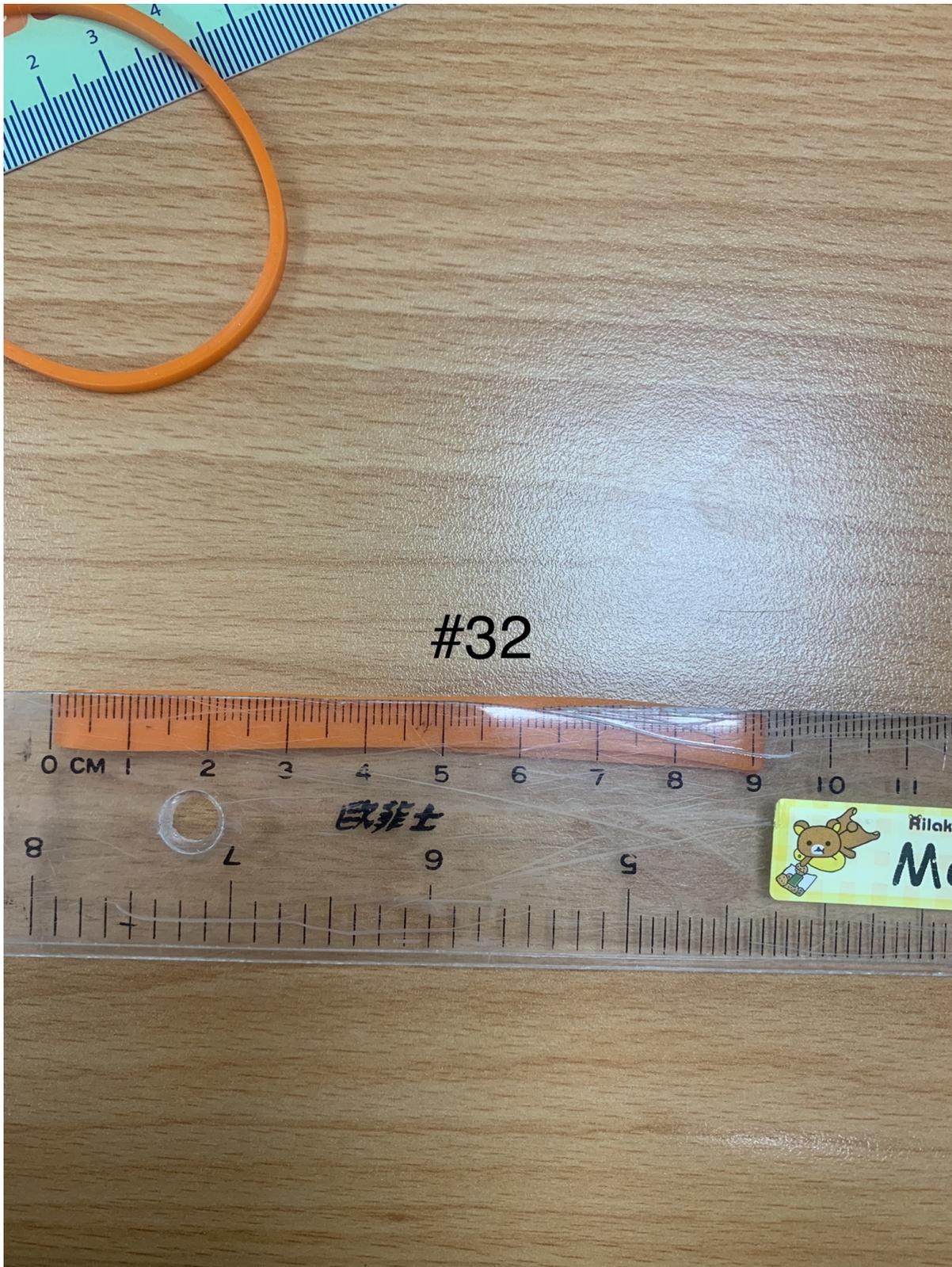
## 929: Rubber band size

15-Nov-2021

R8

According to VIQC rule R(8), teams are allow to use rubber bands either directly purchased from VEX or has the same dimension specified on VEX website.

However, it comes to our awareness that there are significant dimension difference between the website and the rubber band in our warehouse. How would you suggest we address this during the events?



**Answered by committee**

Per the [VEX website](#), the expected dimensions for VEX IQ rubber bands are as follows:

Rubber Band #32 (275-1089)

- Length: 3" (76 mm)
- Width: 1/8" (3 mm)
- Thickness: 1/32" (0.8 mm)

Rubber Band #64 (276-3990)

- Length: 3.5" (89 mm)
- Width: 1/4" (6 mm)
- Thickness: 1/32" (0.8 mm)

Although it is tough to tell, it appears that the rubber band in the attached image meets the nominal dimensions for a #64 size, and would therefore be legal.

In general, the reason why rubber band sizes are referred to in nominal terms (e.g. #32, #64) is because it is impossible to guarantee a rubber band's exact dimensions with 100% certainty. Rubber may expand or contract due to temperature, humidity, repeated over-stretching, etc. If students are raising concerns about the legality of their official VEX rubber bands, this could serve as a "teaching moment" to explain material properties, tolerances, etc.

The intent of R8-c is to clarify that although off-the-shelf rubber bands are permitted, searching for "the [perfect rubber band](#)" should not be a part of the design challenge. Inspectors may request measurements of rubber bands that appear to be grossly outside of the expected sizes, but measuring to millimeter precision should not be necessary.

---

### 834: Starting positions in RSC7 "Handling Robots during a Programming Skills Match"

28-Jul-2021

RSC7

For RSC7 "Handling Robots during a Programming Skills Match". Is the robot allowed to reset to any of the 8 starting positions regardless where the robot started at first place? In such case, team could gain strategic advantage of using this rule for programming skills only.

#### Answered by committee

Please review the [Q&A Usage Guidelines](#) before posting, specifically point 3, "Quote the applicable rule from the latest version of the manual in your question". Often, you'll find that by quoting the rule, you'll answer your own question.

RSC7 is partially quoted below, with a portion bolded for emphasis.

<RSC7> Handling Robots during a Programming Skills Match. A Team may handle their Robot as many times as desired during a Programming Skills Match.

- a. Upon handling the Robot, it must be immediately brought back to **any legal Starting Position**.

There is no requirement in RSC7 for the Starting Position to be the same one in which they began the Match. Therefore, this would be legal.

---

### 926: Driver skills-driver movement

12-Nov-2021

RSC7

RSC7 states "During a Programming Skills Match, Drivers may move freely around the Field, and are not restricted to the Driver Station when not handling their Robot." Can we get clarification on the word around. Does this mean the student can grab the robot to move it, but must walk around the board to the next starting position or can a student walk across the board?

#### Answered by committee

Does this mean the student can grab the robot to move it, but must walk around the board to the next starting position

Yes, this is what it means.

or can a student walk across the board?

Walking on the Field is never permitted in any situation, including while doing an RSC7 re-positioning.

Also - as quoted, RSC7 only applies during Programming Skills Matches. Driving Skills Matches are still governed by <G18>, especially for strategic violation.

---

## 999: RSC7 Can drivers move freely around the field during driver skills match?

7-Jan-2022

RSC7

Hello,

In RSC7, it states that "During a Programming Skills Match, Drivers may move freely around the Field". We are wondering if teams can also move freely around the field during a Driver Skills match or at least switch between driving stations? Sometimes it is hard to see the other side of the field when only staying in one driving station.

Best regards, 6699B Unicorn Puncher

### Answered by committee

No, this would not be legal. The full text of RSC7 includes the following note, which applies specifically to this question:

Note: This rule only applies to Programming Skills Matches. Driving Skills Matches are still governed by <G18>, especially for strategic violations.

---

## 1080: Clarification of RSC7 for programming skills matches

22-Feb-2022

RSC7

I have a question about statement a.i. in RSC7 "Drivers may reset or adjust the Robot as desired from this position, including pressing buttons on the Robot Brain or activating sensors." Does the word "reset" refer to only the physical robot, or are teams also allowed to reset their program, choose different programs, etc during an official programming skills run?

Thank you,

### Answered by committee

Does the word "reset" refer to only the physical robot, or are teams also allowed to reset their program, choose different programs, etc during an official programming skills run?

Yes, pressing buttons on the Robot Brain to activate / reset / switch programs is legal.

---

## 1081: <T15> Students must be accompanied by an Adult Question

23-Feb-2022

Tournament Structure

From the manual: <T15> Students must be accompanied by an Adult. No Student may attend a VIQC event without a responsible Adult supervising them. The Adult must obey all rules and be careful to not violate student-centered policies, but must be present at the event in the case of an emergency.

If I am a coach of multiple teams may I serve as the adult for multiple teams?

Also, may the supervising adult also serve as a volunteer at the event? Teams are often asked to provide a volunteer but for a small team it might not be possible to get multiple adults for the team to a tournament. If one adult, i.e. a parent, can both serve as the supervising adult and help volunteer (e.g. field reset, queuing, etc.) that would help to ensure staffing for tournaments.

My sense is that this would depend on additional factors, such as the age. My middle school students seem to be totally capable of guiding themselves at a tournament. Parents of my high school VRC teams are particularly concerned that they need to be in attendance the entire time when I am present and their older students are not needed them.

### Answered by committee

Yes, a coach can serve as the Adult representative for multiple Teams. This is common, especially when one teacher is the coach of several Teams from the same school.

While nothing prohibits the Adult from also volunteering at an event, it would be prudent to have an alternative Adult available to address any Team concerns that may arise during the event.

---

## 801: Scoring in the Basket

10-Jun-2021

Do they need to be launched or can the balls be placed in the scoring basket by any means as long as the height limitation is considered?

### Answered by committee

Balls can be placed in the High Goal by any means, as long as no other rules (such as the height limitation) are violated.

---

## 825: Starting positions have balls in them in LRT

21-Jul-2021

In the LRT setup it seems like there are some balls in starting positions. Should those balls be removed if they are using that starting position? Or, can those positions only be used if they are not touching the balls?

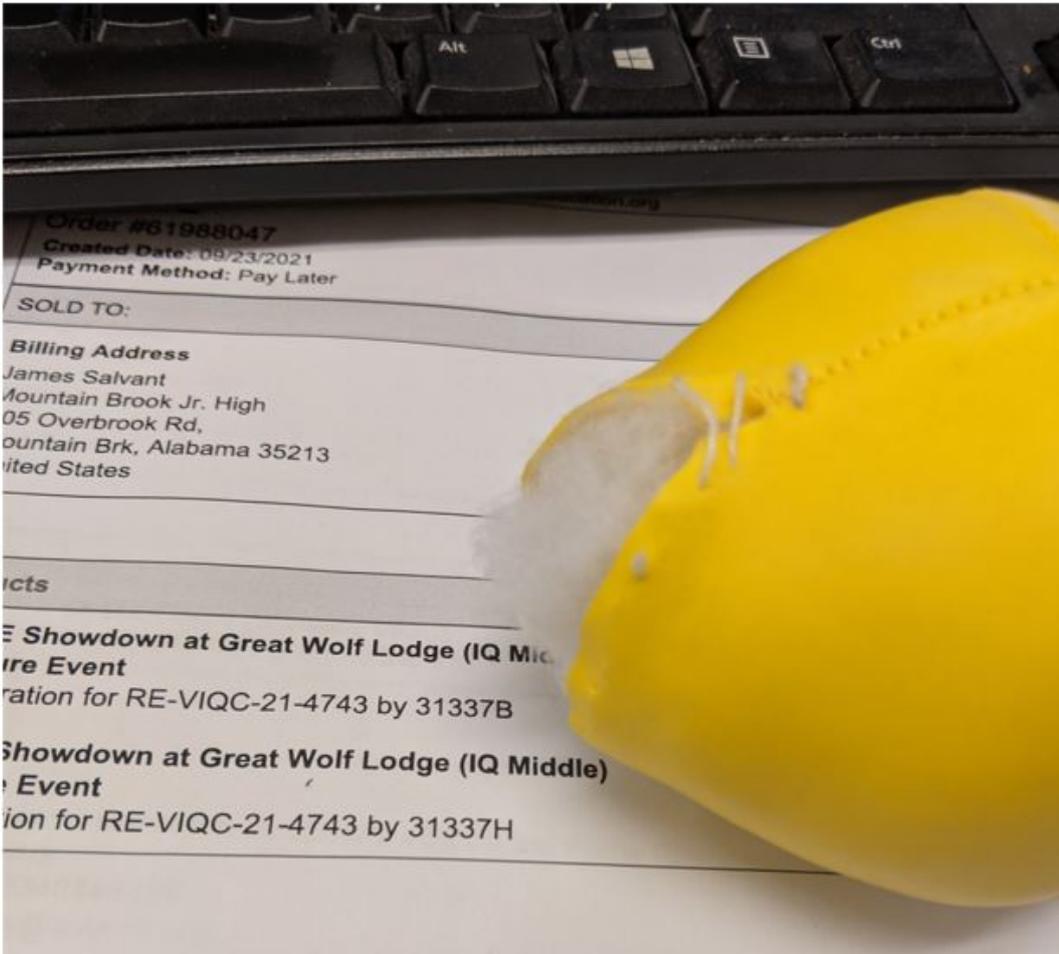
Thanks!

### Answered by committee

Thank you for bringing this to our attention. In the Game Manual v1.1 update, LRT4 and Figure 23 were updated to clarify the legal Starting Positions for Live Remote Tournaments.

## 873: Balls Busting

1-Oct-2021



I have a question about the balls that we are using this year in IQ... under normal/ light use almost ½ of our balls are busting at the seam and the stuffing is starting to come out. Can they be repaired, or do we need to replace the balls? If they can be repaired how do we repair them and are they still legal to use? If not at what point are they deemed “too busted open” to use as an element as the stuffing is getting caught in flywheels.

### Answered by committee

Can they be repaired, or do we need to replace the balls? If they can be repaired how do we repair them and are they still legal to use?

Although replacing Balls with [new ones](#) would always be recommended, Balls may be repaired for competition use by sewing the seam shut with off-the-shelf sewing thread.

The [Field Appendix](#) provides the following guidelines for Ball specifications:

The Balls in VEX IQ Challenge Pitching In are constructed from four panels and filled with stuffing, are roughly 3.0” (75mm) in diameter, and weigh approximately 0.055 pounds (25 grams).

Provided that the repaired Balls meet these approximate specifications, they will be considered legal for competition use.

---

### 885: Scored in Low Goal and touching floor outside Low Goal

16-Oct-2021

Looking for confirmation on how we are reading this definition. Scored in Low Goal - the Ball is **partially** within the three-dimensional area... Because the wording does not include any mention of a ball that is touching the floor outside of the Low Goal, we conclude that a ball that is resting on the floor outside of Low Goal and partially within the three-dimensional area is scored. If you were to use Figure 12 as a visual aid, move the image of the ball 1.00" to the right and you will see the example illustrated above.

To be extra clear, a ball in our example is not touching the teal PVC pipes and is NOT supported or touching the teal VEX IQ wedge parts attached to the floor. The ball is fully resting on the floor **outside** of the Low Goal and the ball DOES break the plane of the infinite vertical projection of the Low Goal, made by the VEX IQ wedge Parts. This ball would be scored.

Please confirm. Thank you

#### Answered by committee

To be extra clear, a ball in our example is not touching the teal PVC pipes and is NOT supported or touching the teal VEX IQ wedge parts attached to the floor. The ball is fully resting on the floor **outside** of the Low Goal and the ball DOES break the plane of the infinite vertical projection of the Low Goal, made by the VEX IQ wedge Parts. This ball would be scored.

Yes, this is correct.

---

### 913: Are omni wheels legal?

7-Nov-2021

I noticed that omni wheels aren't listed on the illegal or legal parts list. Are they legal this year? One of our teams wants to use them, but don't want to put them on their robot until they know for sure.

#### Answered by committee

Yes, the [VEX IQ Omni Wheels](#) are legal for competition use.

Thank you for bringing this to our attention; the [VIQC Legal Parts Appendix](#) will be updated shortly with the correct information.

---

### 914: Clearing Corral

8-Nov-2021

Can someone please clarify "clearing the corral"?

### Answered by committee

Please review the [Q&A Usage Guidelines](#) before posting, specifically point 1, "Read and search the manual before posting", and point 3, "Quote the applicable rule from the latest version of the manual in your question". Often, you'll find that by quoting the rule, you'll answer your own question.

The definition of "Cleared" reads as follows:

Cleared - A Starting Corral status. A Starting Corral is considered Cleared at the end of a Match if no Balls are contacting the Floor inside of the Starting Corral. Referees can check any Balls in question by sliding a piece of paper between the Ball and the Floor.

The definition of "Starting Corral" reads as follows:

Starting Corral - One of two areas of the Floor on either end of the Field, each of which are bound by the Field perimeter and the outside of the solid black line closest to the 6' edge of the Field. The Starting Corral is defined as this portion of the Floor, not the three-dimensional volume above it.

---

## 925: Ball in the air at the sound of the buzzer

10-Nov-2021

Does the ball need to be in the basket before the sound of the buzzer to count or as long as it is launched and in the air before the buzzer sounds to count as long as it goes in?

Same question for the low scoring balls.

### Answered by committee

Please review the [Q&A Usage Guidelines](#) before posting, specifically point 3, "Quote the applicable rule from the latest version of the manual in your question". Often, you'll find that by quoting the rule, you'll answer your own question.

Rule G12 reads as follows, with a portion bolded for emphasis:

<G12> When it's over, it's over. Scores will be calculated for all Matches immediately after the Match is complete, **\*\*and once all Robots and Balls on the Field come to rest. \*\***

a. Referees or other event staff are not allowed to review any videos or pictures from the Match, per <T1b>.

b. If there is a concern regarding the score of a Match, a Driver from that Match (not an Adult), may discuss the score with the Head Referee. See <T2> for more details.

c. This rule's intent is for Driver inputs and Robot motion to cease at the end of the Match. A pre-programmed routine which causes the Robot to continue moving after the end of the Match would violate the spirit of this rule. Any Scoring which takes place after the Match due to Robots continuing to move will not count.

Note: Using a motor's built-in "Hold" function, such as to remain Hanging, is permissible.

If a Ball is in the air (or rolling along the Floor) at the end of the Match, it should be scored wherever it eventually comes to rest.

---

## 936: Clarification on Definition of Hanging, either Low or High

18-Nov-2021

The definitions of both Low Hanging and High Hanging robots indicate that a robot is hanging if it "is contacting one of the Hanging Bars." It's unclear whether this should be interpreted as 1) contacting only one Hanging Bar, or 2) contacting at least one Hanging Bar. If a robot is touching multiple Hanging Bars and meets all of the other conditions of either a High or Low Hang, should it be scored as a Hanging Robot? Thank you for your clarification!

### Answered by committee

It's unclear whether this should be interpreted as 1) contacting only one Hanging Bar, or 2) contacting at least one Hanging Bar.

It should be interpreted as "at least one".

If a robot is touching multiple Hanging Bars and meets all of the other conditions of either a High or Low Hang, should it be scored as a Hanging Robot?

Yes.

---

## 945: Driver Positions for Teamwork Match

29-Nov-2021

Looking at Figure 2, which appears to try and explain the Driver Station configuration for Teamwork Matches, I'm a little unsure of the options and how it is decided which configuration will be used. From what I can tell, at the start of a match the two teams in the alliance can choose to start on opposite ends (like last year) or both start on the long side of the field, with both on the same side (like years prior to last year). Is this correct? Figure 2 doesn't show a blue starting position on the bottom picture so I'm a little confused. It could be that teams can choose to stand on opposite ends, opposite sides, or both teams on the same side. What are the options, and who decides which option will be used? Do the teams decide this at the beginning of each match, or is that decided globally for a tournament by the EP?

Thanks for your clarification.

### Answered by committee

Driver station configuration is determined by the Event Partner, and should be the same across all fields at a given event.

One configuration requires each team to stand on the opposing 6' ends of the field. The other requires both teams to stand on the 8' side of the field, facing the audience.

Teams should be prepared to use either configuration at any given tournament.

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## 956: LRT Scoring according to the definitions of "Scored", "Cleared", and "Corral" along with the field setup according to LRT5

7-Dec-2021

Specific definitions and rules in question : LRT Scoring according to the definitions of "Scored", "Cleared", and "Corral" along with the field setup according to LRT5

Question:\* The initial placement of the balls at the start of an LRT has the balls on the edge or outside the corrals. The LRT rules state that scoring is to be done the same as an in-person tournament unless otherwise specified. This would mean that a "cleared" score would be automatic unless some of the balls were pushed into the corral. Or is the intention of this configuration to eliminate the possibility of earning a "cleared" score?\*

### Answered by committee

Question:\* The initial placement of the balls at the start of an LRT has the balls on the edge or outside the corrals. [...] This would mean that a "cleared" score would be automatic unless some of the balls were pushed into the corral.

This is incorrect. Here is the full text of the relevant definition, with a portion bolded for emphasis:

Starting Corral - One of two areas of the Floor on either end of the Field, each of which are bound by the Field perimeter and the **outside of the solid black line** closest to the 6' edge of the Field. The Starting Corral is defined as this portion of the Floor, not the three-dimensional volume above it.

Per the bolded portion of the above definition, the six Balls which begin the Match on the black line intersections would be considered "in" the Starting Corral. This is also confirmed by the Note in LRT5:

<LRT5> In a Live Remote Match, each field is set up with twenty-two (22) Balls, as shown below in figure 22.

Note: The Balls on the "right" side of the Field, as depicted in Figure 22 or when viewed from the "audience side", **are considered in their Starting Corral. There is only one Starting Corral in a Live Remote Match.**

Therefore, a "Cleared" score would only be counted once the definition of Cleared is met, at the end of the Match:

Cleared - A Starting Corral status. A Starting Corral is considered Cleared at the end of a Match **if no Balls are contacting the Floor inside of the Starting Corral**. Referees can check any Balls in question by sliding a piece of paper between the Ball and the Floor.

So, per the Note in LRT5, there is only one Starting Corral per field in an LRT Match. Per the layout shown in Figure 22, that Starting Corral begins with 6 Balls in it.

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## 962: <LRT5> One starting corral in LRT

8-Dec-2021

In the latest game manual update 2.2, it indicates there is only one starting corral in LRT. In that case, we have 2 questions to ask for clarification,

1. One team can only receive up to 5 clearing corral bonus point in one match.
2. If the "left" side is not considered as starting corral in LRT, then having balls ended up in the "left" side corral will not result in losing the clearing corral bonus points. e.g. "right" side is cleared at the end of the match, but "left" side contains balls in it. In such case, team will still receive the clearing corral bonus.

### Answered by committee

Yes, these are both correct interpretations.

---

## 963: Driver Positions in LRT

8-Dec-2021

In this Q&A <https://www.robotevents.com/VIQC/2021-2022/QA/945>. It's indicated that driver position is determined by EP for single event, not the team. Does the same rule apply for LRT?

### Answered by committee

No. Teams competing in a Live Remote Tournament may use any legal Driver Station, provided that no other rules are violated, namely LRT1, LRT2, & LRT4.

---

## 965: <LRT5> Clearing the corral in LRT

8-Dec-2021

Do both teams have to clear the corral on their own field for it to be considered cleared and score 5 points for the alliance? or is one team clearing it enough to score? Can it be scored twice for a total of 10 if both teams clear the same corral?

### Answered by committee

Do both teams have to clear the corral on their own field for it to be considered cleared and score 5 points for the alliance? or is one team clearing it enough to score?

The latter - each Starting Corral that qualifies for the Cleared state should be awarded 5 points.

Can it be scored twice for a total of 10 if both teams clear the same corral?

Yes. Please note that only one Starting Corral exists per field in the LRT format. In Figure 22, it is the left side that is considered the Starting Corral.

---

## 966: LRT scoring - is there a maximum of 22 balls that can score?

8-Dec-2021

Last year, for LRT, the manual said "For all intents and purposes, you can picture the two Teams' fields being stacked on top of each other and scored as one "Alliance field"." Is that still true this year?

Specifically, if the combined fields of the two teams included more than 22 scored balls, would all of them count? or would it max out at 22 because they couldn't actually score more than 22 balls if they were really playing on the same field.

### Answered by committee

Yes; all 44 Balls can be Scored in a two-Team LRT Match.

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## 967: Low Goal Definition & Scoring

The definition of the Low Goal is different between the Game Manual and the Field Appendix, which leads to some confusion on what is actually the scoring area for the balls in the Low Goal.

Scored - A Ball status. A Ball is considered Scored at the end of a Match if it is not touching a Robot, and if it is "in" one of the Goals:

1. The Ball is partially or fully within the three-dimensional area defined by the infinite vertical projection of the Low Goal.

#### Game Manual Definition of the Low Goal

**Low Goal** - The area in the center of the *Field* surrounding the *High Goal* structure. On two sides, the *Low Goal* is bound by clear plastic sheets. On the other two sides, the *Low Goal* is bounded by the outer edge of the teal PVC pipes, and the VEX IQ parts attached to the Floor. The plastic sheets, PVC pipes, and VEX IQ parts are considered part of the *Low Goal*.

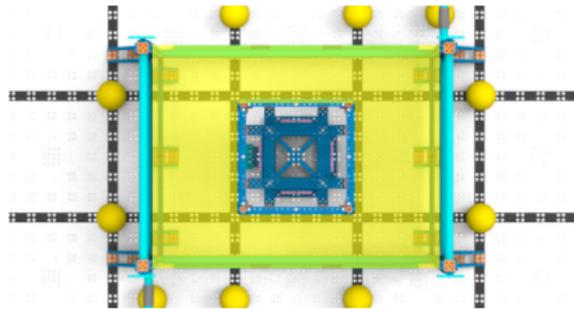


Figure 11: The Low Goal.

#### Field Appendix Definition of the Low Goal

### VEX IQ Challenge – Pitching In Field Appendix

## Low Goal Specifications

The *Low Goal* in VEX IQ Challenge Pitching In consists of multiple VEX IQ pieces assembled as shown in the Field Assembly Instructions and serves as one of the areas to score *Balls*. The *Low Goal* is an approximately 26" x 20" (660.7mm x 508mm) rectangle located in the center of the field and is bounded by the inside edges of the VEX IQ pieces.



Based on the Game Manual definition, any ball that crosses the vertical plane above the "outer" edges of the blue floor pieces should count as scored. Based on the Field Appendix definition of the low goal, only those balls that pass the "inner" edges of the floor pieces or blue vertical bar and into the vertical plane of the "inside" of the box should count. I'm assuming that we should operate based on the Game Manual definition, but it is confusing. Thank you.

#### Answered by committee

Thank you for bringing this to our attention. Appendix A has been updated to coincide with the definition found in the Game Manual.

### 976: Computer Generated Alliance Pairing

My elementary school has two VEXIQ teams that share one field, one set of audio-visual equipment, and one smartboard (all of which was sufficient for last year's "remote" events). I've been told that for multi-team schools, that will not be

sufficient for this year's \*\*2021-22 Pitching In \*\*event.

**Question: In the event that the computer pairs our two teams (from the same school) as alliance partners for a match, can we just use the same field for that match? Or, can the event director manually reassign our two teams to different alliance partners?**

To expect a school to have multiple sets of equipment necessary to participate in an LRT event poses many logistical and fiscal dilemmas for the school's STEM program.

### Answered by committee

In the event that the computer pairs our two teams (from the same school) as alliance partners for a match, can we just use the same field for that match?

No, this would not be permissible. As stated in the Live Remote Tournament Overview section of the Game Manual, "Each Team competes on a separate field (i.e. there are two Robots, two Teams, and two fields in each Match)."

Or, can the event director manually reassign our two teams to different alliance partners?\*

No, this functionality is not found in the LRT interface (or the in-person Tournament Manager software).

To expect a school to have multiple sets of equipment necessary to participate in an LRT event poses many logistical and fiscal dilemmas for the school's STEM program.

This is a bit outside of the scope of this rules Q&A, but we would recommend reaching out to your [REC Foundation Team Engagement Manager](#) to discuss potential solutions to these dilemmas.

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## 988: Rescuing a robot from Corral that has control of a ball

31-Dec-2021

If your team is rescuing a robot from Corral that has control of a ball (let's say the last ball left in the corral), by rule the ball will be removed from the field, in essence "clearing" the corral." Does the corral count as cleared? For argument sake let's also say it is very obvious that the robot needs rescued and it is not a strategy being used to score higher.

Thanks,

### Answered by committee

Please review the [Q&A Usage Guidelines](#) before posting, specifically point 3, "Quote the applicable rule from the latest version of the manual in your question".

Rule G18 reads as follows:

<G18> Handling the Robot mid-match is only allowed under certain circumstances. If a Robot goes completely outside the playing Field, gets stuck, tips over, or otherwise requires assistance, the Team's Drivers may retrieve & reset the Robot. To do so, they must:

1. Signal the Referee by placing their VEX IQ Controller on the ground. (Or table, if the field is elevated.
2. Remove any Balls being controlled by the Robot from the Field. i. In the context of this rule, "controlled" implies that the Robot was manipulating the Ball, and not simply touching it. For

example, if the Ball moves with the Robot either vertically or while turning, then the Robot is “controlling” the Ball.

3. Place the Robot back into a Starting Position which does not have any Balls in it. If no “empty” Starting Positions are available, then any Balls in the Starting Position where the Robot is being placed must be removed from the Field.

Note: If the Drivers cannot reach the Robot due to the Robot being in the center of the Field, the Drivers may ask the Head Referee to pick up the Robot and hand it to the Drivers for placement according to the conditions above.

The definition of Cleared reads as follows:

Cleared - A Starting Corral status. A Starting Corral is considered Cleared at the end of a Match if no Balls are contacting the Floor inside of the Starting Corral. Referees can check any Balls in question by sliding a piece of paper between the Ball and the Floor.

It is worth noting that per these two definitions, if a Robot is "controlling" a Ball such that it was no longer contacting the Floor, then the Starting Corral was already considered Cleared.

Either way - removing a Robot / Balls from the field in line with G18 should always be the same interaction/process, regardless of where the Robot is coming from. To answer your specific question, yes, the Starting Corral would be considered Cleared.

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## 992: High Hang Definition(s)

3-Jan-2022

Definition:

**Hanging** - A Robot status at the end of a Match.

- **Low Hanging** – A Robot is *Low Hanging* if it is contacting one of the *Hanging Bars*, is not contacting the *Floor*, and is not supported by any *Balls*. Referees can check to see if a *Robot* is *Low Hanging* by sliding a piece of paper between the *Robot* and the *Floor*.
- **High Hanging** – A Robot is *High Hanging* if it is contacting one of the *Hanging Bars*, is not supported by any *Balls*, and is completely above a horizontal plane that is in line with the bottom edge of the lower *Hanging Bar*. Referees can check to see if a *Robot* is *High Hanging* by sliding a VEX IQ part which is 15 holes long (e.g. a 1x15 beam) underneath it.

**Note 1:** A *High Hanging Robot* does not also count as a *Low Hanging Robot*.

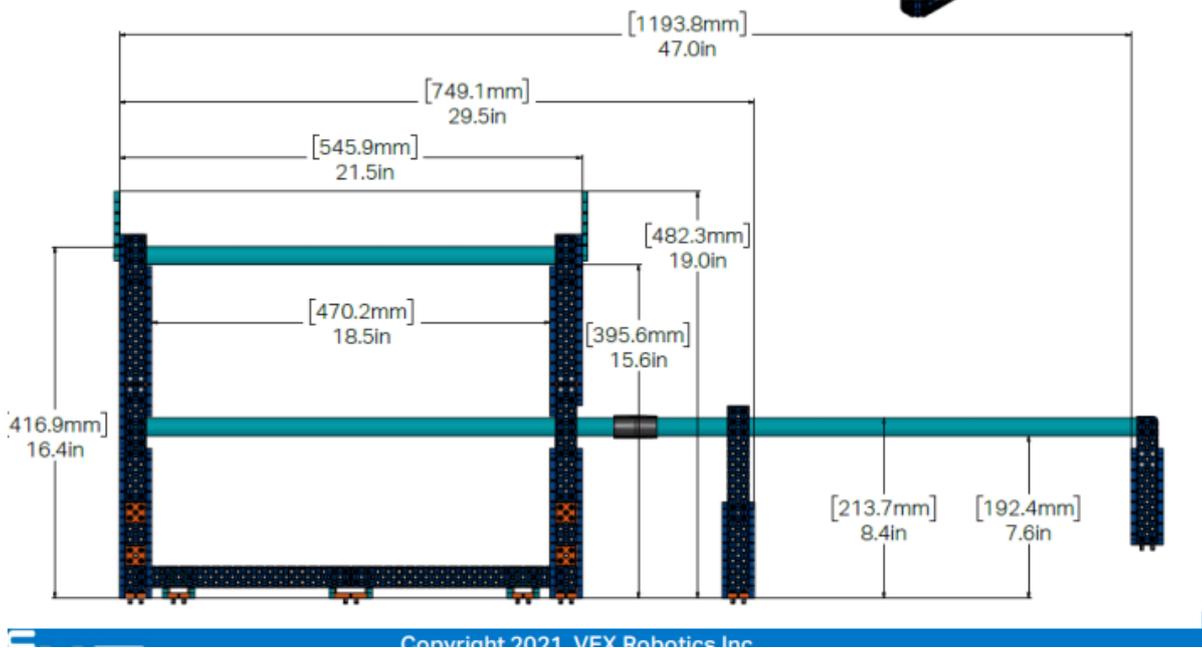
**Note 2:** Referees can check to see if a *Robot* is supported by any *Balls* by gently removing the *Ball* in question.



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There are two ways to check for a high hanging robot.

1. Above the bottom of the lower bar. (7.6" off the field.)
2. Slide a 1x15 across the field (7.5" off the field.)



In the event of a close call, would a 1x15 check be OK for a high hang even if the robot is visually below the low bar? It's easy to check by looking across the field and lining up your eye with the bottom of both bars.

### Answered by committee

In the event of a close call, would a 1x15 check be OK for a high hang even if the robot is visually below the low bar?

Yes. Technically, a Robot with a bottom edge 7.55" inches from the Floor should still be considered High Hanging. Close calls should always be checked with a 15-hole IQ part.

This slight difference between a visual check and the physical aid is intended to give close calls the "benefit of the doubt", and ensure that a Robot which is touching the height check is "without a doubt" lower than the lower Hanging Bar.

## 997: Driving Station at Worlds

6-Jan-2022

Which driving station configuration will be used at Worlds?

Thanks,

### Answered by committee

As noted in G20, gameplay details and rules clarifications pertaining specifically to VEX Worlds will be included in the April 5 Game Manual Update.

## 998: Consent form

6-Jan-2022

### Answered by committee

Please review the [Q&A Usage Guidelines](#) before posting, specifically note 1, "The Q&A system is for rules clarifications only". For event, registration, or other competition support questions, please contact your [REC Foundation Manager](#).

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## 1001: Coaches confused about G8

9-Jan-2022

There appears to be confusion among the coaches about G8. In particular, there are perceived contradictions between the rule G8-b, the blue box clarification, and the current Q&A post on the topic. See below for each of the statements.

G8-b: "It is at the Team's discretion whether they wish to have one Driver or two." Blue box: "If a Team has the capacity to include multiple Students, it should also be expected that they will not take advantage of this single-Driver exception for strategic gain." Q&A answer: "We will not be implementing, requiring, or endorsing any specific "validation tests", as it is ultimately at the Team's discretion whether they wish to have one Driver or two."

G8-b and the Q&A answer both give the Team the "discretion" of having one or two Drivers, but the blue box states that Teams that have the "capacity to include multiple Students" is "expected that they will not take advantage" of the decision.

I'm not advocating for a single Driver versus two Drivers but is there a process to acknowledge when a Team doesn't have the capacity to have two Drivers?

### Answered by committee

Note: This response comes directly from Grant Cox, Chairman of the GDC.

The original intent of G8-b and the referenced Q&A post, coupled with its blue box explanation, were that Teams would have the opportunity to use their discretion in alignment with the spirit of a teamwork-oriented competition. Out of respect for Team privacy and varying local health guidelines around the world, we had hoped that this level of explanation would be adequate, and that Teams would value the opportunity to teach these teamwork/fairness principles more highly than just focusing on seeking competitive advantages.

Put simply, it has come to our attention that this has not been the case. So, the February 1st Game Manual Update will include the following revisions to rule G8 to bring this "spirit" into a more black-and-white ruling.

Point "b" will state the following (portion bolded for emphasis):

b. For the 2021-2022 season, Teams restricted by local health guidelines may elect to have one Driver in the Driver Station, instead of two. If only one Driver is present in the Driver Station, they may drive for the full Match, and a controller switch is not required. If two Drivers are present in the Driver Station, the controller switch rules in <G8a> would then apply. It is at the Team's discretion whether they wish to have one Driver or two; **however, taking advantage of this exception for strategic gain is considered a violation of this rule, and may be considered a violation of the RECF Code of Conduct.**

The blue box explanation will state the following (portion bolded for emphasis):

The intent of point “b” in this rule is to provide flexibility for Teams who are unable to meet in a traditional capacity due to local health guidelines. As noted in the definition of “Team”, teamwork is a core tenet of the VEX IQ Challenge, and the two-Student drive team is intended to be a fundamental application of this skill. If a Team has the capacity to include multiple Students, it should also be expected that they will not take advantage of this single-Driver exception for strategic gain.

**Teams that exhibit the following behaviors may be in violation of <G8b>, and/or the RECF Code of Conduct, and should be prepared to share relevant health guidelines with RECF staff upon request:**

- Utilizing two drivers in Qualification matches, but utilizing only one Driver in Finals Matches or Robot Skills Matches.
- Utilizing only one Driver in Matches, but permitting interactions in the pit area between multiple Students similar in nature to interactions that would occur between two Drivers in the Driver Station.
- Meeting outside of the event setting in a manner consistent with interactions that occur between two Drivers in the Driver Station, yet only utilizing one Driver in Matches.

To answer your specific question:

is there a process to acknowledge when a Team doesn't have the capacity to have two Drivers?

Teams who find themselves in this situation, or Event Partners who have a concern regarding a Team potentially exploiting this rule for strategic gain, should contact to their [REC Foundation Team / Event Manager](#) for further details.

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## 1004: Autonomous

13-Jan-2022

When students are running autonomous, must they run it from the brain or can they run using an iPad?

### Answered by committee

Please review the [Q&A Usage Guidelines](#) before posting, specifically point 3, "Quote the applicable rule from the latest version of the manual in your question". Often, you'll find that by quoting the rule, you'll answer your own question.

Relevant rules pertaining to this question are as follows, with some portions bolded for emphasis:

<RSC8> Starting a Programming Skills Match. **Drivers must start a Robot's Programming Skills Match routine by pressing a button on the Robot Brain or manually activating a sensor.** Because there is no VEX IQ Controller hand-off, only one (1) Driver is required for Programming Skills Match (though Teams may still have two (2) if desired). <G7> still applies to any Driver participating in the Match.

a. Pre-match sensor calibration is considered part of the standard pre-match setup time, i.e. the time when Team would typically be turning on the Robot, moving any mechanisms to their desired legal start position, etc.

b. Pressing a button on the VEX IQ Controller to begin the routine is not permitted. To avoid any confusion, Teams are advised not to bring controllers to Programming Skills Matches.

<G9> Drivers drive your Robot, and stay in the Driver Station. During a Match, Robots may only be operated by that Team's Drivers. Drivers must remain in their Driver Station, except when legally interacting with their Robot as per <G18>. **Drivers are not allowed to use any communication devices while in the Driver Station.** Devices with communication features turned off (e.g. a phone in

airplane mode) are allowed.

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## 1005: Clearing Corral (The Return)

13-Jan-2022

Going through the manual in detail, I want to make sure I am understanding the intent of a cleared Corral correctly.

Cleared states: "A Starting Corral status. A Starting Corral is considered Cleared at the end of a Match if no Balls are contacting the Floor inside of the Starting Corral. Referees can check any Balls in question by sliding a piece of paper between the Ball and the Floor."

And Starting Corral states: "One of two areas of the Floor on either end of the Field, each of which are bound by the Field perimeter and the outside of the solid black line closest to the 6' edge of the Field. The Starting Corral is defined as this portion of the Floor, not the three-dimensional volume above it."

Then in these two situations the Corral would be cleared assuming all other balls are clear of the Starting Corral. 1.) The ball is contacting the field just outside the Starting Corral, since the ball is a sphere only a small portion is touching the field at any given time. It is very possible to have a portion of the ball overhanging into the Starting Corral 3-D space. As long as the ball isn't touching the Starting Corral floor(2-D) we would count it as cleared.

2.) A robot or part of a robot has prevented the ball(s) from touching the floor inside the Starting Corral.

Thank you for your assistance in this manner,

Nickolas

### Answered by committee

Thank you for quoting the relevant rules and definitions in your questions.

Then in these two situations the Corral would be cleared assuming all other balls are clear of the Starting Corral.

1.) The ball is contacting the field just outside the Starting Corral, since the ball is a sphere only a small portion is touching the field at any given time. It is very possible to have a portion of the ball overhanging into the Starting Corral 3-D space. As long as the ball isn't touching the Starting Corral floor(2-D) we would count it as cleared.

This is correct. If a Head Referee is unsure whether the Ball is contacting the Corral or not, they can use a "paper test" (i.e. slide a piece of paper along the Floor) to check where the Ball makes contact with the Floor.

2.) A robot or part of a robot has prevented the ball(s) from touching the floor inside the Starting Corral.

This is correct.

Along with these two questions, we would also note the "blue box" explanation from the definition of Scored:

Teams may encounter other Ball / Goal states than the examples depicted in the figures above. In these edge cases, Teams will be given the "benefit of the doubt", and the Ball should generally be considered Scored. Head Referees will not be expected or required to define a perfectly rigid imaginary vertical projection or check imperceptibly small measurements.

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## 1020: Clarification of RSC7 (Handling Robots during a Programming Skills Match)

26-Jan-2022

We have a situation where a team has talked about programming their robot to collect all the balls in a starting corral during their run. Their robot would store all the balls within its own ball hopper. At the end of their run, they would pick up the robot to return to a Starting Position and empty out all the balls. In our heads this would be allowed for the following reason: RSC7 a. states that "Upon handling the Robot, it must be immediately brought back to any legal Starting Position." RSC7 b. states that "Any Ball being controlled by the Robot while being handled must be removed from the Field. Controlled requires that the Robot was manipulating the Ball and not simply touching it, e.g. if the Ball moves with the Robot either vertically or while turning, the Robot is controlling the Ball."

This situation could result in the following situation where the robot is still in the Starting Corral, has control of the balls in its hopper, but the balls are touching the 2-D plane of the Starting Corral. This creates the following dilemma. RSC7 would allow for the Programmer to bring the robot back to a Starting Position thus legally removing the balls contacting the floor and creating a Cleared Status (5 pts). But... rule G18 blue box states "This rule(talking about handling a robot) is intended so Teams can fix damaged Robots or help get their Robots "out of trouble." It is not intended for Teams to use as part of a strategy to gain an advantage during a Match. If a Head Referee determines that a Team is strategically exploiting this rule, they may be Disqualified from said Match."

Now we also know that RSC7's Note says: "This rule only applies to Programming Skills Matches. Driving Skills Matches are still governed by <G18>, especially for strategic violations." This would seem to indicate that G18 isn't applicable for programming matches.

So if I was a Head Ref for a match where this happened I would apply the "benefit of the doubt" (Page 8 of the Game Manual) and rule the corral cleared and award the 5 pts. Is that the correct interpretation of the Game Manual?

Thank you,

### Answered by committee

This situation could result in the following situation where the robot is still in the Starting Corral, has control of the balls in its hopper, but the balls are touching the 2-D plane of the Starting Corral.

This situation should not occur. Please review Figures 16 and 17 in the Game Manual; the Starting Corrals and the Starting Positions occupy different areas of the Floor.

RSC7a states the following:

- a. Upon handling the Robot, it must be immediately brought back to **any legal Starting Position**.

Therefore, if a Team is exercising RSC7 / G18, they should be bringing a Robot (and/or any Balls controlled by the Robot) into a Starting Position, not the Starting Corral.

In general, RSC7 / G18 actions should not have any bearing on a Corral's Cleared status. Please see this related Q&A post:

<https://www.robotevents.com/VIQC/2021-2022/QA/988>

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## 1025: Elementary Team wishes to Play Up mid-season.

29-Jan-2022

I have an Elementary team that wishes to "play up" for the remainder of the season. They have already participated in several tournaments. In the game definitions section of the rules under team, it states "Elementary School Teams may "play up" and compete as a Middle School Team". It identifies that this can be done at registration.

It also states that: "Once declared and playing as a Middle School Team, that Team may not change back to a Elementary School Team for the remainder of the season."

I am asking if my team is allowed to "play up" or do we have to add a middle school participant that has not participated on another team to justify the move.

Thank you for your prompt response.

### Answered by committee

The best time to make this decision is during the team registration process. If you have already registered as an Elementary School Team, please contact your REC Foundation [Team Engagement Manager](#) for assistance.

## 1039: Clarification of Starting Position concerning rule RSC7

3-Feb-2022

Hello,

My question concerns a local tournament and an email I received before the event. The email contained this paragraph:

"Our Head Ref and Refs expect teams to follow the <RSC7> rule as stated - LEGAL STARTING POSITION - not straddling. Robots that are close to filling the entire starting position will need to take extra precautions that they are truly within the legal starting box or will first receive a warning and if it happens again, will be DQ'd from their match. Remember, if this happens in finals, both teams will get the DQ."

I have reread the rules and checked on the QA Page but haven't found any such rule where the robot needs to be returned to pre-match conditions (ie: fit exactly in the box) when brought back to start position during a match. There are however a few rules that express that a robot can be adjusted when returned to start position, specifically during programming, and can expand beyond pre-match configurations throughout the entire match in both programming and driving.

Also, like years past, there is no rule that clarifies a robot must not "straddle" start positions when returned to one during a programming match. In years past the vagueness of these rules allowed students to reset their robot in a way that would satisfy returning to a legal start position and allow them to straddle the edges of the starting box. This was used a lot during programming to give the students an advantage in their runs and during teamwork challenges it allowed a little grace when teams were frantically trying to fix a robot.

Here are the relevant rules concerning Start Positions and returning a robot to start position during a match. I've included my thoughts with these rules so that you can better understand how I came to my interpretation.

<G4> Pre-Match setup. At the beginning of a Match, each Robot must meet the following criteria: Only be contacting the Floor and / or the Field perimeter (i.e. not contacting any Balls, other Field Elements, or other Robots). Fit within an 11" x 19" (279.4mm x 482.6mm) area, bounded by one of the Starting Positions. Be no taller than 15" from the Floor. <G5> Expansion is limited during a Match. During the Match, Robots may not expand beyond the following restrictions: Horizontally, beyond an 11" x 19" (279.4mm x 482.6mm) area. Vertically, beyond 19" (482.6mm) high. This is the same height as the top of the teal T-shaped VEX IQ parts in the center of the Field. See Figure 19. This expansion limit does not require that the Robot stay in the same configuration as it was when it began the Match. It simply means that, at any given moment during the Match, it should be able to fit within an 11" x 19" x 19" (279.4mm x 482.6mm x 482.6mm) rectangular prism. Robots will be tested for compliance with this rule, alongside rule <R6>, during inspection.

My thoughts: These two rules clarify what the robot looks like at Pre-Match and how the robot can expand during the match. The line of note is: "This expansion limit does not require that the Robot stay in the same configuration as it was when it began the Match." When returning a robot to the start position it is during the match and therefore does not need to be reset to pre-match size restrictions.

<G18> Handling the Robot mid-match is only allowed under certain circumstances. If a Robot goes completely outside the playing Field, gets stuck, tips over, or otherwise requires assistance, the Team's Drivers may retrieve & reset the Robot. To do so, they must: Signal the Referee by placing their VEX IQ Controller on the ground. (Or table, if the field is elevated. Remove any Balls being controlled by the Robot from the Field. In the context of this rule, "controlled" implies that the Robot was manipulating the Ball, and not simply touching it. For example, if the Ball moves with the Robot either vertically or while turning, then the Robot is "controlling" the Ball. Place the Robot back into a Starting Position which does not have any Balls in it. If no "empty" Starting Positions are available, then any Balls in the Starting Position where the Robot is being placed must be removed from the Field. Note: If the Drivers cannot reach the Robot due to the Robot being in the center of the Field, the Drivers may ask the Head Referee to pick up the Robot and hand it to the Drivers for placement according to the conditions above.

My thoughts: This is the general rule concerning handling a robot during the match. As you can see, it does not specify that a robot needs to return to a pre-match configuration when handling it during the match.

RSC7> Handling Robots during a Programming Skills Match. A Team may handle their Robot as many times as desired during a Programming Skills Match. Upon handling the Robot, it must be immediately brought back to any legal Starting Position. Drivers may reset or adjust the Robot as desired from this position, including pressing buttons on the Robot Brain or activating sensors. Any Ball being controlled by the Robot while being handled must be removed from the Field. Controlled requires that the Robot was manipulating the Ball and not simply touching it, e.g. if the Ball moves with the Robot either vertically or while turning, the Robot is controlling the Ball. Any Ball contacting the chosen Starting Position (as to where the Robot is placed) must be removed from the Field for the remainder of the Match. During a Programming Skills Match, Drivers may move freely around the Field, and are not restricted to the Driver Station when not handling their Robot.

My thoughts: In bullet point 1.1 it states: "Drivers may reset or adjust the Robot as desired from this position, including pressing buttons on the Robot Brain or activating sensors." The line "or adjust the robot as desired" is very important for this clarification. This means they can set-up the robot however they desire, which I interpret as: they do not need to conform to pre-match size restrictions. Furthermore, I believe that this line and the fact that they don't need to fit in the size restrictions that allows the robots to "straddle" the start position if they desire to.

So my question is this, do robots need to be returned to a pre-match configuration when it is returned to a start position during either driving or programming match? Or, is my interpretation correct that the robots must be returned to a start position but not reconfigured back to a pre-match configuration?

I am a head referee and I want to make sure that my interpretation of these rules aligns with whatever Robot Events decides on this matter. Thank you for looking into this.

-Josh Bowen

### Answered by committee

This post contains a few different topics that are being combined into one, which may be causing some confusion. We will try to answer your specific question, but if the topic is still unclear, please feel free to rephrase and re-submit.

So my question is this, do robots need to be returned to a pre-match configuration when it is returned to a start position during either driving or programming match? Or, is my interpretation correct that the robots must be returned to a start position but not reconfigured back to a pre-match configuration?

G18 and RSC7 do not require that Robots meet the requirements of G4 upon being handled. The only requirement in G18 and RSC7, as quoted, is for the Robot to return to a (single) legal Starting Position.

With that being said, we do not see any conflict between this statement, and the quoted guideline from your event's Head Referee:

"Our Head Ref and Refs expect teams to follow the <RSC7> rule as stated - LEGAL STARTING POSITION - not straddling. Robots that are close to filling the entire starting position will need to take extra precautions that they are truly within the legal starting box or will first receive a warning and if it happens again, will be DQ'd from their match. Remember, if this happens in finals, both teams will get the DQ."

Picture a hypothetical Robot which begins the Match as an 11" x 11" square, and later expands to an 11"x19" rectangle. If this Robot were to exercise G18 or RSC7, they would not be required to return to their 11"x11" size. However, they *would* still be required to fit within one of the 11"x19" Starting Positions.

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## 1042: Starting placement of balls

6-Feb-2022

we have witnessed several teams move yellow balls from original placements from under the bars. in the past there has been variance "within an inch", but that information is not present in this year's manual. Can a ball be "cheated" this inch?

### Answered by committee

The 1" variance can be found in rule G16:

<G16> Be prepared for minor field variance. Field tolerances may vary by as much as  $\pm 1$ " unless otherwise specified. Teams must design Robots accordingly.

With that being said, manually adjusting the Field to "push the limit" of this variance for strategic reasons is outside the intent of the rule. A G3-esque analogy would be for a Team to lower a Hanging Bar by 0.9" in order to make their Hanging mechanism work.

Head Referees should check Ball placement prior to the start of each Match, and re-position any that are in question into the correct starting locations.

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## 1043: Hangs requiring driver control

7-Feb-2022

In a prior question, there was clarification about robots "settling" after hanging (still rocking and intermittently touching floor after the buzzer, but ultimately hanging). What about a robot that can hang but requires driver/controller assistance such that when the controller is placed on the ground after the buzzer, the robot will fall back down (motor does not hold it in place in neutral position).

### Answered by committee

Rule G12 reads as follows, with a portion bolded for emphasis:

<G12> When it's over, it's over. Scores will be calculated for all Matches immediately after the Match is complete, and once all Robots and Balls on the Field come to rest.

- a. Referees or other event staff are not allowed to review any videos or pictures from the Match, per <T1b>.
- b. If there is a concern regarding the score of a Match, a Driver from that Match (not an Adult), may discuss the score with the Head Referee. See <T2> for more details.
- c. **This rule's intent is for Driver inputs and Robot motion to cease at the end of the Match.** A pre-programmed routine which causes the Robot to continue moving after the end of the Match would violate the spirit of this rule. Any Scoring which takes place after the Match due to Robots continuing to move will not count.

**Note: Using a motor's built-in "Hold" function, such as to remain Hanging, is permissible.**

Therefore, the scenario described in this question would not be legal, as it involves continued Driver input past the end of the Match. However, pressing a button to use a "Hold" function (or similar) would be permissible.

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## 1046: Measuring Tool During Skills

8-Feb-2022

Are students allowed to use a VEX piece to measure spacing when placing their robot on the field for their autonomous program? The piece would be removed from the field before the student presses the "go" button to run their program. This

piece is not attached to their robot. Please advise.

### Answered by committee

There are no rules prohibiting this; therefore, it is legal.

However, we would advise Teams to be mindful of the blue box in RSC8, if choosing to do so:

In accordance with <G6>, Teams should be mindful of event schedules and set their Robot up as promptly as possible. The definition of "prompt" is at the discretion of the Event Partner and Head Referee, and could depend on things like how much time is left for the Skills Challenge field(s) to be open, how many Teams are waiting in line, etc. As a general guideline, three seconds to calibrate a Gyro Sensor would be acceptable, but three minutes to debug a program would not.

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## 1049: Robot touching a low hanging robot

12-Feb-2022

The definition of a low hanging robot is "A Robot is Low Hanging if it is contacting one of the Hanging Bars, is not contacting the Floor, and is not supported by any Balls. Referees can check to see if a Robot is Low Hanging by sliding a piece of paper between the Robot and the Floor." Would it be considered a low hang if it was supported by another robot? We had a situation where a robot was low hanging and then the second robot collided with it. The hanging robot was still on the bar and not touching the ground, but when we moved the second robot it fell. So, it would have been considered supported by the other robot. Would this be counted as a low hang?

### Answered by committee

As quoted, the definition of Hanging does not include any reference to contact with other Robots. Therefore, yes, the situation described in your post would still be considered Low Hanging.

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## 1050: Driver skills

13-Feb-2022

can there be 1 driver for driver skills or are 3 drivers required if two team members are present?

### Answered by committee

All rules pertaining to Drivers and Driver switches in Teamwork Challenge Matches, namely G6 and G8, also apply to Driving Skills Matches. We would recommend reviewing the blue box in rule G8, and the other Q&A's on this subject, for more information.

Three Drivers can never be used in a single Match.

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## 1065: Virtual Skills

16-Feb-2022

Can teams qualify for state/regional or Worlds competitions with virtual skill rankings? I cannot find documentation that states yes or no.

**Answered by committee**

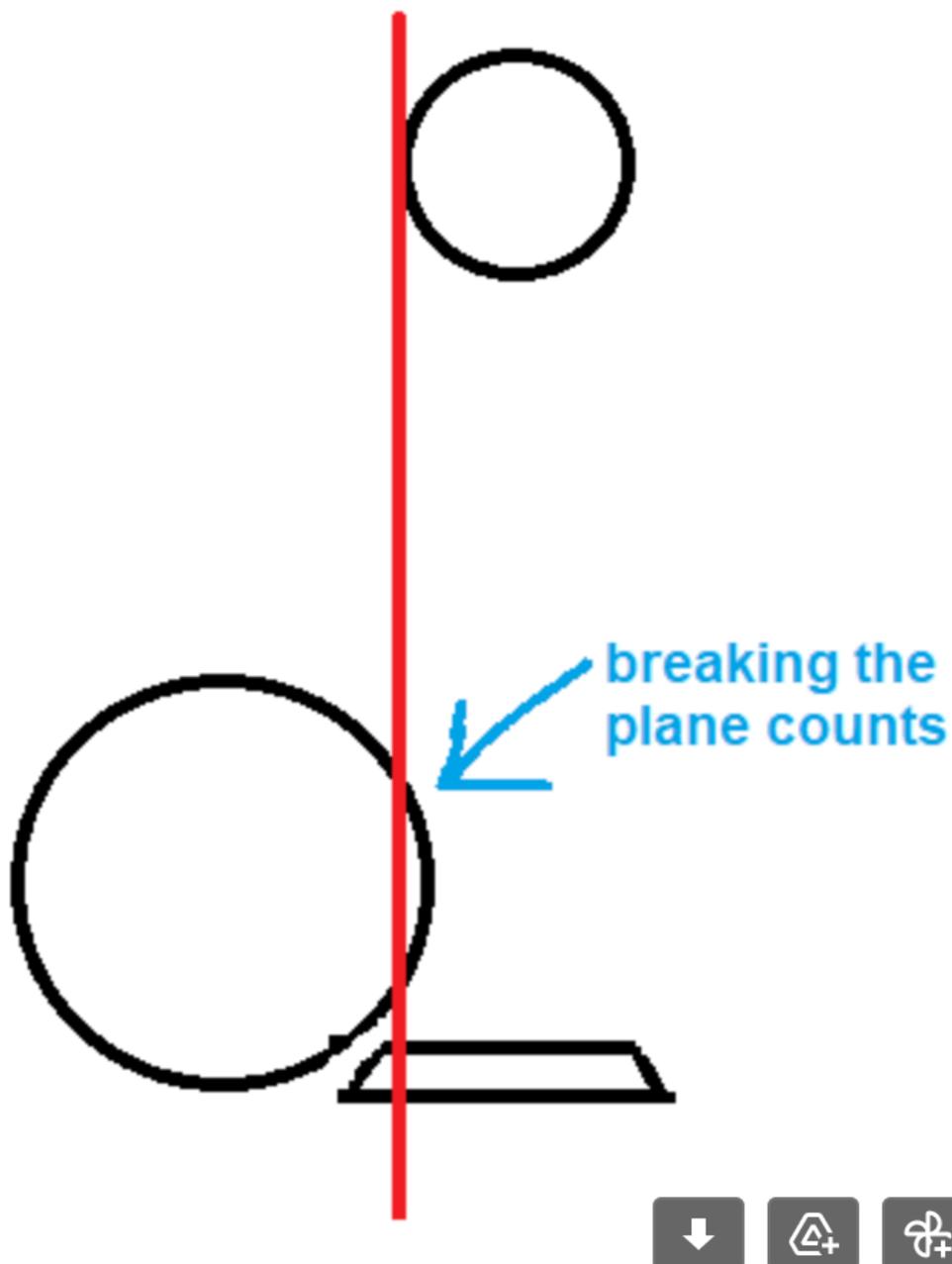
Information regarding qualification structures can be found in the REC Foundation [Qualifying Criteria](#) document. For further questions, please contact your [REC Foundation Manager](#).

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**1078: Ball scored in low goal scoring question (picture included)**

22-Feb-2022

We saw the question with clarification for the low goal scoring ball touching the field and clearing the plane as counting. I just wanted to make sure this image that I am submitting is clearly what you were talking about. As we prepare for state we realized we haven't been counting these as points and it could make a difference in the scoring of our students scores. I just want to make sure that this diagram is what you are referring to when you say it clears the plane and still can count. Thank you!



### Answered by committee

Please review the [Q&A Usage Guidelines](#) before posting, specifically point 3, "Quote the applicable rule from the latest version of the manual in your question".

The relevant Q&A post being referenced is the following:

<https://www.robotevents.com/VIQC/2021-2022/QA/885>

As noted in that Q&A post, the relevant rules / definitions are as follows, with a portion bolded for emphasis:

Low Goal - The area in the center of the Field surrounding the High Goal structure. On two sides, the Low Goal is bound by clear plastic sheets. On the other two sides, the Low Goal is bounded by the outer edge of the teal PVC pipes, and the VEX IQ parts attached to the Floor. The plastic sheets, PVC pipes, and VEX IQ parts are considered part of the Low Goal.

Scored - A Ball status. A Ball is considered Scored at the end of a Match if it is not touching a Robot, and if it is "in" one of the Goals:

1. The Ball is **partially or fully within the three-dimensional area defined by the infinite vertical projection of the Low Goal**, or
2. The Ball is above the bottom surface of the High Goal, and partially or fully within the three-dimensional area defined by the infinite vertical projection of the High Goal.

Yes, the attached picture is correct, and that Ball would be considered Scored in the Low Goal.

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## 1079: IQ Starting Position Volume

22-Feb-2022

In VRC a robot may overhang a starting tile as long as nothing is touching the field outside of the home row.

Does the same apply for IQ? Can a robot overhang a 11x19 starting position as long as the wheels are inside or is it a projected 3D volume?

### Answered by committee

Please review the [Q&A Usage Guidelines](#) before posting, specifically point 3, "Quote the applicable rule from the latest version of the manual in your question".

The definition of Starting Position reads as follows, with a portion bolded for emphasis:

Starting Position – Any one of the designated 11" x 19" (279.4mm x 482.6mm) **volumes** of the Field where Robots must start the Match. Starting Positions are bound by the inner edges of the long black lines, outer edge of the short black line, and the inner edge of the field perimeter. See Figure 17 for more details.

The Starting Position is intended to be an infinitely tall 3-dimensional projection of the 11" x 19" area.

So, no. Robots must begin the Match completely contained within this volume.

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## 1082: Can balls be launched simultaneously, OR ONLY one at a time?

23-Feb-2022

One of my teams built Fling, and modified it to fling three balls at once. Another team is launching two balls at once. Are either of these legal, or do the rules state that ONLY one ball can be launched at a time?

### Answered by committee

Please review the [Q&A Usage Guidelines](#) before posting, specifically point 3, "Quote the applicable rule from the latest version of the manual in your question". If there is no applicable rule, then there are typically no restrictions on the question being asked.

There are no rules limiting the number of Balls that may be launched into the Goal at once.

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## 1084: RULE <G19> CLARIFICATION

24-Feb-2022

IN RULE G19 THE ROBOT CANNOT HANG WITH MORE THAN TWO BALLS TO MAKE THE SCORING. THIS IS WHAT SHOULD BE UNDERSTOOD IN THIS RULE IN MENTION

### Answered by committee

We apologize, but we are not sure what is being asked in this question. Please feel free to work with your [REC Foundation Manager](#) to rephrase and re-submit.

## 1086: G8b at tournaments and WC

2-Mar-2022

If local health guidelines do not prevent drivers from standing next to each other, would there be any circumstances that would allow a single driver to drive the entire time?

- b. For the 2021-2022 season, *Teams* restricted by local health guidelines may elect to have one *Driver* in the *Driver Station*, instead of two. If only one *Driver* is present in the *Driver Station*, they may drive for the full *Match*, and a controller switch is not required. If two *Drivers* are present in the *Driver Station*, the controller switch rules in <G8a> would then apply. It is at the *Team's* discretion whether they wish to have one *Driver* or two; however, taking advantage of this exception for strategic gain is considered a violation of this rule, and may be considered a violation of the RECF Code of Conduct.
- c. *Drivers* are the only *Team* members that are allowed to be in the *Driver Station*. No *Adults* are permitted in the *Driver Station*.

The intent of point "b" in this rule is to provide flexibility for *Teams* who are unable to meet in a traditional capacity due to local health guidelines. As noted in the definition of "*Team*", teamwork is a core tenet of the VEX IQ Challenge, and the two-*Student* drive team is intended to be a fundamental application of this skill. If a *Team* has the capacity to include multiple *Students*, it should also be expected that they will not take advantage of this single-*Driver* exception for strategic gain.

*Teams* that exhibit the following behaviors may be in violation of <G8b>, and/or the RECF Code of Conduct, and should be prepared to share relevant health guidelines with RECF staff upon request:

- Utilizing two *Drivers* in *Qualification Matches*, but utilizing only one *Driver* in *Finals Matches* or *Robot Skills Matches*.
- Utilizing only one *Driver* in *Matches*, but permitting interactions in the pit area between multiple *Students* similar in nature to interactions that would occur between two *Drivers* in the *Driver Station*.
- Meeting outside of the event setting in a manner consistent with interactions that occur between two *Drivers* in the *Driver Station*, yet only utilizing one *Driver* in *Matches*.

### Answered by committee

Please see the following related Q&A's regarding this subject:

<https://www.robotevents.com/VIQC/2021-2022/QA/870>

<https://www.robotevents.com/VIQC/2021-2022/QA/1001>

<https://www.robotevents.com/VIQC/2021-2022/QA/1007>

As noted in the blue box, *Teams* who appear to be exhibiting behavior in violation of G8b should be prepared to share their relevant health guidelines with RECF staff upon request.