

Q&A

VRC 2023-2024: Over Under

Tagged: G17

Welcome to the official VEX 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 VRC Over Under 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 VRC Over Under 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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628: G17 clarification

16-Jul-2020

G17

When a robot is stuck/tipped over, a student is allowed to retrieve their robot and place it back into ANY legal starting position. However, if they place their robot into their alliance partners starting position, they would be violating the 6-feet of distance required by many local health departments. Can teams be asked to only return their robot to THEIR starting position?

Answered by committee

The August 14th Game Manual Update will include information on permissible game modifications to allow for better compliance with social distancing guidelines. The update will also include a process through which an Event Partner can request an event accommodation that is not covered by the Game Manual, in order to comply with local health department guidelines.

579: Broken piece of robot touching scored object

26-Feb-2020

G17

If a piece of the robot breaks off and that piece contacts a scored object, it would remain scored, right?

<G12> 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 gameplay, the Team may be Disqualified at the Head Referee's discretion. Note: 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 <G17>)

! [img] (<https://www.robotevents.com/storage/markdown/uploads/szH5KJ8KsHsds8PjsTymGpy5Hxmg8loq1vCxh>)

Answered by committee

Thank you for quoting a relevant rule and providing a photo of the scenario in question. We would also like to reference the definition of Scored:

Scored - A Game Object is Scored if it satisfies one of the following conditions, **and is not touching a Robot**

A Cube is Scored in a Corner Goal if any part of it is contacting a Corner Goal of the same color as the Cube. See the definition of Corner Goal for specific details. Note: A maximum of one (1) Cube may count for points per Corner Goal

<G12> states that "*Parts that become unintentionally detached from the Robot are no longer considered to be part of the Robot*". Thus, the Cube in the photo appears to meet all the conditions of being Scored in a Corner Goal, and would be considered Scored.

569: 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 392 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.

543: 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.

542: Delay in resetting robot during teamwork

8-Feb-2020

G17

<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*. To do so, they must:

- a. Signal the *Head Referee* by placing their VEX IQ Controller on the ground.
- b. Move the *Robot* to any legal *Starting Position*.
- c. Any *Game Object* 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*.
- d. Any *Game Objects* in the *Starting Position* may be moved out of the *Starting Position* and gently placed into a non-*Scored* position by the *Team*.

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*.

Is it OK if there is a delay for < G17 >b?

For example, a robot is completely inoperable in the field and is in the way of the other bot trying to score. The team sets down their controller and picks up the robot. They hold onto the robot until there are just a couple of seconds left in the match to stay out of the way of the other bot trying to score.

Would this be legal?

Answered by committee

G17 does not specify a limited window of time given to a Team to repair their Robot, with the following caveats:

- At a minimum, the Robot must have actually met one of the criteria listed in G17 ("goes completely outside the playing Field, gets stuck, tips over, or otherwise requires assistance").
- There are some scenarios where a Head Referee could interpret taking an extended amount of time as a strategic exploit. Debating how much is an acceptable window of time, or what contextual situations would be considered strategic, is missing the intent of G17 and the role of a Head Referee's judgment call. We would advise Head Referees to give Teams the "benefit of the doubt" when a Robot is legitimately damaged or otherwise requires assistance.
- Any scenario where a Team has coerced another Team to utilize G17 as a tactic to "stay out of their way" would likely lead to a G1 and/or Code of Conduct investigation.

The explicit scenario described in your question would be legal, as the snapshot description implies that the Robot was indeed damaged beyond repair.

537: 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.

530: 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.

529: 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.

2-Feb-2020
G17 RSC5

<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.

518: G17 c. Any Game Object 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

31-Jan-2020

G17

c. Any Game Object 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

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 3 and 4 above. If a Head Referee sees Teams strategically exploiting this rule, they may be Disqualified from said Match.

Can you clarify how this is legal? I have a first-year coach asking me and it appears the team is intent on moving the parts to gain and advantage. <https://youtu.be/IVpE1isiEJw>

Answered by committee

Please see the following related Q&A's:

<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/455>

While we were not at the event referenced in the video and cannot confirm with absolute certainty, the title of the video mentions that it is a Programming Skills Challenge run. Therefore, there are no illegal actions being performed, in accordance with the Q&A's linked above.

392: 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.

354: Returning Game Elements Back to Field

9-Sep-2019

G10 G17

This year game elements that leave the field during the match are not returned to the field per rule <G10>.

If a robot is still holding onto a cube or ball but it touches the floor outside of the field can the team still bring this element back into the field as long as it never left contact with the robot?

Would a team be able to utilize <G17> to handle their robot and put the cube/ball back into play, or should this cube/ball be considered to have left the field?

Answered by committee

Would a team be able to utilize <G17> to handle their robot and put the cube/ball back into play, or should this cube/ball be considered to have left the field?

In the future, please quote the applicable rules from the Game Manual so that future visitors can have a better understanding of a question's context.

G10 states the following, with a portion bolded for emphasis:

<G10> Keep Game Objects in the Field. Game Objects that leave the Field during a Match will not be returned. "Leaving the Field" means that a Game Object is outside of the vertical projection of the Field Perimeter **and no longer in contact with** the Field, Field Elements, other Game Objects, or **Robots**.

G17 states the following, with a portion bolded for emphasis:

<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. To do so, they must:

- a. Signal the Head Referee by placing their VEX IQ Controller on the ground.
- b. Move the Robot to any legal Starting Position.
- c. **Any Game Object 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.**
- d. Any Game Objects in the Starting Position may be moved out of the Starting Position and gently placed into a non-Scored position by the Team.

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.

Per G10, as long as the Game Object was still in contact with a Robot, then it has not "left the field". Therefore, G17c can be utilized to return the Game Object to a non-Scored position.

329: G17 Position of game elements after handling robot

11-Aug-2019

G17

When a robot claw is entangled in the cube, and the driver puts the robot back in a legal starting position, where should they put the cube? Just next to the starting position? or where the cube was before they picked up the robot as long as it is non-scored position? Should the referee adjust the position of the cube if he/she is not happy with the placement by the driving team?

<G17> Rule 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. To do so, they must: a. Signal the Head Referee by placing their VEX IQ Controller on the ground. b. Move the Robot to any legal Starting Position. c. Any Game Object 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. d. Any Game Objects in the Starting Position may be moved out of the Starting Position and gently placed into a non-Scored position by the Team.

Answered by committee

Thank you for quoting the game manual.

To your first question,

where should they put the cube?

The answer can be found in G17c, quoted below for reference:

G17c: Any Game Object 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

This means *any* non-Scored position, so both examples you provided would be appropriate options. However, remember be mindful of the rest of G17 beyond what you quoted in your post:

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 3 and 4 above. If a Head Referee sees Teams strategically exploiting this rule, they may be Disqualified from said Match.

So, this addresses the second part of your question regarding what the Referee should do:

Should the referee adjust the position of the cube if he/she is not happy with the placement by the driving team?

No, the referee should not adjust the Cube themselves. 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).

Referees are there to help the teams, so if a referee sees that a team is about to violate this rule, then the referee may caution the team to ensure that no rules are violated.

This answer was edited in February 2020 to include the following note:

This question did not specify whether it was being asked with regard to a Teamwork Challenge or Robot Skills Match. Therefore, the answer above assumes that the question was referring to a Teamwork Challenge Match, since most questions normally do. We apologize for any confusion this may have caused.

24: Hub on barrier possession question

12-Jun-2018

G17

When a hub is touching one of the barriers or the other beams that are attached to the floor, but not the floor, does it count as possessed?

I am especially interested in the case where a robot could be pushing two hubs into the building zone. If the robot approached the building zone in a perpendicular manner then they will both be off the floor for a moment as they are scored.

Answered by committee

In the June 15th Game Manual update, <G17> was revised to more clearly answer this question. Barriers are considered a Field Element, and are thus included in the allowance for "pushing" multiple Hubs.

Pushing, shoving, pulling, or plowing multiple Hubs along the Floor, field perimeter, or Field Elements (*e.g. Barriers*) is not considered a violation, as long as these Hubs remain in contact with the Floor.

217: question on dragging the hubs

19-Jan-2019

G17

We have a robot like most where we pick one and drag 4 hubs. we are being told now at competition that if we drag 2 and they cross the blue bar at the same time it is considered both being lifted. Is this correct? If so what happens if you have one in the claw then you can not push or drag one over the blue while you have it. Please help

Answered by committee

It is always difficult to provide a blanket ruling on a hypothetical robot design based on a snapshot description. With that being said, let's take a look at G17, with a portion bolded for emphasis:

<G17> Hub control is limited. Robots may not directly or indirectly lift or hold more than one (1) Hub off of the Floor at a time. **Pushing, shoving, pulling, or plowing multiple Hubs along the Floor, field perimeter, or Field Elements (e.g. Barriers) is not considered a violation, as long as these Hubs remain in contact with the Floor.** However, if a Robot controls multiple Hubs that are not in contact with the Floor (such as pushing a Hub with two Hubs stacked on top of it), this would be a violation.

Provided that you can demonstrate / prove to a Head Referee that your mechanism keeps the Hubs in contact with the Floor and the blue Barriers as they cross, this should be legal. This concept is also covered in this similar Q&A post:

<https://www.robotevents.com/VIQC/2018-2019/QA/117>

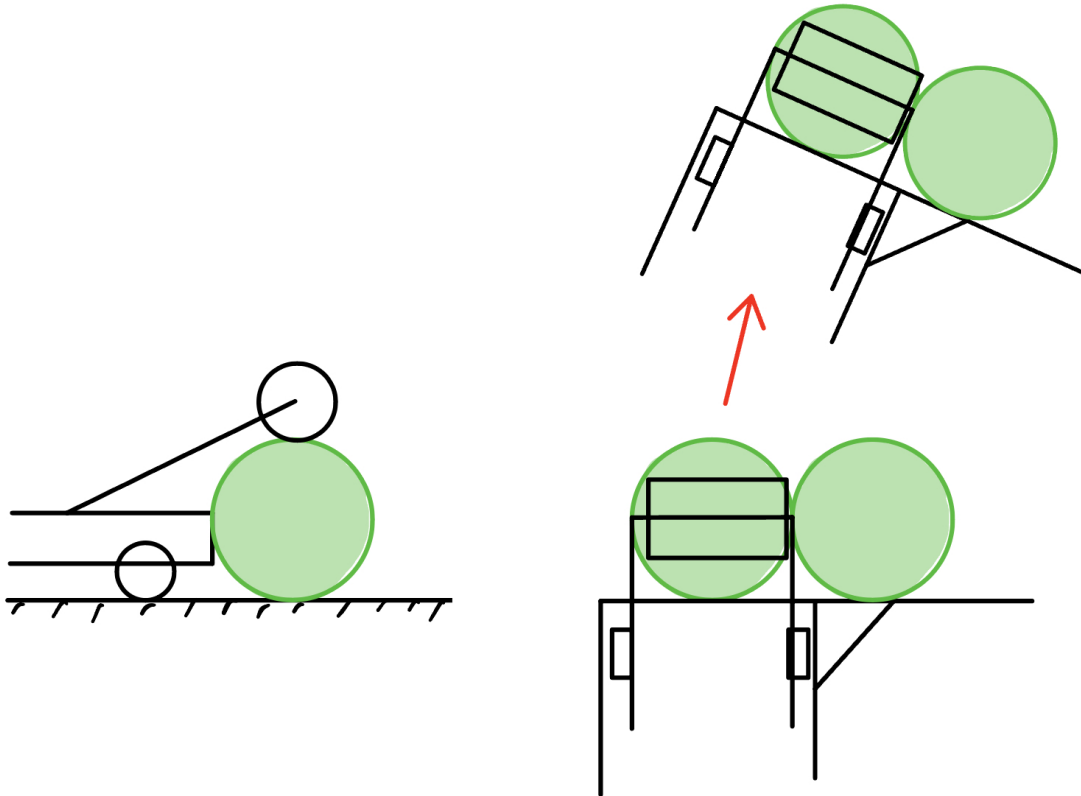
1891: G17, SG7 and plowing: use triball to affect other triballs

24-Jan-2024

G17 SG7

<G17> As image shows, when a robot is turning, a triball possessed by the robot helps prevent another triball from slipping to the outside, the question is:

1. Is the triball possessed by the robot considered part of the robot.
2. Is this specific example a violation of G17.



Answered by committee

Please review the Q&A posts and answers referenced in [Q&A 1807](#).

Specifically, the following quotes:

... when reviewing a face, mechanism, or interaction, it is much easier to prove that "yes, this is Plowing", and much harder to prove that "no, it's not Possession".

Remember that during a Match, a Head Referee won't be asking for a stable, isolated demonstration of a snapshot moment in time, such as the linked video. They will watch a Robot driving around the field, interacting with multiple Triballs, and make a judgment whether the Robot appeared to be Possessing any of them or simply Plowing through them.

1821: Transitive Triball contact while match loading

11-Dec-2023

S1 G9 G17 SG6

While match loading, a team contacts a triball in the possession of their robot (let's call this triball P) with a triball that they are holding and attempting to match load (let's call this triball H). Considering [<SG6>](#), [<S1>](#), [<G9>](#), and/or [<G17>](#), which violations (if any) should the referee rule in the following situations:

1. Triball P is currently being launched out of the robot by a mechanism and hits triball H. Triball H:
 - a) stays in the students hands
 - b) lands in the opposing alliances offensive zone

- c) lands in the teams offensive zone
 - d) lands in the teams match load zone
 - e) leaves the students hand and goes out of the field
2. Triball P is currently being launched out of the robot by a mechanism and hits triball H. Triball H falls into the field and the student instinctively or on purpose picks up the ball and uses it as the next matchload:
 - a) from the teams matchload zone
 - b) from the opposing alliances offensive zone
 3. Triball P is only briefly touched by triball H. Triball P remains possessed by the robot and:
 - a) does not move at all/significantly
 - b) moves within the robot i.e from the catapult to the intake
 4. Triball P is knocked off the robot with triball H so that it is no longer possessed

Also, should any of the triballs in the above scenarios be considered 'out of the field' and placed into the match load zone by the head referee?

Matthew and Kieran UK refs

Answered by committee

Please review [Q&A 1778](#), specifically regarding the introduction of Match Loads one at a time.

If we are understanding correctly, these scenarios all imply that a Drive Team Member was introducing a second Match Load before the Robot had launched its first one. These are good examples of what could happen if the "one Triball at a time" rule is not followed. So, at a minimum, all scenarios would warrant a warning / Minor Violation of [<SG6> Note 2](#).

Since these are now considered "improper Match Loads", [this similar Q&A](#) applies. If an event has the resources to do so, one application of this Q&A is to count the number of illegal Match Loads, and determine if this quantity could have a Match Affecting result.

With that being said, due to the safety implications of this particular form of illegal Match Loading (i.e., a Drive Team Member has literally been hit by a Match Load), a more rapid escalation may be appropriate at the Head Referee's discretion.

180: Rule G17 Question

13-Dec-2018

Hubs [G17](#)

Rule G17 states: Hub control is limited. Robots may not directly or indirectly lift or hold more than one (1) Hub off of the Floor at a time. Pushing, shoving, pulling, or plowing multiple Hubs along the Floor, field perimeter, or Field Elements (e.g. Barriers) is not considered a violation, as long as these Hubs remain in contact with the Floor. However, if a Robot controls multiple Hubs that are not in contact with the Floor (such as pushing a Hub with two Hubs stacked on top of it), this would be a violation.

This rule primarily refers to Robots which lift Hubs off of the Floor. Any mechanisms which are designed to lift Hubs can only do so one Hub at a time. If you design your Robot to only lift one Hub at a time, you will probably not violate this rule.

We need clarification on one design used by our students. Here is a <https://www.youtube.com/watch?v=usyzZAdXq2s> of the robot in action. The question is whether or not the robot is violating G17 after it scores the first hub, which remains seated on the grounded hub. The question is whether or not the robot should be considered lifting two hubs at the same time at this point.

Thank you for your input and clarification.

Answered by committee

Thank you for the video and for quoting the relevant rule. It is always difficult to issue blanket rulings on specific Robot designs, so a video helps significantly in providing the best possible answer to your question. Let's hone in on the following specific line of the blue box under G17:

Any mechanisms which are designed to lift Hubs can only do so one Hub at a time. If you design your Robot to only lift one Hub at a time, you will probably not violate this rule.

This design, by itself, is not inherently illegal. However, it absolutely contains the potential to violate G17, as it is designed to lift multiple Hubs at a time.

The question is whether or not the robot is violating G17 after it scores the first hub, which remains seated on the grounded hub. The question is whether or not the robot should be considered lifting two hubs at the same time at this point.

It is a semantic but worthwhile point to note that the first Hub is not necessarily considered Scored at this time, because the Robot is still contacting it. Even if the mechanism was somehow "floating" in the middle of the Hub, it would not be reasonable to consider this distinction abundantly clear to a Head Referee in the middle of a Match.

Because the mechanism is still in the same position that it was in when it was very clearly "controlling" the Hub (in the context of G17), and the Hub would definitely move with the Robot if it were to turn or move the mechanism further, the Robot would still be considered "controlling" the first Hub. Thus, this video would be considered a violation of G17. If the Robot could demonstrate visually and clearly that it was completely disengaged with the first Hub, such as by moving the mechanism out of the way, then it would be more likely to be considered legal.

1530: <SG1><SG4><G17> Legality of Preload Placements

6-Jun-2023

G17 SG1 SG4

<SG1> Starting a Match. Prior to the start of each Match, the Robot must be placed such that it is:

[...]

c. Not contacting any other gray foam field tiles, including the Match Load Zones. d. Not contacting any Triballs other than a maximum of one (1) Preload. See rule <SG4>. e. Not contacting any other Robots. f. Not contacting any Barriers or Elevation Bars. i. Contact with the field perimeter and/or Match Load Bars is permitted, but not required. g. Completely stationary (i.e., no motors or other mechanisms are in motion).

<SG4> Each Robot gets one Alliance Triball as a Preload. Prior to the start of each Match, each Alliance Triball/Preload that is used must be placed such that it is: a. Contacting one Robot of the same Alliance color as the Preload.

<G17> Use Triballs to play the game. Triballs may not be used to accomplish actions that would be otherwise illegal if they were attempted by Robot mechanisms (e.g., interfering with an opponent's Autonomous routine per <SG9>.)

1. Can a Preload start in a Match Load Zone? Or does <G17> disallow it as per <SG1c>?
2. Can a Preload start contacting a Triball? Or does <G17> disallow it as per <SG1d>?
3. Can a Preload of one Robot touch the Preload of another Robot? Or does <G17> disallow it as per <SG1e>?

Answered by committee

Preloads would generally fall under the caveat listed in the "red box" of G17, quoted here for reference:

The intent of this rule is to prohibit Teams from using Triballs as "gloves" to loophole any rule that states "a Robot may not [do some action]". This rule is not intended to be taken in its most extreme literal interpretation, where any interaction between a Triball and a Robot needs to be scrutinized with the same intensity as if it were a Robot.

Yes, each of the scenarios listed in your question would be permissible. The requirements listed in SG4 should be the primary factor that Head Referees use to determine Preload legality.