

Q&A

VRC 2019-2020: Tower Takeover

Tagged: G16



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 Tower Takeover 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 Tower Takeover rules questions.

- For event, registration, or other competition support questions, please contact your [REC Foundation Regional Support 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.

Index

[Clarification on <G16>](#)

[Other Questions](#)

[Autonomous mode](#)

[moving a robot during a match](#)

[What can a team do with a detached piece?](#)

[Reset for parking or robot hang.](#)

[Resetting for parking](#)

Clarification on <G16>

G16

Our team is seeking clarification regarding <G16> which states:

"Robots may not intentionally grasp, grapple or attach to any Field Elements. Strategies with mechanisms that react against multiple sides of a Field Element in an effort to latch or clamp onto said Field Element are prohibited."

Regarding the field perimeter, would touching both the metal frame and the polycarbonate sheet on the exterior of the field perimeter at the same time be considered legal, given that the robot is not contacting the interior of the field perimeter?

Answered by Game Design Committee

Regarding the field perimeter, would touching both the metal frame and the polycarbonate sheet on the exterior of the field perimeter at the same time be considered legal, given that the robot is not contacting the interior of the field perimeter?

We cannot provide a blanket ruling based on a the information provided of one possible hypothetical mechanism interaction.

In addition to "grasp, grapple, or attach to", you can also look towards the key words "latch onto" and "anchor" to help understand the intent of this rule. Some additional synonyms that are covered by the intent of this rule are "grip", "pinch", or "clamp". These are all terms that describe active retention of the Field Element, such that a robot mechanism is actively exhibiting force on multiple sides of it.

If this guidance is not enough to answer your question, please feel free to re-submit with further explanation, such as a photo or diagram, so that we can provide a more clear answer.

Other Questions

Center Platform G16 SG10

Can a team extend tabs from their robot which extend out over the edges of the center platform to keep them on when an opponent is attempting to push them off? This is assuming they do not grapple the platform in any capacity, so they don't "exert force or pressure on opposite sides of an object to control its position."

Can a team use a potential energy based series of actions which begins as time runs out, enabling them to score or descore after time has expired?

Answered by Game Design Committee

Please review the [Q&A Usage Guidelines](#) before posting, specifically points 3 (quote the applicable rule), 4 (make a separate post for different questions), and 5 (use specific and appropriate question titles).

- *Can a team extend tabs from their robot which extend out over the edges of the center platform to keep them on when an opponent is attempting to push them off? This is assuming they do not grapple the platform in any capacity, so they don't "exert force or pressure on opposite sides of an object to control its position."*

It sounds like you're referring to SG10, quoted here for reference:

<SG10> Don't clamp your Robot to the field. Robots may not intentionally grasp, grapple or attach to any Field Elements, including the Platforms. Strategies with mechanisms that react against multiple sides of a Field Element in an effort to latch or clamp onto said Field Element are prohibited. The intent of this rule is to prevent Teams from both unintentionally damaging the field and/or from anchoring themselves to the field.

It is impossible to provide a blanket ruling on a hypothetical design. However, a static mechanism which extended past the edge of the Center Platform and did not clamp or anchor the robot to it would likely not violate this rule. A mechanism which reacted against multiple sides of the Center Platform, anchoring or latching the Robot to it, would likely violate this rule.

Of course, this assumes that no other rules, such as SG2, are violated in the process.

- *Can a team use a potential energy based series of actions which begins as time runs out, enabling them to score or descore after time has expired?*

Please see G16, quoted here for reference:

<G16> *It's not over until it's over. Scores will be calculated for all Matches immediately after the Match, once all Game Objects, Field Elements, and Robots on the field come to rest.*

Provided that no Robot or Safety rules were violated, there are no rules prohibiting this, and the scores would be calculated once all robots and game objects have come to rest. That said, please remember G2 - "common sense always applies in the VEX Robotics Competition".

Autonomous mode

Programming Skills Challenge G16

In Autonomous mode as per <PSC1> A Team may handle their Robot as many times as desired during a Programming Skills Match.

We want to bring the robot back to base after the first mission (example push the hubs to the final target) and run the next mission (robot hang on the bar) from the base. Pls let us know if this is allowed.

Answered by Game Design Committee

Please review the [Q&A Usage Guidelines](#) before posting, specifically point 2, "Read and search existing Q&A's before posting."

Your question appears to be similar to this Q&A post, as well as the other post that it links to. If these do not answer your question, please feel free to rephrase and re-submit.

www.robotevents.com/VIQC/2018-2019/QA/141

moving a robot during a match

G16

Are drivers allowed to pick up their robot and place it back in the starting position as a strategic move and not for one the circumstances outlined in rule G16. We saw a team pick up their robot and place it back in the starting position so it could obtain a hang within the time left. We were told at the competition that this is considered a strategic move and it allowed for VexIQ Next Level Challenge.

<G16> 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:

1. Signal the Referee by placing their VEX IQ Controller on the ground.
2. Move the Robot to any legal Starting Position.
3. Any Hubs in possession of the Robot while being handled must be removed from the Robot and taken out of play for the remainder of the Match. Note: Any Hubs in the Starting Position may be moved out of the Starting Position, provided that they are not moved into a Scored position and are not moved as part of a strategy to gain an advantage. 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. If a Head Referee sees Teams strategically exploiting this rule, they may be Disqualified from said Match.

Answered by Game Design Committee

Please review the [Q&A Usage Guidelines](#) before posting, specifically point 2, "*Read and search existing Q&As before posting.*"

This question is very similar to the following previous Q&A's:

www.robotevents.com/VIQC/2018-2019/QA/141

www.robotevents.com/VIQC/2018-2019/QA/108

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

What can a team do with a detached piece?

G16

What can a team do with a unintentionally detached piece if they want the extra piece out of the way but not to fix the robot?

The relevant rule:

<G16> 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:

1. Signal the Referee by placing their VEX IQ Controller on the ground.
2. Move the Robot to any legal Starting Position.
3. Any Hubs in possession of the Robot while being handled must be removed from the Robot and taken out of play for the remainder of the Match. Note: Any Hubs in the Starting Position may be moved out of the Starting Position, provided that they are not moved into a Scored position and are not moved as part of a strategy to gain an advantage. 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. If a Head Referee sees Teams strategically exploiting this rule, they may be Disqualified from said Match.

The team can reset the robot and fix it, but what if they want to just keep driving? Can the piece be removed from the field without resetting the robot? Or, to get the now "extra" piece off of the field would the team just reset the robot and simply set the extra piece to the side?

Answered by Game Design Committee

Or, to get the now "extra" piece off of the field would the team just reset the robot and simply set the extra piece to the side?

This would be the correct option. The only time that Drivers have permission for reaching into the field and retrieving Robots (or Robot parts) is when they are doing so under the guidance of G16. Otherwise, this could be considered a violation of G8:

<G8> Hands out of the Field. Drivers are prohibited from making intentional contact with any Field Element or Robots during a Match, except for the allowances in <G16>. Any intentional contact may result in a Disqualification. Accidental contact will not be penalized. However, accidental contact which affects the score of the Match may result in a Disqualification at the Head Referee's discretion.

As always, the last portion of G16 is crucial when discussing these scenarios:

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. If a Head

Referee sees Teams strategically exploiting this rule, they may be Disqualified from said Match.

Reset for parking or robot hang.

Programming Skills Challenge G16

Please confirm:

1. It is NOT legal to reset a robot for parking during Driver Skills or a Teamwork challenge unless the robot is "in trouble".
2. It IS legal to reset a robot during an autonomous run to park or high hang. We can program the robot to set hubs and then pick the robot up and move it to a start zone and run a hang only program?

Rule PSC1 states you can handle the robot as many times as desired during an autonomous run. Rule G16 specifies the robot can only be handled during driver control if the robot is in trouble.

Answered by Game Design Committee

For Driver Skills Matches and Teamwork Challenge Matches, please see this similar Q&A:
www.robotevents.com/VIQC/2018-2019/QA/108

For Programming Skills Challenge runs, <PSC1> is a specific exception that allows teams to reset their robots as a part of game strategy.

<PSC1> 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. Drivers may reset or adjust the Robot as desired from this position, including pressing buttons on the Robot Brain or activating sensors.

Resetting for parking

G16

This question came up as part of one of our practices with other schools. A team wanted to get a reset on their robot as time was running out so they could then move forward and park in the parking zone with time remaining. This would count under the using a reset as a strategy to gain an advantage and the points would be disqualified, correct? If that does occur and the referee does judge they've broken the rule, do they lose all points for the match, or just their parking points?

Answered by Game Design Committee

Let's take a look at the relevant portion of rule G16, quoted here for reference:

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

With this in mind, to answer your question specifically:

This would count under the using a reset as a strategy to gain an advantage and the points would be disqualified, correct?

Correct, if this was a strategic move. As it was posed as a concept during a practice for maximizing time efficiency, it

is likely this was being discussed strategically. During a match, a referee can conclude if it was done strategically by looking at the context of the action. Was the robot damaged or otherwise in need of assistance (as put forth by G16), or was it simply too far away from the Hanging Structure? Has this team received similar warnings before?

If that does occur and the referee does judge they've broken the rule, do they lose all points for the match, or just their parking points?

The penalty for breaking rule G16, as quoted above, is a Disqualification from the Match. The definition for Disqualification is as follows:

A Team that is Disqualified in a Match receives zero (0) points. If a Team is Disqualified in a Match, the Head Referee will notify the Team of their violation at the end of the Match. At the Head Referee's discretion, repeated violations and Disqualifications for a single Team may lead to Disqualification for the entire event.