

Q&A

VIQC 2021-2022: Pitching In

Tagged: G16

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

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

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<G16> Anchoring

G16

<G16> "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."

Q: When a robot/mechanism reacts against only 1 side of a Field Element can this ever be considered anchoring?

Answered by committee

It is impossible to give a blanket answer to this question that would address all hypothetical Robot designs and mechanisms.

Please see this related Q&A for additional "thought experiments" that can be used to determine whether a Robot has "anchored" to the field or not:

www.robotevents.com/VRC/2021-2022/QA/845

And this Q&A, which expands on why is difficult to objectively answer questions involving edge-case G16 calls:

www.robotevents.com/VRC/2021-2022/QA/919

If you would like a blanket clarification regarding a specific mechanism, please feel free to rephrase and re-post with a diagram or photo.

Clarification on Cantilever Parking

G16

Hello,

[Q&A 853](#)

If the Robot were to hypothetically cantilever itself against the lip of the Platform in order to "hover" just slightly off of the black supporting structures, this would very likely be considered "clamping" and/or causing an unnecessary risk of damage to the polycarbonate Platform (in the context of G16).

G16

Don't clamp your Robot to the field. 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. The intent of this rule is to prevent Teams from both unintentionally damaging the field and / or from anchoring themselves to the field.

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

[Change Up Q&A on G16](#)

To test whether a Robot is violating G16, the Robot should be able to be pulled away from the Goal in some horizontal direction, without lifting the Robot off of the field tiles, and without damaging, disassembling, or violating any laws of physics of the Goal and/or Robot.

Assuming the robot is removable from a horizontal direction like in the Change Up Q&A and isn't causing unnecessary risk to the Platform or Field Elements...

If a Robot were to only be contacting one surface of the Platform (the floor) would this be a legal way to park?

Does this change if a Robot is contacting multiple surfaces?

Thank you for your time!

Answered by committee

Assuming the robot is removable from a horizontal direction like in the Change Up Q&A and isn't causing unnecessary risk to the Platform or Field Elements... If a Robot were to only be contacting one surface of the Platform (the floor) would this be a legal way to park?

Yes, especially given that this description is essentially the same as the standard action of a Robot driving up and Balancing on the Platform.

Does this change if a Robot is contacting multiple surfaces?

This question cannot be answered with a one-size-fits-all blanket response. However, we will at least try to explain why this is the case.

Much like [R12](#), determining whether a specific mechanism or strategy has violated G16 requires a certain amount of context and subjective human judgment.

To help guide Head Referees who are faced with this subjective decision, we have attempted to provide a few guiding principles to watch for.

One guideline that can be objectively interpreted in a "black-and-white" litmus test is "reacting against multiple sides of a Field Element". Therefore - any time a mechanism has been designed to intentionally react against multiple sides of a Field Element in an attempt to remain attached to that Field Element, it should be immediately apparent that the mechanism is at a severe risk of violating G16.

Other guidelines are more subjective, such as "what does 'anchor' mean" and "what constitutes a risk of field damage". To address these, we have attempted to provide general hypothetical principles that can be applied to real-world situations. Namely, the "horizontal-pull-away" thought experiment, and "cantilevering off of the polycarbonate Platform is probably causing a risk of field damage" (853).

We cannot provide any further hypothetical clarifications that are not simply restating what has already been said. If you would like a blanket clarification regarding a specific mechanism, please feel free to rephrase and re-post with a diagram or photo.

How to determine the violation of G16

G16

I remember last season one Q&A answer states that the method of determine whether a robot is clamped to the field is to pull it in a horizontal direction. If the robot can be pulled in one direction then it is not considered a violation of G16. Is this method still valid for judging this season? And is there any criterion of the distance that the robot can be pulled and the force used for pulling?

Answered by committee

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

Rule G16 reads as follows:

<G16> Don't clamp your Robot to the field. 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. The intent of this rule is to prevent Teams from both unintentionally damaging the field and / or from anchoring themselves to the field.

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

We are not going to define the phrases "grasp", "grapple", "attach to", "react against", "latch", "clamp", or "anchor" any further than their dictionary definitions. They are intended to be "common sense" terms (in line with rule G3) that apply to the vast majority of Robot interactions found in a typical Match. If a Head Referee has determined that a Robot is doing any of these actions while interacting with a Field Element, then the Robot will be considered in violation of G16.

If a Head Referee is faced with a questionable situation during a Match, the following "thought experiments" can be used to dig into the definitions of these words. However, these questions are only intended to guide in this judgment call process alongside the context of the Match; they should not be used as airtight/foolproof/black-and-white criteria.

- If the ground underneath the field were to suddenly disappear, but the Robot was able to "float" (think [Wile E. Coyote](#)), would the Robot be "pulled down" with the Field Element, or would the Field Element fall away from it?
- If the Robot were to be gently pulled in any random horizontal direction opposite the Field Element in question, by any random amount of force, would the Field Element be "pulled" with it (or otherwise hinder the Robot's movement)?
- How many sides of the Field Element is the Robot contacting? To determine how many of those sides are "contact" vs "reacting against in an effort to latch or clamp onto", how would the Robot respond if one of those sides were to vanish?
- Is the interaction causing any risk of field damage that is higher than normal gameplay? (this is the primary reason for rule G16 in the first place)

Elevating a robot using the platform base

G16

According to this Q&A <https://www.robotevents.com/VRC/2021-2022/QA/818>, the Platform includes the black plastic towers. Would this mean that if a robot was able to lift itself just using the towers, it could count as elevated? The definition for elevated is:

1. The Robot or Mobile Goal is contacting their Alliance Platform.
2. The Platform meets the definition of Balanced.
3. The Robot or Mobile Goal is not contacting any other Field Element, such as the foam field tiles or the field perimeter.

Now most methods of trying to lift using the tower would be a G16 violation, which states:

<G16> Don't clamp your Robot to the field. 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. The intent of this rule is to prevent Teams from both unintentionally damaging the field and / or from anchoring themselves to the field.

However, through testing we found that there is a rectangular gap between the hinges and the tower, which is slightly smaller than a 2-wide c channel. If a robot were to stick a metal channel into there, and lift itself off of the ground using the channel, it could reach the definition of Elevated, as long as it doesn't cause the hinge to lift off of the tower, as per

the definition of Balanced:

1. The Platform is roughly parallel to the field.
2. Both flat surfaces of the Platform hinges are contacting the Platform base, as shown in Figure 7.
3. Robots and / or Scoring Objects contacting the Platform in their Alliance Home Zone are not also contacting any other Field Elements, such as foam field tiles or the field perimeter

So would it be a legal strategy to elevate the robot using this method? It is reacting against multiple sides of the platform, but it is not latching on or clamping, and will fall out the moment the platform is tipped, so I don't believe it'd be a G16 violation.

Answered by committee

In version 2.0 of the Game Manual, the definition of Platform was updated to read as follows:

Platform - The 53.0" x 20.1" (1,346.2mm x 511mm) hinged polycarbonate device and the attached red or blue PVC pipes (highlighted below in Figure 17), located in each Alliance Home Zone, that sits 9.5" (241.5mm) high off of the ground when Balanced. The Platform is attached to a double hinge that allows it to tip towards the field in either direction.

[Q&A 818](#) was also updated accordingly.

Under this revised definition, contact with the black supporting structures would cause the Robot to no longer meet the definition of Balanced.

G16 Referee Decisions

Answered by committee

Further Clarification On G16

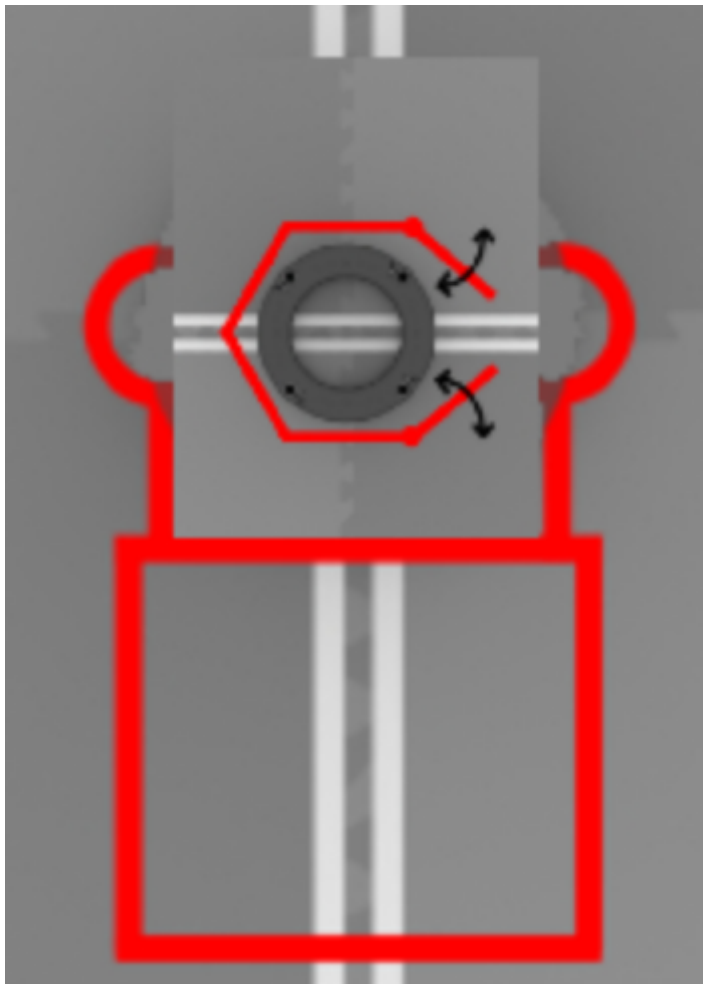
G16

Assume that G16 is the only rule in consideration and the cage under discussion is the same as the one discussed in www.robotevents.com/VRC/2020-2021/QA/615

Is the use of a mechanism that makes the removal of a legal cage require a more accurate application of force, or require multiple applications of forces, legal? This would specifically mean that a safe application of force or combination of forces could remove the design without lifting the design or damaging the game pieces.

Example: a hypothetical robot wraps its intakers around a legal cage. The robot needs to be removed before the cage can be pulled away in some horizontal direction. (edited diagram originally sourced from Q&A 615 by Team 80X).

Thank you! -- Team 28007A



Answered by committee

There is not enough information given in this hypothetical, instantaneous example to provide a concrete answer. However, even if more information was given, it would still be impossible to issue a blanket ruling that would apply to all possible hypothetical interactions of this nature. Even if a video was provided of a whole Match, the answer would only be applicable to that particular Match and those particular mechanisms, and such an answer would not be helpful to Teams or Head Referees who find themselves in similar-but-slightly-different situations.

We would encourage you to consider the following possibilities, and walk through the logic provided in the previous Q&A's on this subject, alongside rules G5, G13, G16, and R29.

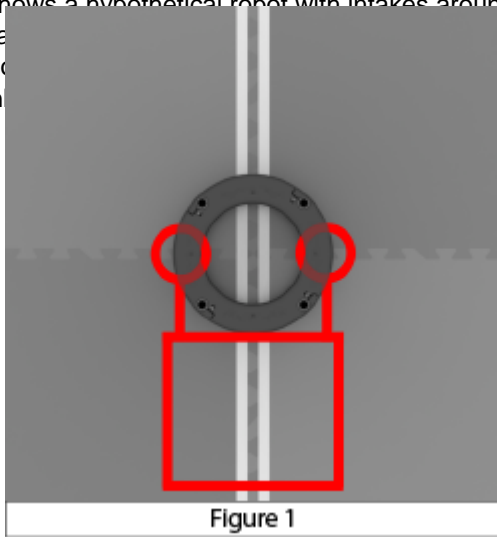
- If this question refers to two mechanisms on the same Robot, or two separate Robots
- If those two Robots were from the same or opposing alliances
- Match context prior to the interaction, e.g. if said interaction would be considered Match Affecting
- Match context after the interaction, e.g. if there were any damage to the Goal, or the opposing Robot (if one is present)
- Context of the mechanism(s) and/or Robot(s) in question, e.g. rule R29

Clarification on Q&A <G16> Answer (Reacting Against Multiple Sides of The Center Goal).

G16

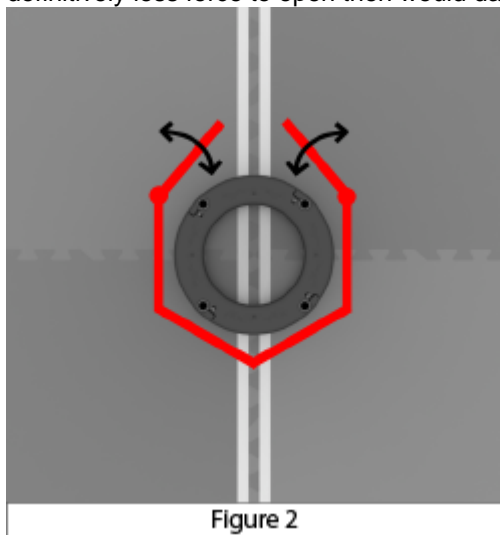
A question about "Reacting Against Multiple Sides of The Center Goal" was answered here in the Q&A: www.robotevents.com/VRC/2020-2021/QA/603. The answer was along the lines of imagine pulling the mechanism in a random direction, to comply it should not "get stuck" or risk damaging anything. We are worried this could interfere with the more intended game play and have some further questions regarding this matter.

Figure 1 shows a hypothetical robot with intakes around a goal. It interacts with multiple sides of the goal in order to score because of the vague term; does it mean there needs to be at least one direction for the robot to be able to move anything? If not how should a ref apply that to this case?.. since there is one direction that can apply... Does this scenario comply with



<G16>?

Additionally, what about a mechanism that releases when pulled a substantial enough force, but small enough to definitely not damage the field elements? Figure 2 shows an example of such a mechanism; the mechanism has "doors" which are closed using rubber bands, meaning if pulled with enough force, open. If such a mechanism required definitively less force to open then would damage a goal, would it be legal to put it around the center goal?



Finally, "pulled in random directions", from the linked Q&A answer it seems that directly up (lifting it) doesn't seem to be an option when doing this check, is that correct? If a mechanism can only be lifted up off a goal does it pass or fail the test to comply with <G16>?

Sorry for asking some slightly redundant seeming questions, we are just trying to be as thorough as possible.

Thank you from Vexmen Team 81K Magik

Answered by committee

For reference, G16 reads as follows:

G16: 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. The intent of this rule is to prevent Teams from both unintentionally damaging the field and/or from anchoring themselves to the field.

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

The relevant portion of the linked Q&A post is as follows:

As noted in the quoted portion, one intent of G16 is to prevent teams from "anchoring" themselves to the field. The primary thought experiment that Head Referees should use to determine whether a Robot has "anchored" itself to a field element is to envision the Robot being pulled in any random direction by a strong force (such as a human or an opposing Robot).

When it is pulled in random directions, does the Robot "get stuck" on the field element? Does it run a risk of damaging the field? Does it run the risk of damaging itself (a la G5)?

It may be more straightforward, albeit more verbose, to phrase as the following:

To test whether a Robot is violating G16, the Robot should be able to be pulled away from the Goal in some horizontal direction, without lifting the Robot off of the field tiles, and without damaging, disassembling, or violating any laws of physics of the Goal and/or Robot.

By this revised thought experiment, the two examples depicted would likely not be in violation of G16.

However, this judgment call is highly dependent on the specifics of the mechanism in question, how it interacts with the Goal, and any prior warnings/DQ's received by the Team. As always, it is impossible to provide a blanket answer that will definitively encompass all hypothetical mechanism designs and interactions. If a Team is concerned that a mechanism may dance on the edge of a potential G16 violation, we would advise them to design their Robot in such a way that it is abundantly clear to Head Referees that the Robot is not anchored, grappled, latched, clamped, or otherwise attached to the Goal.

Reacting Against Multiple Sides of The Center Goal

G16

G16: 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. The intent of this rule is to prevent Teams from both unintentionally damaging the field and/or from anchoring themselves to the field.

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

Field Element– The foam field tiles, field perimeter, white tape, Goal, and all supporting structures or accessories (such as driver station posts, field monitors, etc)

A team creates a square structure that surrounds the center goal in an effort to prevent the goal from being descored. If the structure were to remain stationary and not come in contact with the center goal, would the robot not be considered grasping, grappling, or attaching to the goal since it is not reacting against any sides? See Figure 1 for a visual.

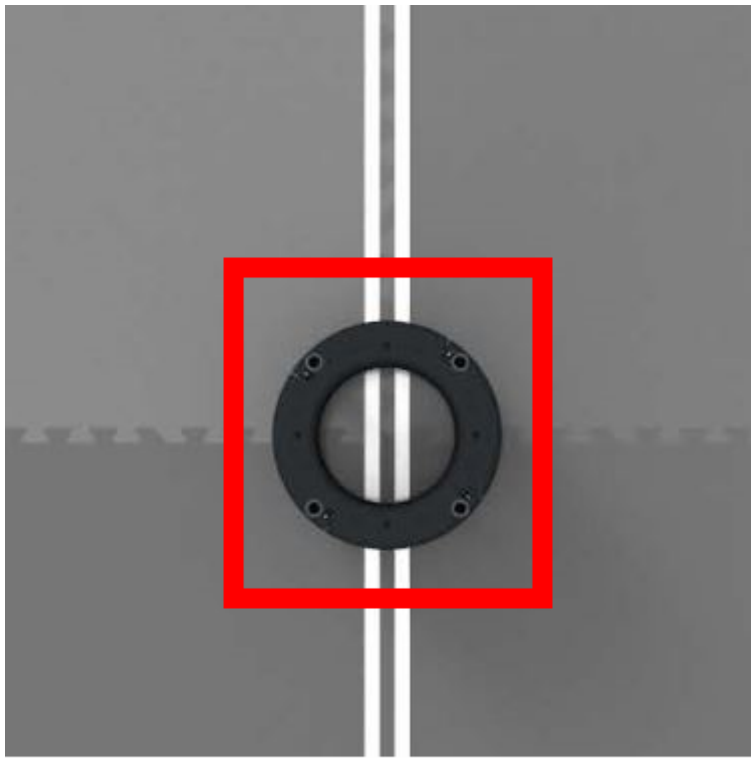


Figure 1

Say the same square structure is moved and is now in contact with the center goal at two different points. Would the robot now be considered grasping, grappling, or attaching to the goal since it is reacting against multiple sides? See Figure 2 for a visual.

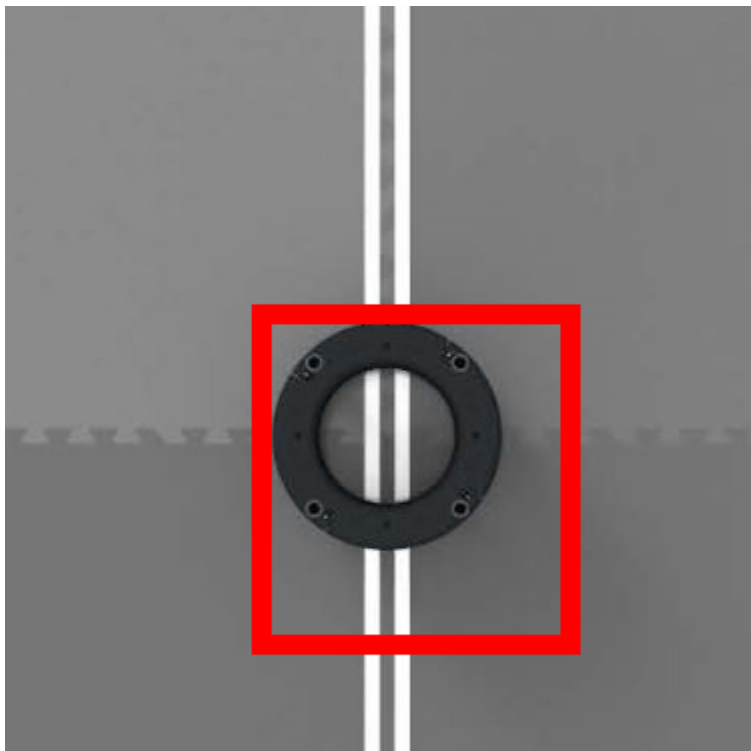


Figure 2

The square structure is now replaced with a circular structure. Is it moved against the center goal but is only in contact at one point. Would the robot not be considered grasping, grappling, or attaching to the goal since it is only reacting against one side instead of multiple sides? See Figure 3 for a visual.

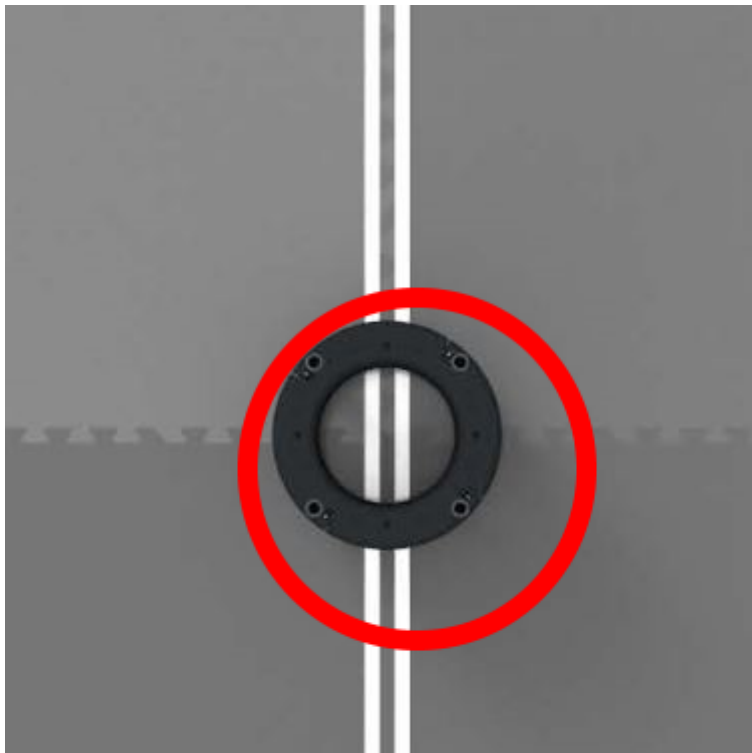


Figure 3

Answered by committee

Thank you for quoting the relevant portions of the Game Manual and providing images of your scenarios.

For the purposes of answering this question, we are assuming that the red lines represent hypothetical structures that satisfy all Robot rules, and the only rule in question is G16. We are not making any assumptions or blanket statements about the height, rigidity, or other design characteristics of the mechanisms, as it would be impossible to issue a blanket ruling that would satisfy all possible hypothetical Robot mechanisms.

As noted in the quoted portion, one intent of G16 is to prevent teams from "anchoring" themselves to the field. The primary thought experiment that Head Referees should use to determine whether a Robot has "anchored" itself to a field element is to envision the Robot being pulled in any random direction by a strong force (such as a human or an opposing Robot).

When it is pulled in random directions, does the Robot "get stuck" on the field element? Does it run a risk of damaging the field? Does it run the risk of damaging itself (a la G5)?

Based on this thought experiment, the three hypothetical depictions would not be legal.

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 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 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 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 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 committee

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

Major Violation for Inverse Score Affecting?

G16

Per <G15>, during the end game, if a robot's contact arm reaches over the fence and accidentally moves a disc to a lower scoring zone (IE: moves a disc from 3 points -> 2 points), would this be a major violation?

<G16>

Answered by committee

The Violation Notes for rule <G15> specify that Score Affecting violations are Major Violations and should earn a DQ. However, per the definition of a Score Affecting Violation (on page 8 of the game manual at the time this answer was written), **a violation is Score Affecting if it *improves the Team's or Alliance's score at the end of the Match***

Moving a Disc to a lower-scoring Zone in violation of <G15> should be considered a Minor Violation unless the action includes a G1, S1, or Code of Conduct violation or the Team has already received multiple Minor Violations for <G15> at the event (as described in the Violation flowchart in Figure 4 of the game manual).

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 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 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.

Dispensers "shooting" discs over the fence.

G16

Note: Discs which incidentally bounce over the Fence upon being Removed from a Dispenser are not considered a violation of this rule.<G16>

Can you please provide clarification. I have seen several robots that have dispensers that "shoot" the discs over the fence and the discs are being scored based on the note above. If the mechanism works inconsistently, but consistently shoots about 50% of the time over the fence, does it violate G16?

Answered by committee

As defined in the Game-Specific Definitions in Section 1 of the Slapshot Game Manual, a Dispenser is "A structure built out of VEX IQ parts which contains Discs at the beginning of the Match."

The Note within <G16> only applies to Discs that incidentally cross the Fence as they are removed from a Dispenser. Any Disc that is passed over the Fence by a Robot by any means is in violation of rule <G16> and will be considered a Major Violation and Disqualification as described in the Violation Note for <G16>.

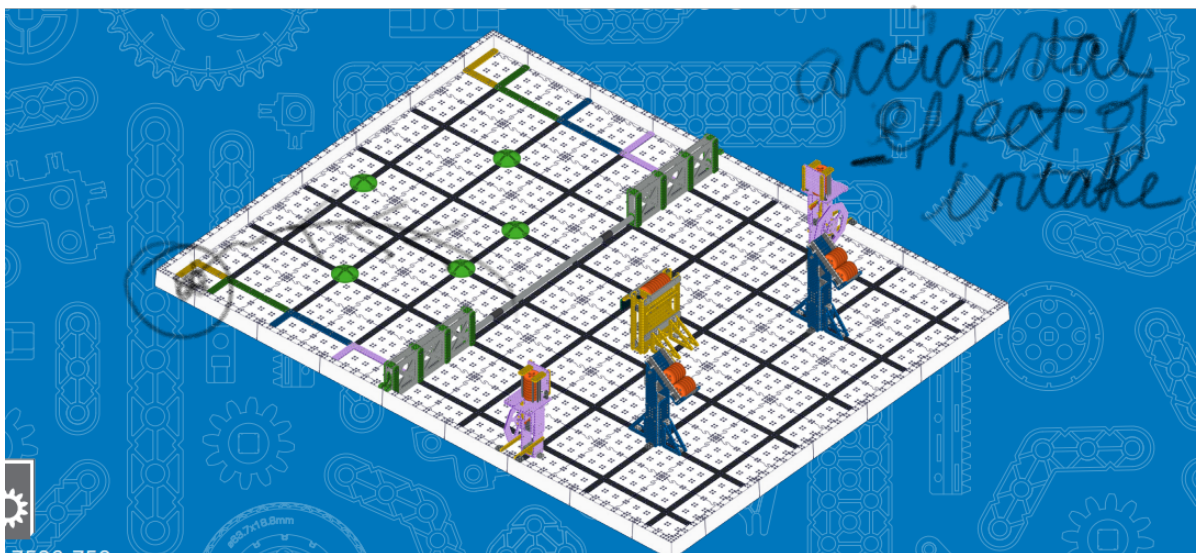
Disc over the fence <removal vs disqualification>

G3 G16

<G16> Discs go under the Fence, not over it. Discs may only be Scored in Goal Zone by passing them underneath the gray PVC pipe. Robot actions such as "dumping," "placing," or "throwing" Discs over the Fence are strictly prohibited, and will result in a Disqualification

I am requesting that this rule be revisited by what terms mean "dumping, placing and throwing" over the fence. This needs to be clarified, since one disc as a result of an accidental "bounce or ricochet" does not equal "dumping, placing or throwing" and to be immediately disqualified for an accident seems harsh indeed. If the singular disc landed outside of the field it would have resulted in a disc removal and no penalty.

We know in the robotic world there are those once in a lifetime freak accidents and that is when we should apply <common sense G3 > and should have been given the benefit of the doubt and spoke to them at the end of the match instead scaring them by announcing it during the match when they had no clue about the rule and did not understand what was going on.



Answered by committee

As stated in the [Q&A Usage Guidelines](#), the Q&A platform is intended to be a communication channel for questions such as "Is this interpretation of a rule legal?", not a discussion forum to post questions such as "I disagree with this rule, can it be changed?" For those comments, please use the official VEX Forum or email GDC@vex.com.

Disks going over Fence, Disqualification VS. Disk Removal

G16

I understand this question was asked in August but wanted further clarification. In rule [<G16>](#) it states Discs may only be Scored in Goal Zone by passing them underneath the gray PVC pipe. Robot actions such as "dumping," "placing," or "throwing" Discs over the Fence are strictly prohibited, and will result in a Disqualification. It also states Violation Notes: Since this rule is inherently Score Affecting, all Violations will be considered Major Violations which would require the team to be disqualified from that match.

It also states Please don't over-think this rule. It does seem like the rule is created to stop teams from using the strategy of dumping, placing or throwing. This seems like a harsh punishment for the team to be disqualified if the team's strategy is to shoot the disks under the fence but it flies over the fence by mistake and/or a bad bounce. Instead, can the Head referee make a judgement to remove the disk that flew over the fence from the goal zone, issue the team a minor violation, with the assumption that if the same team were to violate the rule it would lead to a major violation, thus a disqualification?

Answered by committee

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How immediate is the disqualification for a score affecting violation?

G16

[<G16>](#) When a score affecting violation has occurred, a team has shot a disc over the bar, does that team immediately have to stop motion of their bot and become disabled for the rest of the match, or do they continue on until the final buzzer since "scoring" technically doesn't happen until time is up and all pieces have come to rest?

Answered by committee

Thank you for your question! As described in the definition of Disqualification in Section 1 of the Slapshot Game Manual, "If a Team is Disqualified in a Match, the Head Referee will notify the Team of their violation at the end of the Match."

When any Major or Major rule Violation occurs the Head Referee should immediately alert the Team and ask them to stop the action that is in Violation of a rule. If the Team has Violated rule [<S1>](#), they may be Disabled by the Head Referee and asked to put their controller down for the remainder of the Match. For all other Violations in VIQC Spin Up, the Team is permitted to continue driving for the remainder of the Match.

G16 Reacting Against Multiple Sides of the Field

G16

Hello!

G16: "Don't clamp your Robot to the field. 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. The intent of this rule is to prevent Teams from damaging the field and / or from anchoring themselves to the field."

In Change Up, [Q&A 615](#) established that a robot is not usually violating G16 if it can be pulled away from the field element in any horizontal direction without being lifted off the floor tiles.

Does this interpretation of G16 also apply to Spin Up? For example, [in this drawing](#), the orange C represents a robot mechanism, and the red and blue circle represents a roller. Because the mechanism can be pulled away from the roller to the right, it seems not to be violating G16 (unless it clamps to the roller with excessive force or damages the field etc.) Is this a correct interpretation?

[In this drawing](#), the robot mechanism takes an upside down U shape and can only be pulled away from the roller by lifting up. However, the mechanism is on a pivot that allows it to retract from the roller without the whole robot being picked up off the floor tiles. Because of this, it also seems not to be violating G16. Is this a correct interpretation?

Thank you!

Answered by committee

Thank you for your question. Our response to [Q&A 1196](#) describes how Spin Up rule [<G16>](#) should be interpreted better than any rulings from previous seasons could.

We cannot issue a blanket ruling that would encompass all possible hypothetical mechanisms or scenarios.