

Q&A

VIQRC 2023-2024: Full Volume

Tagged: RSC5

Welcome to the official VEX IQ Robotics Competition 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 VIQRC **Full Volume** 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 VIQRC Full Volume rules questions.

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

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Prerecorded Events Clarification

16-Dec-2020

Tournament Structure RSC5

Question: For Clarification on my Q&A that I posted yesterday, 12/16, the specific situation is a student competed in my Pre-recorded Skills event but in all Skills runs he started the robot in the wrong Starting Position. In a regular or remote Skills Event the Head Ref would have corrected that action before the Skills run even took place. The coach is asking to resubmit a new Pre-recorded Skills video with the robot in the correct starting position.

1. How can a team seek clarification on a Head Ref score during a Prerecorded event?
2. Can a team submit more than one Prerecorded skills video in one event?

Answered by committee

1. How can a team seek clarification on a Head Ref score during a Prerecorded event?

We would advise reaching out to the Head Referee or Event Partner for the event, just as you would during an in-person event. Just as any rulings are explained to the Team during an in-person event (per rule T1-d), an explanation should be provided for any rulings that result from a remote submission.

2. Can a team submit more than one Prerecorded skills video in one event?

There are no rules specifying how many videos can be submitted for a Pre-Recorded Skills-Only Event. However, since it would generally be assumed that Teams are only submitting one video to their Event Partner, we would advise making sure that Teams who choose to submit multiple videos make it abundantly clear to the Event Partner why multiple videos are being submitted, and which one(s) should be scored.

Clarification on RSC5 and the meaning of Controlled

24-Feb-2020

RSC5

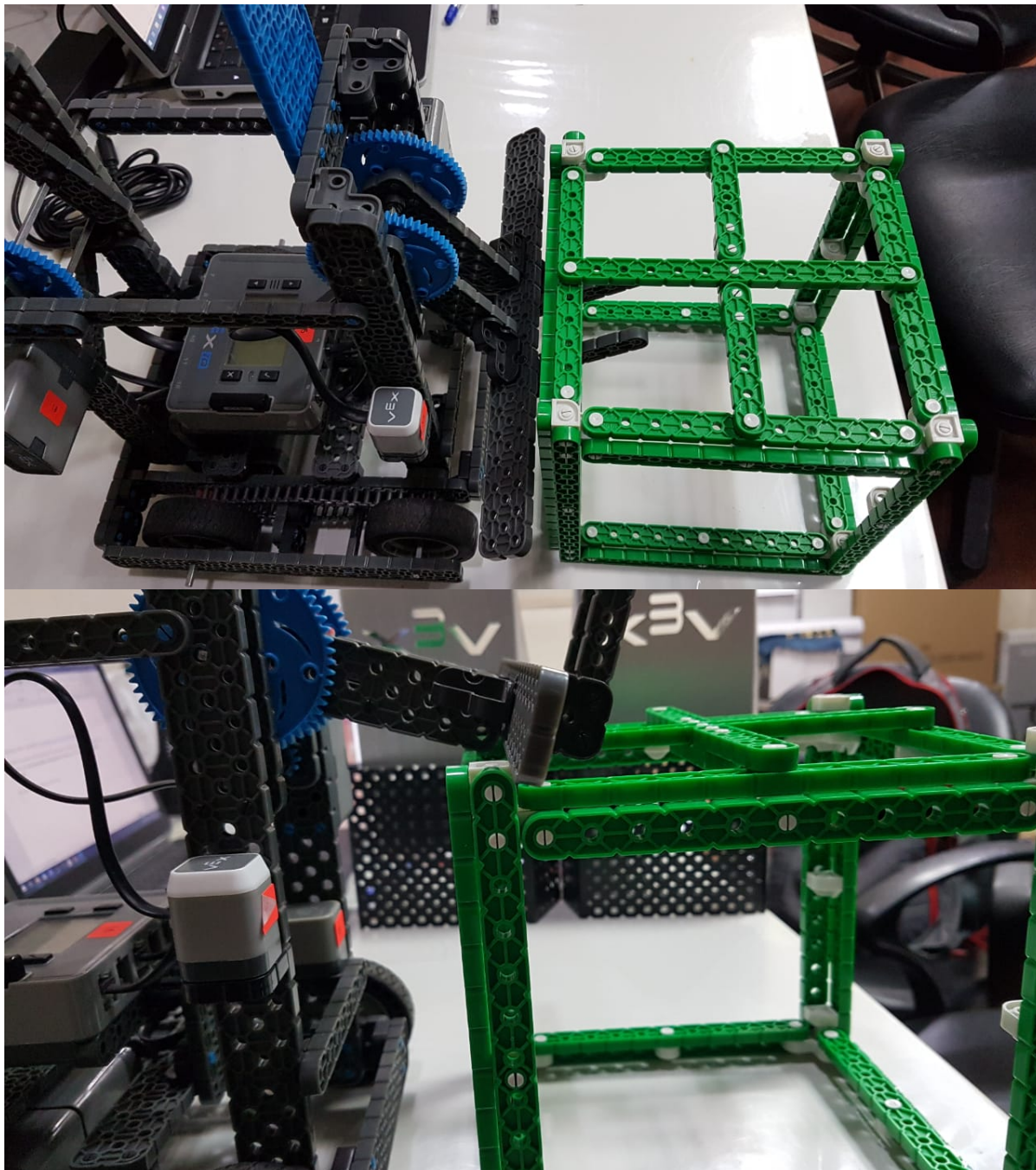
Referencing to <RSC5> and <Q471> “ <https://www.robotevents.com/VIQC/2019-2020/QA/471>” In the Q471 the answer to the meaning of the cube being controlled was and I quote “if, upon lifting the Robot for a reset, **the Game Object is left behind on the Floor**, then **it would not have qualified as "controlled"**.”

this raises many questions some of which are:

1- In the 1st picture the robot is not touching the cube, but if the robot was lifted it will lift the cube as well, would the cube be considered “**Controlled**” in this state ?

2- In the 2nd picture if the robot is touching a scored cube as shown, if the robot is lifted the cube will not be affected, would the cube be considered “**Not Controlled**” in this state ?

3- if the cube is considered controlled in the 2nd question, should the referee ask the team to move the cube to a non-scored position ?



Answered by committee

First, it is important to note that there are multiple types of Game Objects on the Field, and an infinite number of ways for Robots to interact with these objects. Because of this, it would be impossible to provide a blanket statement that would encompass all possibilities of Robot interactions that would be defined as "control". Similarly, we will not be able to provide answers based on snapshots of possible hypothetical interactions.

To help Head Referees make an on-site judgment call based on the context that they observe in a Match, we recommend the following thought exercises:

- If the Robot were to be lifted away, would the Game Object come with the Robot?
 - If the Floor were to drop out (and the Robot were to remain floating in space), would the Game Object fall with the Floor, or stay with the Robot?
 - If the Robot were to slide away from the Game Object, would the object come with the Robot?
 - Could another Robot interact with the Game Object, without any interference/difficulty from the Robot in question?
 - If the Robot were to turn, would the Game Object turn with it?
-

Let us not miss the opportunity to learn from the discussion of Strategically moving Game Elements

23-Feb-2020

G17 RSC5

Many have asked about the rule change post 518 (<https://www.robotevents.com/VIQC/2019-2020/QA/518>) which was Answered by the Game Design committee ~2/12/20 and speaks to moving 'controlled' game elements by hand in Programming Skills Match.

- Whether you agree or disagree with this ruling, I think we can all agree that the experience with this rule change can lead to many positive changes going forward.
1. Consider changing '<G18> This manual will have three scheduled updates.'
 - I think we'd all agree that if there is a major rule change, such as allowing Strategic moving of Game elements in 1 or more aspects of the game, then we'd ask that Game Design Committee revise the Game Manual ideally at planned break in the season (e.g. January 15th or another date as 4th planned Update to Game Manual?).
 - The alternative is students, mentors and event partners trying to interpret the Q&A, which are numerous and may have potentially conflicting answers?
 2. When possible the Q&A should be more clarifying <G19> The Q&A system is an extension of this Game Manual.
 - I think we'd all agree that since the Q&A is an extension of the game manual, then the Questions as well as the Answers from the Game Design Committee should be clarifying to current and related past questions.
 - Part of the challenge to interpreting post 518 was that there were earlier questions and answers from the Game Design Committee, related to rule G17 (<G17> Handling the Robot mid-match is allowed under certain circumstances.) that may appear contradictory (Strategically moving cubes 'possible Disqualification' 329: Strategically moving cubes LEGAL 392) or at least required different assumptions about what part of competition was being discussed (Driver Skills, Programming Skills and/or Teamwork).
 - 329 <https://www.robotevents.com/VIQC/2019-2020/QA/329>
 - 392 <https://www.robotevents.com/VIQC/2019-2020/QA/392>
 3. Dates in both Q&A may be helpful acknowledging <G19> The Q&A system is an extension of this Game Manual.
 - I think we'd all agree that if Q&A is extension of the game manual, then both the Questions as well as the Answers from the Game Design Committee should be dated.
 - Dated because, the absence of dating leads to further uncertainty ◦ Was the Answer to 392 really 5 months old or more recent? ◦ Did the Answer to 329 before or after 329 which supersedes which may depend which is older? ◦ Does any of this ambiguity make Q&A more 'student centered'?
 4. Q&A should more fully consider non-native speakers of English when responding in Q&A
 - If there is a new ruling that creates a need for definition (controlled), then shouldn't this definition be worded in a student-centered verbiage and included within the Q&A and ideally within the Game Manual?
 - Answer to post 471 was that "We cannot provide a strict definition for "controlled" ".<https://www.robotevents.com/VIQC/2019-2020/QA/471>
 - If controlled couldn't be easily defined then we'd ask the game design committee to either change to more simple concept like 'contacting', rather than controlled. Or even better revisit the Q&A to seek out way to clarify the game to avoid this issue.
 5. Consider adding or consulting Q&A Frequent users to your Game Design Committee.
 - Allot of the frustration related to 518 could have been avoided if Game Design Committee. Looked for Solutions in the Q&A ◦ Solution: Please create a legal position for game objects being controlled by robots during autonomous. <https://www.robotevents.com/VIQC/2019-2020/QA/455> ◦ There are countless follow-up questions about what represents a 'legal position for game objects' including: OK to reattached to robot? OK to stack on top of other cubes?
 6. Soccer (aka football OUS) is the Worlds game for a variety of reasons including the rules of soccer are simple for any young person to understand.
 - As VEX/REC strive to be even more student centered, then the Game Design Committee should seek to simplify rules wherever possible, in particular in the Q&A.

- For example 'Drivers' refers to the student operating the robot in all 3 aspects of the game (Driver Skills, Programming Skills and/or Teamwork), which may be worth redefining if the 'Drivers' are allowed to do different tasks depending on the different parts of the game as proposed by post 518 and related Q&A.

Answered by committee

Thank you for taking the time to write out this feedback; we will be sure to take it into consideration for future seasons.

In order to keep the Q&A system as organized as possible for all viewers, we do need to remind users of the [Q&A Usage Guidelines](#). For general feedback, further discussion of a previous ruling, or other messages that are absent of a specific question, please feel free to contact the GDC directly via GDC@vex.com.

Moving blocks across the field during autonomous

23-Feb-2020

RSC5

How is it legal for a driver to move a game element 7 feet down the board during a programming match? Doesn't this clearly violate the spirit of a programming match? Our teams watched multiple teams at state use their robots to just grab an element so the other driver could grab the cubes and place them near the scoring zone. This results in very basic programming skill and mostly tests how fast drivers can grab, run, and reset cubes. This was very disappointing to the students who actually worked hard to program their robots to accomplish this task to be beaten by what appears to be a loophole in the rules.

Answered by committee

Please review the [Q&A Usage Guidelines](#), specifically point 2, "Read and search existing Q&As before posting." We feel that your question is answered by the following similar Q&A's. If this is not the case, please feel free to rephrase and re-submit.

<https://www.robotevents.com/VIQC/2019-2020/QA/392>

<https://www.robotevents.com/VIQC/2019-2020/QA/434>

<https://www.robotevents.com/VIQC/2019-2020/QA/530>

<https://www.robotevents.com/VIQC/2019-2020/QA/535>

<https://www.robotevents.com/VIQC/2019-2020/QA/537>

<https://www.robotevents.com/VIQC/2019-2020/QA/540>

<https://www.robotevents.com/VIQC/2019-2020/QA/555>

Autonomous Team - One Team Member Handles Robot, One TM Handles Cubes?

14-Feb-2020

RSC5

In the situation where the robot gets hung up with a cube the rules are a bit vague as to whether it must be one person who moves the cube and the robot or can one team mate move the robot back to the starting position and the other team mate move the cube?

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 applicable rule in this case is RSC5:

<RSC5> 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.

i. Driver may reset or adjust the Robot as desired from this position, including pressing buttons on the Robot Brain or activating sensors.

b. Any Game Objects being controlled by the Robot while being handled must be removed from the Robot and gently placed in a non-Scored position by the Team.

c. Any Game Object in the Starting Position may be moved out of the Starting Position and gently placed into a non-Scored position by the Team.

d. 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.

i. An intent of this exception is to permit Drivers who wish to "stage" Robot handling during a Programming Skills Match to do so without excessive running back and forth to the Driver Station.

Note: This rule only applies to Programming Skills Matches. Driving Skills Matches are still governed by <G17>, especially for strategic violations.

There are no restrictions in RSC5 to state that only one Driver must complete all of the "handling" interactions. Thus, this would be legal.

G17, RSC5, & G7 request for official clarification before State & Worlds

8-Feb-2020

G7 G17 RSC5

I went back to the Q&A, and I am still not happy with the situation with moving a cube 7 feet across the board by hand during automatic programming attempts. Apparently neither are many other coaches, as I see continued questions going unanswered as recent as a day ago on the Q&A.

The Q&A does not give one clear-cut official answer either. In fact, not only does the Rules Committee appear to contradict itself on two occasions, it also appears to have misinterpreted the game manual rules in regards to what sub-sections and notes they were reading. This was pointed out in another post 6 days ago:

<https://www.robotevents.com/VIQC/2019-2020/QA/530>. The post has not been answered. The absence of clear and ethical guidance on this issue has given wide berth to teams to move objects as part of a strategy in direct opposition to the spirit of the automatic challenge.

In one post answered by the Rules Committee 5 months prior <https://www.robotevents.com/VIQC/2019-2020/QA/329>, it states "The only reason that the referee would be "not happy" with the placement is **if the Team was using this rule to move a Cube into a position that was either strategically advantageous**, such as just barely outside of a Corner Goal, or Scored. Both scenarios **could result in a possible Disqualification if it is not rectified immediately** (i.e. if it was an accident)."

In a second post on the topic, also answered by the Rules Committee 3 months prior <https://www.robotevents.com/VIQC/2019-2020/QA/392>, it says the action would be legal, quoting RSC5's Note "Note: This rule only applies to Programming Skills Matches. Driving Skills Matches are still governed by <G17>, especially for strategic violations."

However, I believe the Rules Committee of that post misquoted RSC5, as the portion they quoted was bullet i. of sub-section D in RSC 5 which specifically and only addresses DRIVERS moving around the board (Note D RSC5). The preceding full ruling of RSC5 with note states:

"d. 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.

i. An intent of this exception is to permit Drivers who wish to "stage" Robot handling during

Note: This rule only applies to Programming Skills Matches. Driving Skills Matches are

This note, **as nested within sub-section d**, should logically only pertain to sub-section d - not the entirety of RSC5. As such, I feel the note is not referring to the placement of game objects, but Drivers, as stated in the ruling.

I understand that nothing can be done about previous rulings on this. And yet, I feel this lack of attention by the Rules Committee has done tremendous damage to teams who worked hard to program while remaining true to the ethical spirit of the competition. Moreover, with State and World championships looming, I believe it highly important to have a straight-forward, full understanding of this ruling. I would also suggest whether allowed or not that this particular issue be addressed publicly by the State and World officials before competition so that all teams who have worked so hard to compete at these prestigious levels have an even playing field.

With so many coaches stepping up to question the moral nature of this matter, I would hope the RECF would maintain a stance in the future in the most ethical spirit of the game. As an elementary teacher passionate about teaching kids social/emotional skills especially in technological fields, I feel it is best we model what is morally good sportsmanship rather than teaching them to try to find loopholes - which in this case has led to arguing for a loophole that does not appear to be present. Please consider this a formal complaint.

Thank you for all your continued hard work, as well as your consideration in this matter,

Answered by committee

Thank you for taking the time to write out your position regarding this rule. We will take this feedback into consideration for future games or Game Manual Updates, but will not be modifying the previous Q&A responses or rulings. We feel that the following responses, as well as the rule as it is written, provide as clear of an explanation as is possible within the scope of the Q&A system:

<https://www.robotevents.com/VIQC/2019-2020/QA/530>

<https://www.robotevents.com/VIQC/2019-2020/QA/518>

<https://www.robotevents.com/VIQC/2019-2020/QA/434>

<https://www.robotevents.com/VIQC/2019-2020/QA/392>

Q&A 329 did not specify whether the question was being asked for a Teamwork Challenge or Robot Skills Match. Our answer assumed that the question was referring to a Teamwork Challenge Match, since most questions do, and we apologize for any confusion this may have caused.

Per the Q&A Usage Guidelines, this Q&A system is intended for specific ruling clarifications or questions. For general feedback, further discussion of a previous ruling, or other messages that are absent of a specific question, please feel free to contact the GDC directly via GDC@vex.com.

Programming skills moving of objects

6-Feb-2020

RSC5

Is it legal to move a game piece that is not in control of a robot? For example we code the robot to move forward and pick up a green cube, instead it bumps the cube and does not stay in contact with it. I know the robot is allowed to be retrieved, but can the cube be put back in place?

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 applicable rule in this case is RSC5, quoted below for reference with a portion bolded for emphasis:

<RSC5> 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.\

i. Driver may reset or adjust the Robot as desired from this position, including pressing buttons on the Robot Brain or activating sensors.

b. Any Game Objects **being controlled by the Robot** while being handled must be removed from the Robot and gently placed in a non-Scored position by the Team.

c. Any Game Object in the Starting Position may be moved out of the Starting Position and gently placed into a non-Scored position by the Team.

d. 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.

i. An intent of this exception is to permit Drivers who wish to "stage" Robot handling during a Programming Skills Match to do so without excessive running back and forth to the Driver Station.

Note: This rule only applies to Programming Skills Matches. Driving Skills Matches are still governed by <G17>, especially for strategic violations.

Any interaction between a Driver and a Game Element that is not being controlled by a Robot, and therefore not covered by G17/RSC5, would be considered a violation of G9.

<G9> Hands out of the Field. Drivers are prohibited from making intentional contact with any Field Element, Game Object, or Robot during a Match, except for the allowances in <G17>.

Violations of this rule will result in a warning for minor offenses that do not affect the Match. Score affecting offenses will result in a Disqualification. Teams who receive multiple warnings may also receive a Disqualification at the Head Referee's discretion.

Note: Accidental contact may result in a warning, Disqualification, or Disablement at the Head Referee's discretion.

How to Referee the unintentional shifting of cubes while strategically placing cube with RSC5 rule

5-Feb-2020

G9 G17 RSC5

With RSC5 allowing teams to move cubes to a 'strategic' position in Programming Skills, the most common place to move the cube is along the wall, inside a Blue/Red cube.

<RSC5> A Team may handle their Robot as many times as desired during a Programming Skills Match. b. Any Game Objects being controlled by the Robot while being handled must be removed from the Robot and gently placed in a non-Scored position by the Team.

As a Skills Referee, how do we handle the situation when a team uses RSC5 to move a cube in between the wall and a Blue/Red cube, but unintentionally bumps/moves/shifts the position of the cube that was already there.

1. Would this fall under G9 where "Drivers are prohibited from making intentional contact with any Field Element, Game Object, or Robot during a Match, except for the allowances..". It is match effecting, it determines whether a team can get 10 more points, moving them up/down in the rank. If so, how do we decide to warn or DQ in this situation.
2. If no warning or DQ, then what do we do about the cube that was shifted? Leave it? Move it back?
3. Or do we do nothing. Just ignore that the students unintentionally shifted game elements while they strategically place a cube?
4. Or do you have other insight in how to handle this?

Can you help me give a skills referee direction in how to handle this specific situation for an upcoming State Championship?

Answered by committee

We believe this question is answered in [this similar Q&A](#), specifically the following portion:

It is impossible to issue a blanket ruling that would encompass all hypothetical states of the field / Cubes. That said, any interaction between a Driver and a Game Element (that is not being reset per G17) would be considered a violation of G9.

Regarding your questions 2, 3, and 4, it should be handled as any other G9 violation would be handled.

Violations of this rule will result in a warning for minor offenses that do not affect the Match. Score affecting offenses will result in a Disqualification. Teams who receive multiple warnings may also receive a Disqualification at the Head Referee's discretion.

Note: Accidental contact may result in a warning, Disqualification, or Disablement at the Head Referee's discretion.

The "handling" window

4-Feb-2020

RSC5

Howdy! I do have one more clarifying question.

< RSC5 > 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.

Example:

Two students are working together to reset the bot and elements. One student starts by hitting a bumper, which makes the arm fall and the bot drops the cube onto the floor. That student grabs the cube and places it in a non-scored position. The second student grabs the bot and places it in a legal starting position. Once the element and bot are in place, the students then start the bot again by hitting a bumper.

Questions: Would the first student simply hitting the bumper start the "handling" process? Can the cubes still be reset if the bot drops the cube on the floor after the student hits the bumper? Can the students grab the cubes before they grab the bot? (I'm looking at the word "immediately.")

Answered by committee

The full text of RSC5 is quoted below for reference:

<RSC5> 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.\

i. Driver may reset or adjust the Robot as desired from this position, including pressing buttons on the Robot Brain or activating sensors.

b. Any Game Objects being controlled by the Robot while being handled must be removed from the Robot and gently placed in a non-Scored position by the Team.

c. Any Game Object in the Starting Position may be moved out of the Starting Position and gently placed into a non-Scored position by the Team.

d. 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.

i. An intent of this exception is to permit Drivers who wish to "stage" Robot handling during a Programming Skills Match to do so without excessive running back and forth to the Driver Station.

Note: This rule only applies to Programming Skills Matches. Driving Skills Matches are still governed by <G17>, especially for strategic violations.

Would the first student simply hitting the bumper start the "handling" process?

Yes, any physical contact between a Driver and a Robot should be considered the beginning of an RSC5/G17 "handle".

Can the cubes still be reset if the bot drops the cube on the floor after the student hits the bumper?

Yes, as long as the Game Object was "being controlled by the Robot" at the time of the handling, per RSC5-b.

Can the students grab the cubes before they grab the bot? (I'm looking at the word "immediately.")

Yes, as long as the Game Object was "being controlled by the Robot" at the time of the handling, per RSC5-b.

Is it 'legal' to Strategically Move Game Objects 7 feet across the board in Programming Skills Matches when resetting the robot and the Game Object(s) that had been 'controlled by the robot'?

2-Feb-2020

G17 RSC5

The proposed programming strategy was shared by a student at our 1/31/2020 team meeting at which time the student also reported the proposed strategy to Move Game Objects 7 feet across the board had been also confirmed as 'legal' by unnamed VEX/REC contact.

At 2/1/2020 competition others students on our team observed and questioned the local Skills Judge who ruled the strategy outlined below was 'legal' when another team was using it to Strategically Move Game Objects 7 feet across the board in Programming Skills Matches.

The proposed programming strategy is to:

1. Program the robot to pick up and 'control' 1 or 2 Blue cubes and then stop
2. Reset the robot to legal starting position on opposite side of board [RSC5a]
3. Reset the Game Objects 'controlled by the robot' (1 or 2 Blue cubes) into non-scored position [RSC5b]
4. The non-Scored position though is 7 feet across the board and directly adjacent to Blue Corner Goal [appears to be inconsistent with G17 'not intended for Teams to use as part of a strategy to gain an advantage during a Match, including via moving Game Objects']
5. Program the robot push the 1 or 2 Blue cubes into the Blue Corner Goal and then stop

6. Repeat steps 1-5 listed above except these steps will be done for Red Cubes

There have been at least 2 posted responses ' Answered by Game Design Committee' on this topic of Strategically Moving Game Objects which appear to differ either in interpretation of the rules or distinction between Driving (not legal) and Programming (Legal) to Strategically Move Game Objects 7 feet across the board.

1. Initial response to question about Driving match: 'could result in a possible Disqualification'
<https://www.robotevents.com/VIQC/2019-2020/QA/329>
2. More recent response about Programming match: 'legal within RSC5, which supersedes G17 for Programming Skills Matches' <https://www.robotevents.com/VIQC/2019-2020/QA/392> There are other Q&A, which include videos (<https://www.robotevents.com/VIQC/2019-2020/QA/518>) and which are also seeking clarification from Game Design Committee about 'legally' Moving Game Objects.

Though noting that can be done to clarify past rulings about Strategically Moving Game Objects at past competitions, it would be particularly helpful to teams and event partners to clarify the 'legality' of Strategically Moving of Game Objects for future Driving and/or Programming matches and Teamwork competitions.

Answered by committee

[Q&A 392](#) explicitly refers to a Programming Skills Match. As noted in <RSC1>, standard Game rules only apply during Skills Matches if there is no RSC rule to clarify a change. In this case, <RSC5> supersedes <G17>.

<RSC1> All rules, scoring, and field layouts from previous sections apply to the Skills Matches, unless otherwise specified.

<RSC5> 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.\

i. Driver may reset or adjust the Robot as desired from this position, including pressing buttons on the Robot Brain or activating sensors.

b. Any Game Objects being controlled by the Robot while being handled must be removed from the Robot and gently placed in a non-Scored position by the Team.

c. Any Game Object in the Starting Position may be moved out of the Starting Position and gently placed into a non-Scored position by the Team.

d. 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.

i. An intent of this exception is to permit Drivers who wish to "stage" Robot handling during a Programming Skills Match to do so without excessive running back and forth to the Driver Station.

Note: This rule only applies to Programming Skills Matches. Driving Skills Matches are still governed by <G17>, especially for strategic violations.

[Q&A 329](#) did not specify whether the question was being asked for a Teamwork Challenge or Robot Skills Match. Our answer assumed that the question was referring to a Teamwork Challenge Match, since most questions do, and we apologize for any confusion this may have caused.

G17 It is not intended for Teams to use as part of a strategy to gain an advantage during a Match, including via moving Game Objects per parts c and d above.

<G17> Handling the Robot mid-match is 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.

According to the answer from Game Design Committee, the question below is legal. "A robot starts by turning and lifting a red cube. The team picks up the robot and cube and places the bot in the other starting position and places the cube next to its scoring zone on the other side of the field. The robot then pushes the cube in."

<https://www.robotevents.com/VIQC/2019-2020/QA/392>

However at the bottom section of G17, it says: This rule 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, including via moving Game Objects per parts c and d above. If a Head Referee sees Teams strategically exploiting this rule, they may be Disqualified from said Match.

We need a clear answer for this.

There is a similar question but no answer yet and there is the YouTube link which made a lot of teams and referees confused. <https://www.robotevents.com/VIQC/2019-2020/QA/518>

Answered by committee

As noted in <RSC1>, standard Game rules only apply during Skills Matches if there is no RSC rule to clarify a change. Q&A's [518](#) and [392](#) refer to Programming Skills Matches, in which <RSC5> supersedes <G17>.

<RSC1> All rules, scoring, and field layouts from previous sections apply to the Skills Matches, unless otherwise specified.

<RSC5> 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.\

i. Driver may reset or adjust the Robot as desired from this position, including pressing buttons on the Robot Brain or activating sensors.

b. Any Game Objects being controlled by the Robot while being handled must be removed from the Robot and gently placed in a non-Scored position by the Team.

c. Any Game Object in the Starting Position may be moved out of the Starting Position and gently placed into a non-Scored position by the Team.

d. 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.

i. An intent of this exception is to permit Drivers who wish to "stage" Robot handling during a Programming Skills Match to do so without excessive running back and forth to the Driver Station.

Note: This rule only applies to Programming Skills Matches. Driving Skills Matches are still governed by <G17>, especially for strategic violations.

Please Clarify legal reset set positions for game objects during skills RS5 and earlier post: Programming reset while touching cube... Strategically...

12-Dec-2019

RSC5

Problem: The youth are not being challenged to create quality programs but rather simple programs that just end in touching a cube so they may reset the cubes across the field closer to their respective color scoring zone and their robots next to it and just push the cubes in for an easy 10 points. RSC5b allows this

"Any Game Objects being controlled by the Robot while being handled must be removed from the > Robot and gently placed in a non-Scored position by the Team."

As a mentor this ruling makes it hard to motivate youth to think about their programs and use their savvy skills to create a autonomous program. This earlier Q & A ruling has prompted many teams to not actually create quality autonomous programs for their robots. We want to see them grow and learn but not by shortcuts.

Solution: Please create a legal position for game objects being controlled by robots during autonomous. There was once a rule that an object be placed back on the field closest to where it left the field, could a similar rule not be created for this scenario as well? An example: "Any Game Objects being controlled by the Robot while being handled must be removed from the Robot and gently placed in a non-Scored position closest to programmed robot ended prior to reset by the Team" or " Any Game Objects being controlled by the Robot while being handled must be removed from Robot and gently placed in a non-Scored starting position by the Team.

or perhaps have RSC5 also be governed by <G17>, especially for strategic violations such as touching game cubes on the field while resetting the cube.

Details of what is being seen at tournaments: Teams will program robot to turn and drive forward to touch red cube (or blue), program will stop. The team will reset by moving the red cube and robot to other starting position closer to red scoring zone(or blue). They then set the red cube down pushing the blue cube out of the way, then they use their hands to move blue cube back in b place, but allowing the red cube to be placed just right. They then run their robot program to push red cube in to score 10 points. EPs allow this bc of this earlier ruling, this should in fact be a warning or a DQ since they touched other game elements on the field. This is not accidental hands on as we saw two skills runs and each one they did the exact same way.

<RSC5> 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. i. Driver may reset or adjust the Robot as desired from this position, including pressing buttons on the Robot Brain or activating sensors. b. Any Game Objects being controlled by the Robot while being handled must be removed from the Robot and gently placed in a non-Scored position by the Team. c. Any Game Object in the Starting Position may be moved out of the Starting Position and gently placed into a non-Scored position by the Team. Robot Skills Challenge Rules

Earlier question that is prompting teams to move cubes close to their scoring zones:

Programming reset while touching cube... Strategically...

David Sankey (Event Partner) 1 month ago RSC5 A Team may handle their Robot as many times as desired during a Programming Skills Match. b. Any Game Objects being controlled by the Robot while being handled must be removed from the Robot and gently placed in a non-Scored position by the Team. In other words, there is no rule against strategically placing the cube, it can be placed on any non-scored position by the team. So are the following legal during a Programming Skills Match? #1: A robot starts by turning and lifting a red cube. The team picks up the robot and cube and places the bot in the other starting position and places the cube next to its scoring zone on the other side of the field. The robot then pushes the cube in. #2: A team is going to score the green cube on the platform and it gets off course. The team then resets the bot before it drops the cube. They reset the bot and put the cube back in its original position and give it another go. RSC5 G17

Answered by Game Design Committee So are the following legal during a Programming Skills Match? #1: A robot starts by turning and lifting a red cube. The team picks up the robot and cube and places the bot in the other starting position and places the cube next to its scoring zone on the other side of the field. The robot then pushes the cube in. #2: A team is going to score the green cube on the platform and it gets off course. The team then resets the bot before it drops the cube. They reset the bot and put the cube back in its original position and give it another go. Yes, these are both legal within RSC5, which supersedes G17 for Programming Skills Matches. Please also see RSC5's Note, which states the following: Note: This rule only applies to Programming Skills Matches. Driving Skills Matches are still governed by <G17>, especially for strategic violations.

Answered by committee

Please create a legal position for game objects being controlled by robots during autonomous.

Thank you for your suggestion. We will take this feedback into consideration for future games or Game Manual Updates, but will not be modifying the previous Q&A response.

Per the [Q&A Usage Guidelines](#), this Q&A system is intended for specific ruling clarifications or questions. For general feedback, further discussion of a previous ruling, or other messages that are absent of a specific question, please feel free to contact the GDC directly via GDC@vex.com.

Tool for setup in autonomous

29-Nov-2019

RSC5

< RSC5 > 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.

Is it legal to use a tool to setup the robot for autonomous attempts in the initial setup?

Is it legal to use the tool after resets during the minute time?

Answered by committee

There are no rules preventing either of your questions, thus they are both legal.

Teams are advised to bear in mind the "blue box" note in RSC6:

In accordance with <G4>, Teams should be mindful of event schedules and set their Robots 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 Robot 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.

Questions about element resets in programming...

26-Nov-2019

RSC5

<https://www.robotevents.com/VIQC/2019-2020/QA/392>

The above ruling has spurred a few questions in my mind...

< RSC5 > A Team may handle their Robot as many times as desired during a Programming Skills Match. b. Any Game Objects being controlled by the Robot while being handled must be removed from the Robot and gently placed in a non-Scored position by the Team.

1. When a team resets a controlled cube to a non-scored position, can they place the cube on top of balls?
2. In the process of placing the cube on top of a ball, can the students use the cube to move the ball?
3. Can the students place the cube on top of a stack of preset balls?
4. Does the cube need to be in place before the bot starts again in the case that two students are working together?
5. Can the cube, after being removed from the robot, be placed back on the robot?
6. When a blue or red cube is placed on the opposite side of the field, can it be placed between the other cube and the wall? It seems like there is enough room, but the students may move the other cube a little bit in the process.

Answered by committee

1. When a team resets a controlled cube to a non-scored position, can they place the cube on top of balls?

No, this is not legal. This would be considered a Scored position (assuming that the Balls underneath the Cube would then be considered Scored).

2. In the process of placing the cube on top of a ball, can the students use the cube to move the ball?

No, this would be considered a violation of G9 and is not legal.

3. Can the students place the cube on top of a stack of preset balls?

The answer to this is the same as the answer to your first question.

4. Does the cube need to be in place before the bot starts again in the case that two students are working together?

If a Team is resetting their Robot, and therefore completing the four tasks listed in G17a-d, all four criteria must be met before the Robot is considered "reset" and can begin moving again. Therefore, the answer to your direct question is "yes".

5. Can the cube, after being removed from the robot, be placed back on the robot?

No, this is not within the intent of G17-c. (if it were, then there would be no need to remove the Game Object from the Robot in the first place)

6. When a blue or red cube is placed on the opposite side of the field, can it be placed between the other cube and the wall? It seems like there is enough room, but the students may move the other cube a little bit in the process.

It is impossible to issue a blanket ruling that would encompass all hypothetical states of the field / Cubes. That said, any interaction between a Driver and a Game Element (that is not being reset per G17) would be considered a violation of G9.

Programming reset while touching cube... Strategically...

24-Oct-2019

RSC5 G17

RSC5 A Team may handle their Robot as many times as desired during a Programming Skills Match. b. Any Game Objects being controlled by the Robot while being handled must be removed from the Robot and gently placed in a non-Scored position by the Team.

In other words, there is no rule against strategically placing the cube, it can be placed on any non-scored position by the team.

So are the following legal during a Programming Skills Match?

#1: A robot starts by turning and lifting a red cube. The team picks up the robot and cube and places the bot in the other starting position and places the cube next to its scoring zone on the other side of the field. The robot then pushes the cube in.

#2: A team is going to score the green cube on the platform and it gets off course. The team then resets the bot before it drops the cube. They reset the bot and put the cube back in its original position and give it another go.

Answered by committee

So are the following legal during a Programming Skills Match?

#1: A robot starts by turning and lifting a red cube. The team picks up the robot and cube and places the bot in the other starting position and places the cube next to its scoring zone on the other side of the field. The robot then pushes the cube in.

#2: A team is going to score the green cube on the platform and it gets off course. The team then resets the bot before it drops the cube. They reset the bot and put the cube back in its original position and give it another go.

Yes, these are both legal within RSC5, which supersedes G17 for Programming Skills Matches. Please also see RSC5's Note, which states the following:

Note: This rule only applies to Programming Skills Matches. Driving Skills Matches are still governed by <G17>, especially for strategic violations.

Clarification of <S1> as it pertains to <RSC5> (autonomous) and <G10> (general) - robot motion while repositioning/repairing

12-Feb-2024

S1 G10 RSC5

[<G10><S1>https://www.robotevents.com/VIQRC/2023-2024/QA/1820](https://www.robotevents.com/VIQRC/2023-2024/QA/1820)

Has there been a clarification or rule change since QA 1820 (linked above) has been issued? Specifically: 1 - If an intake is in motion can the robot be reset during autonomous periods without stopping the program first? 2 - If the robot's drive train is still running can the robot be reset while the wheels are in motion (waiting for the running program to stop before placing it on the field)? 3 - If <S1> has been clarified to mean all motion must stop before the robot can be positioned is it allowable to use a touch LED to perform this control instead of stopping the running program (e.g. to preserve gyro calibration)? 4 - Are the above questions applicable to driver skills and teamwork challenges as well (via <G10>)?

We were informed that this was an official rule change or clarification "from just four days ago" but I can't find it in the Q&A and there isn't a game manual update that I can find that addresses it.

Answered by committee

Please see our response to this similar Q&A post, which we believe will answer your question. If it does not, please feel free to rephrase and re-submit.

<https://www.robotevents.com/VIQRC/2023-2024/QA/1948>

Reset during programming skills - does the robot have to meet starting height requirement

10-Feb-2024

SG1 RSC5

At a recent event the skills referee interpreted rule [<RSC5>](#) "Upon handling the Robot, it must be immediately brought back to any legal Starting Position" to include that robots handled during the autonomous skills runs must meet ALL of the starting criteria of rule [<SG1>](#) which includes "Fit within an 11" wide x 20" long x 15" high".

Some teams had expanded vertically (for example raised a lift) - and were not allowed to start the second portion of their autonomous routes because the robot exceeded the 15" height limitation.

QnA 1820 (<https://www.robotevents.com/VIQRC/2023-2024/QA/1820>) clarifies that motors may be running when resetting during autonomous skills (which is counter to SG1).

I understand the requirements for resetting during autonomous skills to include starting against the wall of the field and not touching any blocks (from SG1) - but to *not* include the requirements for returning to the starting dimensions or stopping the motors. Is this correct?

Answered by committee

I understand the requirements for resetting during autonomous skills to include starting against the wall of the field and not touching any blocks (from SG1) - but to *not* include the requirements for returning to the starting dimensions or stopping the motors. Is this correct?

This is the intent for both [<RSC5>](#) and [<G10>](#) resets.

However, we acknowledge that this intent is ambiguous / not clearly stated in the rule as currently written. Absent any other clarification (i.e. prior to this Q&A post), it would not have been "wrong" for a Head Referee to judge this in either direction, as long as they were consistent within their event. We apologize for any confusion this may have caused, and will be sure that this is better clarified in future Game Manuals.

Reset during Programming Skills: Can motor still be running?

10-Dec-2023

[RSC5](#)

Hi, For VEX IQ Full Volume Programming Skills challenge, during a reset to a legal starting position, can motors on the robot (for example, intake system) still be running, or must all components of the robot cease operation? I understand that, at the start of the skills run, no motors can be running; I just wanted to know if it was legal for motors to be running during a reset in the middle of the skills run.

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". Often, you'll find that by quoting the rule, you'll answer your own question.

[<RSC5>](#) does not contain any requirement that motors stop moving during a mid-Match reset. Therefore, yes, it is legal, provided that the interaction does not pose any safety risks ([<S1>](#)) and is not used to directly interact with any Blocks or Field Elements during the reset ([<G9>](#)).

Handling the robot in an autonomous coding skill match <RSC5>

27-Aug-2023

[RSC5](#)

As outlined in "<RSC5>", the rule specifies that any blocks controlled by the Robot while it's being handled must be removed from the Field. This raises the question of whether the operator(driver) should remove any remaining blocks from the robot during manipulation in the autonomous coding skill match. If the driver is found handling the robot with blocks still inside, should the Referee issue a warning immediately? If no warning is given and the autonomous skill match

proceeds to completion, should this particular match be deemed disqualified?

Answered by committee

Teams must ensure that they remove controlled blocks when resetting the Robot under rules [<RSC5>](#) or [<G10>](#). Failure to do so will result in a DQ if the controlled Blocks are moved to a Scored position on the Field. Referees should monitor Robot resets closely, and require Drivers to remove controlled Blocks before the Robot resumes movement.

As described in rule [<RSC5>](#),

Any Blocks being controlled by the Robot while being handled must be removed from the Field, and can be returned to the Supply Zone by a referee or Driver. "Controlled" requires that the Robot was manipulating the Block and not simply touching it (e.g., if the Block moves with the Robot either vertically or while turning, the Robot is controlling the Block).

If the Driver returns the Robot to the Field while still controlling one or more Blocks, the Referee should instruct the Driver to retrieve the Robot, remove the Blocks, and return the Robot to the Field in accordance with clause A of rule [<RSC5>](#).

If the Driver fails to remove the controlled Blocks, and scores one or more of those Blocks in a Goal, it becomes a Score-Affecting Violation of rule [<RSC5>](#). In accordance with the definition of Violation and the flowchart on page 8 of the game manual, the Team should earn a Major Violation and Disqualification for the Match. Per clause B of rule [<T8>](#),

A Team that receives a Disqualification in a Robot Skills Match will receive a score of zero (0).

Robot Skills Clarifications

5-Jan-2023

SC2 RSC1 RSC2 RSC3 RSC4 RSC5 RSC6

[<RSC7>](#) Here are a couple of questions regarding running teams during a skills match. As per the update on November 1, teams are supposed to be disqualified for coming into contact with anything outside of the field during endgame.

1. How do we mark team as *disqualified* during a skills match? As of December, Tournament Manager does not include an option to disqualify a team during a skills match. The definition of disqualification says that "A Team that receives a Disqualification in a Driving Skills Match or Programming Skills Match receives a score of zero (0) for that Robot Skills Match" Do I simply modify their score to be zero on everything?
2. Also, does the definition of breaking the field perimeter include the top of the field walls, or only the outside? (Would a team be in violation of S2 if a part of their robot is touching the top of the field wall, but not the outside perimeter?)
3. How strict are we supposed to be regarding the expansion rule before endgame (e.g., 18" exactly or 18" +/- 1")? Many teams may have intake rollers that break 18" during operation. There were also some teams with string that would sway outside of the 18" during driving. (One team also had a piece of metal partially detach and stick outside of 18"). Should we keep a sizing tool at the skills field to show teams what part of their robot would violate the 18" rule during operation?
4. Being able to eyeball the size of a robot on the field is slightly subjective and might cause problems with newer volunteers. What is the best method for teaching them how to spot a violation?

5. Finally, how do we resolve a dispute of a robot going oversize and entering endgame early? Depending on how strict we are supposed to be with the expansion limit, this will be a point of conflict. As per the manual, "The Head Referee has final authority regarding all Robot rules". Is this only for the designated Head Referee for the event, or does this include everyone that has been certified as a Head Referee by REC?

Answered by committee

Thank you for your questions.

1. How do we mark team as *disqualified* during a skills match?

The Scorekeeper should record a score of 0 for the Skills Match.

2. Also, does the definition of breaking the field perimeter include the top of the field walls, or only the outside? (Would a team be in violation of S2 if a part of their robot is touching the top of the field wall, but not the outside perimeter?)

Rule <S2> specifies that a Robot that comes in contact with the outside face of the Field Perimeter is in Violation of the rule. It does not address or include the top edge of the Field Perimeter.

3. How strict are we supposed to be regarding the expansion rule before endgame (e.g., 18" exactly or 18" +/- 1")?

Any horizontal expansion beyond 18"x18" prior to the Endgame is a Violation of rule <SG4>, including swaying or dragging strings, flexible intakes that cause the Robot to expand beyond 18" while intaking a Disc, and partially detached Robot components that protrude or drag beyond the 18" size limit. When determining the correct penalty, the Head Referee must consider the clauses and Violation Notes of <SG4> as well as any steps the Team takes to remedy the Violation. Having a sizing tool available to the Head Referee at the Field is always a good idea.

4. Being able to eyeball the size of a robot on the field is slightly subjective and might cause problems with newer volunteers. What is the best method for teaching them how to spot a violation?

If your Head Referee and Scorekeeper Referees are available to help with Robot Inspection, it can provide hands-on experience and understanding of Robot sizing.

5. As per the manual, "The Head Referee has final authority regarding all Robot rules". Is this only for the designated Head Referee for the event, or does this include everyone that has been certified as a Head Referee by REC?

The Head Referee for the event (or, in the case of an event with multiple Head Referees, the Division or the Match) is the one person with final authority regarding all Robot rules and Match play. Other Referees may provide information about what they saw during a Match, and may advise the Head Referee as requested, but all rulings are based on the judgment of the Head Referee and must be made by the Head Referee.