

Q&A

VRC 2022-2023: Spin Up

Tagged: SG8

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 Spin Up 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.

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<SG8> Interplay Between Momentary Possession and Stopping All Other Robot Actions

24-Jun-2020

SG8

This question is asked on behalf of a fellow VEX Forum user.

This is a follow-up to [Q&A 608](#) and, to a lesser extent, [Q&A 601](#). The ruling given here may also be relevant to a ruling on [Q&A 597](#), whenever one is issued.

The relevant portions of <SG8> are repeated below:

Possession is limited. *Robots may not have greater-than-momentary Possession of more than three (3) Balls of its opposing Alliance's color at once. When two Robots from the same Alliance are working in tandem and blocking Balls, those Robots may not Possess a total of more than six (6) Balls of its opposing Alliance's color at once.*

Robots that violate this rule must stop all Robot actions except for those actions that are attempting to remove the excess Ball.

Suppose a Robot is in Possession of more than three (3) Balls of its opposing Alliance's color **for a momentary period of time** before the excess Ball is ejected.

Which of the following interpretations, if either, is correct?

- The Robot must **immediately** stop all Robot actions except for those actions that are attempting to remove the excess Ball **as soon as Possession of the excess Ball begins, even though the Possession of the excess Ball ultimately proves to be momentary in total duration.**
- Because the Possession of the excess Ball is momentary, the Robot **does not** need to stop all Robot actions except for those actions that are attempting to remove the excess Ball. That is, the Robot may continue scoring or performing other actions as desired while momentarily Possessing the excess Ball. By extension, this interpretation would imply that the Robot must stop all Robot actions except for those actions that are attempting to remove the excess Ball **only after the Possession of the excess Ball becomes greater-than-momentary.**

Answered by committee

Suppose a Robot is in Possession of more than three (3) Balls of its opposing Alliance's color **for a momentary period of time** before the excess Ball is ejected.

Which of the following interpretations, if either, is correct?

- The Robot must **immediately** stop all Robot actions except for those actions that are attempting to remove the excess Ball **as soon as Possession of the excess Ball begins, even though the Possession of the excess Ball ultimately proves to be momentary in total duration.**

This interpretation is correct.

We will not be providing a blanket definition for a length of time that is considered "momentary", nor will we be defining how Robot actions (which are not related to ejecting the excess Ball) must be stopped. If a Head Referee finds themselves in a scenario where they must make a judgment call on the severity of an SG8 violation, we would reiterate the remainder of SG8 which was not quoted in your question:

Minor violations of this rule that are not Match Affecting will receive 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.

It is also important to remember that G3 always applies when a Head Referee is attempting to judge an edge-case scenario:

<G3> Use common sense. When reading and applying the various rules in this document, please remember that common sense always applies in the VEX Robotics Competition.

<SG8> Possession

14-May-2020

SG8

QA 601 asked a similar question regarding to the definition of momentary already, so I will start on the other part.

<SG8> Possession is limited. Robots may not have greater-than-momentary Possession of more than three (3) Balls of its opposing Alliance's color at once. When two Robots from the same Alliance are working in tandem and blocking Balls, those Robots may not Possess a total of more than six (6) Balls of its opposing Alliance's color at once.

Robots that violate this rule must stop all Robot actions except for those actions that are attempting to remove the excess Ball.

Minor violations of this rule that are not Match Affecting will receive 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.

a) Is it a correct interpretation that the first and second sentence stands concurrently, which means that each robot may not possess more than 3 opponent balls at any time? Or is the first sentence only applied when two robots are NOT working in tandem and blocking balls? Does the second sentence only apply when blocking balls, or do they apply when there are balls inside robots as well?

In other words, are there any circumstances where one robot is allowed to possess more than 3 opponent balls at any given point?

b) Is it a correct interpretation that if the ball has been determined to have been greater-than-momentary possessed by the other team, then a violation has occurred, regardless of whether the other robot "stop all Robot actions except for those actions that are attempting to remove the excess Ball"? Or in the other word, is the actions after being determined in possession relevant in determining whether a violation has occurred?

c) In the case where there are multiple momentary possession of same/different opponent balls, do these add up to count as a "greater-than-momentary Possession"? If so, under what time frame would they need to be under?

Thanks,

Answered by committee

a) Is it a correct interpretation that the first and second sentence stands concurrently, which means that each robot may not possess more than 3 opponent balls at any time? Or is the first sentence only applied when two robots are NOT working in tandem and blocking balls? Does the second sentence only apply when blocking balls, or do they apply when there are balls inside robots as well?

In other words, are there any circumstances where one robot is allowed to possess more than 3 opponent balls at any given point?

No. At no point in any circumstance is one Robot allowed to Possess more than three opposing Alliance Balls for a greater-than-momentary amount of time.

SG8 includes a "red box", which helps to explain this further:

The intent of this rule is to prohibit each Robot from keeping more than 3 of the opposing Balls from being used by the opposing Alliance. It is anticipated that two Robots from the same Alliance will work together to Possess the opposing Alliance's Balls. When those Robots do this, as long as they are not Possessing more than 6 of the Opposing Alliance's Balls in total, and each Robot is not carrying or controlling more than 3 Balls, these Robots are not in violation of <SG8>.

The intent of the second sentence of SG8, and the red box explanation, is to reduce the need for Head Referees to "track" which Balls are being Possessed by which Robot, in a scenario where both Robots could satisfy the conditions for Possession.

b) Is it a correct interpretation that if the ball has been determined to have been greater-than-momentary possessed by the other team, then a violation has occurred, regardless of whether the other robot "stop all Robot actions except for those actions that are attempting to remove the excess Ball"? Or in the other word, **is the actions after being determined in possession relevant in determining whether a violation has occurred?**

[It seems like the verbiage of your two questions may be in conflict, so for clarity's sake, the following answer is intended for your second (bolded) question.]

Yes. Actions following a momentary excess Possession do determine whether a violation has occurred. If the following action is anything other than ejecting the excess Balls, then there has been a violation of <SG8>. This includes if the following action is inaction.

This could be viewed as an explicit clarification of "Match Affecting" in the context of this rule. Due to the dynamics of VRC Change Up, a momentary excess Possession could occur where would be impossible for a Head Referee to determine whether the action was Match Affecting or not. Therefore, momentary excess Possessions (that are immediately followed by ejecting the excess Ball) are an explicitly permitted exception to the Possession limit.

c) In the case where there are multiple momentary possession of same/different opponent balls, do these add up to count as a "greater-than-momentary Possession"? If so, under what time frame would they need to be under?

We are not going to provide a time frame during which Balls must be ejected; it should be unquestionably apparent to a Head Referee that the Robot in question has stopped all actions that are not in immediate pursuit of ejecting the Ball.

Teams who utilize this rule as a core part of their gameplay strategy should expect additional scrutiny from Head Referees, as they could be at risk of repeated warnings (that escalate to a Disqualification at the Head Referee's discretion), or of violating R29.

<R29> There is a difference between accidentally and willfully violating a Robot rule. Any violation of Robot rules will result in a Team being unable to play until they pass inspection (per <R3d>). In addition, **Teams who intentionally or knowingly circumvent or violate rules to gain an advantage over their fellow competitors are in violation of the spirit and ethos of the competition.** Any violation of this sort may be considered a violation of <G1> and/or the REC Foundation Code of Conduct.

Clarification of "Momentary" Possession

13-May-2020

SG8 Referee Decisions

This question is posted based on a [VEX Forum thread](#) and on behalf of a frequent volunteer in Arizona.

According to <SG8>:

Robots may not have greater-than-momentary Possession of more than three (3) Balls of its opposing Alliance's color at once.

Since "momentary" is not defined, would the following scenario be permitted within the rules?

Red *Robot* approaches a *Goal* containing one or more blue *Balls* while currently in *Possession* of three blue *Balls*. Red robot descodes the *Balls* in the *Goal*, so that it is momentarily holding more than three blue *Balls*. Then, the *Robot* immediately ejects the additional blue *Balls*, so that the *Possession* of greater than 3 blue *Balls* is around 5 seconds long.

Is there any rule-of-thumb that referees should follow when considering similar scenarios?

Answered by committee

The full text of SG8 reads as follows, with a portion bolded for emphasis:

<SG8> Possession is limited. Robots may not have greater-than-momentary Possession of more than three (3) Balls of its opposing Alliance's color at once. When two Robots from the same Alliance are working in tandem and blocking Balls, those Robots may not Possess a total of more than six (6) Balls of its opposing Alliance's color at once.

Robots that violate this rule must stop all Robot actions except for those actions that are attempting to remove the excess Ball.

Minor violations of this rule that are not Match Affecting will receive 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.

Provided that the Robot in question immediately ceases all other actions (e.g. driving, scoring, lifting a mechanism, intaking, etc), and ejects the extra Balls, this scenario would be legal.

Is there any rule-of-thumb that referees should follow when considering similar scenarios?

When a VRC-specific definition is not available, a standard dictionary definition should be used. The Oxford definition of "momentary" is "lasting for a very short time; brief".

It will be at the Head Referee's discretion if a given Robot has exceeded a "momentary" violation, if the violation is Match Affecting, and/or if the Team has received multiple warnings prior to this violation.

Wallbot's Possession of Balls

13-May-2020

SG8 Referee Decisions

SG8: Robots may not have greater-than-momentary Possession of more than three (3) Balls of its opposing Alliance's color at once. When two Robots from the same Alliance are working in tandem and blocking Balls, those Robots may not Possess a total of more than six (6) Balls of its opposing Alliance's color at once.

SG8 establishes a Robot may not have Possession of more than 3 of the opposing alliance's balls at one time. The definition of Possession is the following:

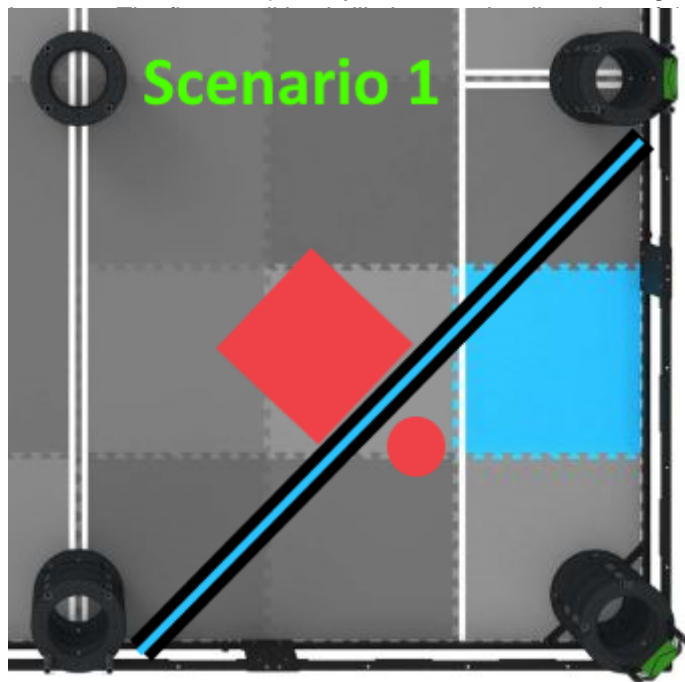
Possession – A Robot is considered to be Possession a Ball if a Ball is in an unscored position and either of the following criteria are met:

- The Robot is carrying, holding or controlling the movement of a Ball such that if the Robot changes direction, the Ball will move with the Robot. Pushing/plowing Balls is not considered Possession, however using concave portions of your Robot to control the movement of Balls is considered Possession.
- The Robot is blocking the opposing Robot's access to Balls that are located between Goals along the field perimeter.* Blocking access to Balls is considered Possessing those Balls only if the opposing Robot is attempting to make contact with those Balls from close range* **AND** those Balls are at least partially within the width of the Goals between the Goals. Robots on the same Alliance working in tandem to block access to Balls would share the Possession of the Balls. See <SG8> for Possession limits.

Emphasis added. A wallbot that has sectioned off a portion of the field does not meet the criteria for possession in the first bullet point as the wallbot (assuming it is stationary) is not carrying, holding, or controlling the movement of a ball. The focus of this question centers around the second bullet point.

There are two conditions under the second point. The "and" qualifier necessitates that both conditions must be met in order to be considered in possession of a ball.

The first condition is that the opposing robot has to be attempting to make contact with a ball from close range and the second is that a ball is partially between the width of two goals along the field perimeter. The second condition is easy to

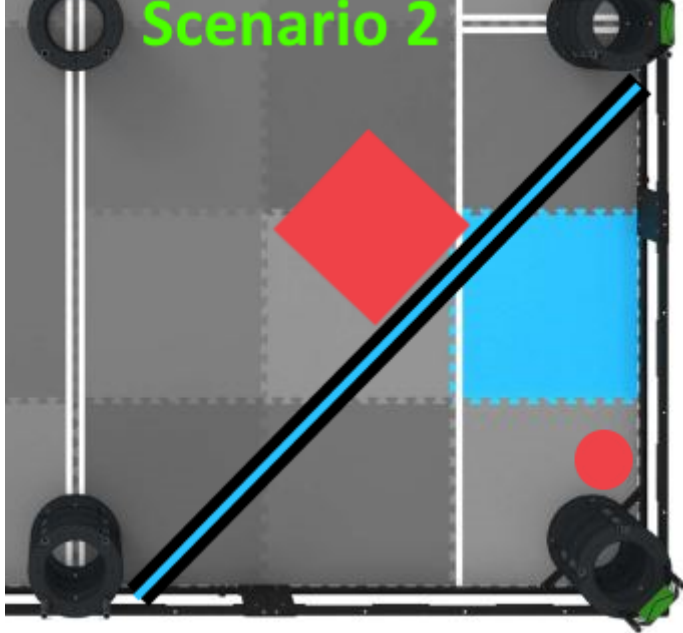


Head Referee as to what is considered "from close range." precedent for Head Referees to base their decisions upon.

An image of scenario 1 can be found at the bottom of this

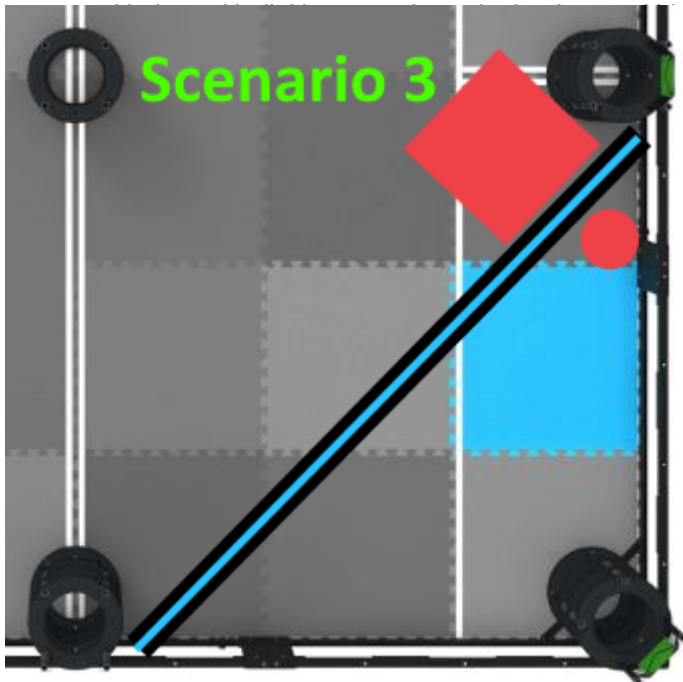
post. A blue robot has deployed a stationary wall in the corner. The wall is tall enough so that no robot can reach over the wall and make contact with balls. A red ball is directly behind the blue wall. A red robot is directly on the other side of the wallbot. The Red robot is attempting to make contact with the red ball and is within close range of the red ball. However, the red ball is clearly not between the width of the goals along the field perimeter. Therefore, the blue robot is not in possession of the red ball. Is this interpretation of scenario 1 correct?

Scenario 2



An image of scenario 2 can be found at the bottom of this

post. A blue robot has deployed a stationary wall in the corner. The wall is tall enough so that no robot can reach over the wall and make contact with balls. A red ball is clearly between the width of two goals along the field perimeter. A red robot is on the other side of the wall but is at least a full tile's length away from the ball. The Red robot is attempting to make close range of the red ball. Therefore, the blue robot is not in correct?



An image of scenario 3 can be found at the bottom of this

post. A blue robot has deployed a stationary wall in the corner. The wall is tall enough so that no robot can reach over the wall and make contact with balls. A red ball is clearly between the width of two goals along the field perimeter and a red robot is directly on the other side of the wall. The red robot is attempting to make contact with the red ball. Even though the red robot is unsuccessful in making contact with the red ball, it is within close range and attempting to make contact. Therefore, the blue robot is in possession of the red ball as both conditions are met. Is this interpretation of scenario 3 correct?

Answered by committee

Thank you for the detailed question, and for your patience while we reviewed the rules in question. <SG8> and the definition of Possession have been modified in the August 17th Game Manual Update to address this confusion. If more clarification is still needed, please feel free to rephrase and re-submit.

Interpreting <SG8>

24-Feb-2019

Caps SG8

If in the elimination matches, in the act of scoring a cap on a pole, the cap leaves the field either due to defense or driver error, should that result in a disqualification for the robot attempting to score the cap? At a recent local tournament, the rules were set in such a way that if you had dropped a cap off the field at any point during the qualifier matches and then dropped a cap during the eliminations, you would be instantly disqualified regardless of if the offense was match affecting or not. Is this a proper interpretation of the rule sg<8> or not? Thanks

Answered by committee

The full text of <SG8> reads as follows:

<SG8> Keep Game Objects in the field. Though it is expected that some Game Objects may unintentionally leave the field during Match play, Teams may not intentionally or strategically remove Game Objects from the field.

a. Balls that leave the field during regular Match play, accidentally or intentionally, will not be returned to the field.

b. Caps that leave the field during regular Match play will be returned to the nearest foam tile, Low Scored for the opposite Alliance color of the last Robot to contact it. If a referee cannot determine which Robot was the last to contact the Cap, then the Cap will not be returned to the field.

An intent of this rule is to prevent Robots from "knocking" Caps out of the field to remove them from Posts. Any strategic, intentional, or repeated removal of Game Objects from the field would be considered a violation of this rule.

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.

"Strategic, intentional, or repeated" is the key phrase to bear in mind. It is up to the Head Referee to determine if the way in which the Caps were removed from the field was intentional or strategic. Similarly, the exact definition of "repeated" will also be at Head Referee discretion, depending on the context of the Match and the event.

Generally, a Cap falling outside of the field due to defensive interactions would be protected by <G11>, although it is impossible to issue a blanket ruling that would cover all possible scenarios.

<G11> You can't force an opponent into a penalty. Intentional strategies that cause an opponent to violate a rule are not permitted, and will not result in an infraction on the opposing Alliance.

See [this Q&A](#) and [this Q&A](#) for more thoughts on this topic.

What happens to a cap if sg8 is violated?

16-Jan-2019

Caps SG8

According to Sg8 balls can not be shot at caps on posts So let's say blue has a scored cap on a post and red comes over and shoots a ball and the cap falls off, will the cap be placed back on the post scored for blue due to the violation?

Answered by committee

First, to be clear, shooting Balls at Caps is not considered a legal strategy. Please see this relevant similar Q&A post: <https://www.robotevents.com/VRC/2018-2019/QA/197>

will the cap be placed back on the post scored for blue due to the violation?

There is no precedent in the Game Manual for "un-doing" an action mid-Match because the action was the result of a rules violation. Instead, the Head Referee should determine if the action was Match Affecting, and assign a warning or a Disqualification accordingly.

However, please note in the linked Q&A above, this particular action should result in an <S1> violation and a potential Disqualification at the Head Referee's discretion, regardless of if the action was Match Affecting or not.

Andy Zieglmeier Event Partner

20-Dec-2018

Caps SG8

Is it an option for the head referee to clarify expectations of SG8 before qualification matches begin? This would be in reference to the following - The intent of this rule is to prevent Robots from "knocking" Caps out of the field to remove them from Posts. Any strategic, intentional, or repeated removal of Game Objects from the field would be considered a violation of this rule.

Examples of clarification would be-

1. If your robot leverages a Pole scored Cap on the bottom side, from the field side only, this would be considered a violation of the note listed above. Reason for this is due to leverage from the field side only would result in knocking a Cap out of the field in most cases. Teams executing this move and "knocking" Caps out of the field, in this manner, will receive one warning and then be logged.
2. It is not possible to assume the intent of a robot to correctly de-score a Cap from a Pole in all scenarios. With that said, a robot that is correctly attempting to take possession of a Cap to bring it back to the field drops it out of the field will be notified that multiple attempts in that nature will be viewed as "knocking" Caps out of play.

My reasoning for asking for this clarification is due to volunteering as a referee or emcee at multiple tournaments this year and having teams knock two or more Caps out of the field and saying that they were trying to bring it back into the field. In clarifying the head referees expectations, this lowers the potential of alliances disagreeing with how the match is called.

It is not my belief that the game designers desired to see the Poles empty at the end of matches. I have not seen a robot be able to score a Cap on a Pole anywhere near the same time it takes to knock that scored Cap out of the field.

Answered by committee

The VEX Robotics Competition does include some rules which are not inherently black-and-white, and rely on some amount of contextual referee interpretation for heat-of-the-moment decisions. See [this Q&A](#) for some more discussion on this topic.

With this in mind, it is reasonable and standard practice for a Head Referee to hold a "[Driver's Meeting](#)" to review and/or clarify key rules prior to an event.

However, it is imperative that any clarifications made during this pre-event meeting are in accordance with the guidance given in official materials like the Game Manual, the Referee Training Videos, the Referee Guide, and the Q&A. Augmenting these guidelines with additional qualifications or criteria would not provide a consistent experience for teams across all events.

Much like we avoid making "blanket" assumptions in the Q&A for these context-specific rules, we would advise Head Referees to avoid making "blanket" assumptions for their entire event. Due to the dynamics of head-to-head robotics games, and the creativity of VRC teams, it is impossible to account for all scenarios that you may encounter.

To directly comment on your specific examples:

If your robot leverages a Pole scored Cap on the bottom side, from the field side only, this would be considered a violation of the note listed above. Reason for this is due to leverage from the field side only would result in knocking a Cap out of the field in most cases.

This is an example of a blanket statement, "We will always interpret X as Y because it can only be Z", which may not always be true. It would not be in your (or the teams') best interest to provide this assumption.

a robot that is correctly attempting to take possession of a Cap to bring it back to the field drops it out of the field will be notified that multiple attempts in that nature will be viewed as "knocking" Caps out of play.

This is a better example of a guideline that is in line with <SG8> as it is written. A portion of <SG8> is quoted below, bolded for emphasis.

Any strategic, intentional, **or repeated** removal of Game Objects from the field would be considered a violation of this rule.

Removal of Game Objects from the field does not have to be strategic, intentional, AND repeated; "repeated" alone can be considered a violation of this rule. This is a good case where the Head Referee should keep track of the warnings in their [Match Anomaly Log](#) and watch for repeated instances from the same Team.

<SG8>, <RSC1>, and Skills

13-Nov-2023

SG8 RSC1

[<SG8>](#)

In a robot skills challenge (both driver and autonomous) what is the appropriate penalty if a team violates SG8?

Scenario 1: The team breaks the plane of the blue goal while pushing in the red alliance triballs. However, this is done in a way where the violation is incidental and accidental, and the team has the ability to score the red alliance triballs even if there was no violation.

Scenario 2: The team breaks the plane of the blue goal with no change of scoring, and the violation has no effect on the score and outcome of the match.

Thank you <SG8>

Answered by committee

Please review the [Q&A Usage Guidelines](#) before posting, specifically point 2, "Read and search existing Q&As before posting." We believe the following previously answered post answers your question; if it does not, please feel free to rephrase and re-submit. <https://www.robotevents.com/VRC/2023-2024/QA/1737>

Entering Opponents Goal

11-Nov-2023

SG8

In SG8, it states that robots aren't permitted to "break the plane" of an opponent's goal, unless they are Double Zoned. Since there's no penalty listed for a violation of this rule, I'm assuming it's up to the referee's discretion and if the violation was match affecting.

What is the standard penalty for a non- match affecting instance of "breaking the plane"? In this case, an opposing robot just bumped the triballs that were in the goal. None were taken out and the score wasn't affected.

Do all instances of this rule result in an automatic disablement?

Answered by committee

Figure 3 in the game manual provides a flowchart that Head Referees should use to determine the appropriate penalty for any Violation, including a Violation of [<SG8>](#) like the one you've described.

Here's how a Head Referee should work through that flowchart for your example, in which an opposing Robot broke the plane of the opponent's Goal but didn't remove any Triballs:

- Rule [<SG8>](#) does have specific guidance for Violations, but they don't apply to this scenario, so we move to the 2nd blue diamond
- The Violation did not change the score, so cannot have been Match Affecting; we move on to the 3rd & 4th blue diamonds
- Because we don't know the larger context of the Violation within the Match and the event, we don't know whether other Violations are involved or if this is a repeated Violation
- If the Head Referee answers 'no' to the questions in the 3rd and 4th blue diamonds, the Team will receive a Minor Violation and a formal warning; if a Team has already received multiple Minor Violations for a rule those Minor Violations will grow to a Major Violation and Disqualification

The only rules that specify Disablement of a Robot are the safety rules (Robot is unsafe, causes damage, or leaves the field) and [<SG5>](#) when a Robot becomes Entangled with the Net. Disablement is not a correct response to a Robot that Violates [<SG8>](#) or most other rules.

Double Zoning and Entering the Opposing Alliance's Goal during Skills Challenge

31-Oct-2023
SG8 RSC1

Hello, There are several skills routes where the robot pushes the red triball into the blue goal. While pushing the red triball into the blue goal, a part of their robot also enters the blue goal. As there are no opposing robots to create a situation of double zoning, are teams allowed to go under the blue goal, as [<RSC1>](#) states that all normal match rules apply which would include [<SG8>](#) If they do go under the blue goal to push in a red triball, is this score affecting which results in a 0 for the skill run?

Answered by committee

Thank you for your question! Because there is no an opponent in a skills Match, rule [<SG8>](#) does not apply in Driving Skills Matches or Autonomous Coding Skills Matches. Robots are free to break the plane of either Goal at any time in skills Matches. This will be reflected in an upcoming game manual update.

Clarification on SG8 :Caps de-scored which leave the field

9-Dec-2018
Caps SG8

Please clarify the following situation as related to caps leaving the field in an attempt to de-score. Is this the correct procedure given the rules "as written"

SG8 says - Match Affecting offenses will result in a Disqualification.

1. Any time a cap is knocked off a post by an opposing alliance and falls out of the field, the referees need to make a mental note and verbally warn the offending team.
2. At the end of the match, the referees need to determine if the de-scored cap(s) affects the outcome of the match. Referees should score the match with the cap (or caps) on the post first. Then referees need to score the match with the caps de-scored. If the de-scored caps affects which alliance wins, the offending de-scoring team will be disqualified.
3. For clarification, is the offending team disqualified? Or is it the alliance disqualified?

SG8 also says: Teams that receive multiple warnings may also receive a Disqualification at the Head Referee's discretion.

1. Please define multiple. The dictionary says several which is also vague at best. Is multiple two or more? Is multiple three or more? Is multiple 15 times? Please replace the word multiple with a number that is not open to interpretation.

Answered by committee

1. Any time a cap is knocked off a post by an opposing alliance and falls out of the field, the referees need to make a mental note and verbally warn the offending team.
2. At the end of the match, the referees need to determine if the de-scored cap(s) affects the outcome of the match. Referees should score the match with the cap (or caps) on the post first. Then referees need to score the match with the caps de-scored. If the de-scored caps affects which alliance wins, the offending de-scoring team will be disqualified.

These are both correct interpretations.

3. For clarification, is the offending team disqualified? Or is it the alliance disqualified?

Please see the definition of Disqualification, in the Tournament section of the manual, for reference:

Disqualification – A penalty applied to a Team for a rules violation. When a Team is Disqualified in a Qualifying Match, they receive zero (0) WP, AP, and SP, and the opposing Alliance receives two (2) WPs. When a Team is Disqualified in an Elimination Match, the entire Alliance is Disqualified and they receive a loss for the Match.

So, the answer to your question depends if the offense occurs in a Qualification Match or an Elimination Match.

SG8 also says: Teams that receive multiple warnings may also receive a Disqualification at the Head Referee's discretion. Please define multiple. The dictionary says several which is also vague at best. Is multiple two or more? Is multiple three or more? Is multiple 15 times? Please replace the word multiple with a number that is not open to interpretation.

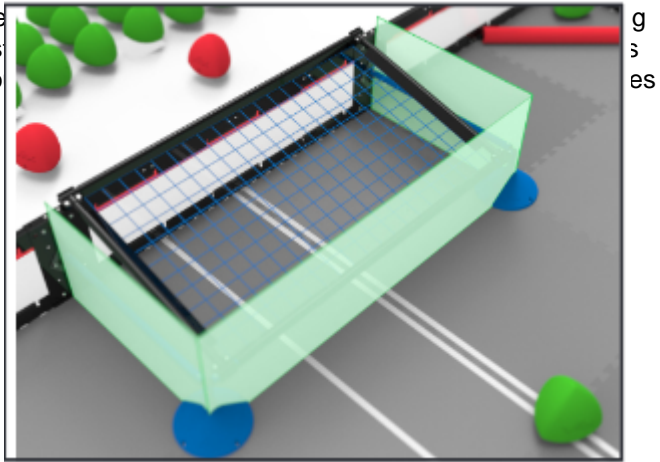
The word "multiple" is used throughout the manual intentionally, to provide referees with the flexibility to interpret and apply a ruling based on the context of their event. Two warnings for egregious actions, or warnings that are met with uncivil reactions, should bear more weight than two warnings for accidental actions, or warnings that are met with respectful discourse.

SG8 and the definition of breaking the plane.

25-Oct-2023

SG8

Goal – The Alliance-colored, netted structure on either side of the field, one red and one blue, into which Triballs can be scored for points. As a Field Element, the Goal is a structure / hardware (e.g. PVC pipes and plastic) specifically to the three-dimensional volume bounded by the net and the field.



onto the field and below the surface of the net.

Figure 16: A Goal. The three-dimensional outer scoring boundaries are highlighted in green.

Looking particularly at the last section of this definition: **For the purposes of scoring**, the “Goal” refers specifically to the three-dimensional volume bounded by a vertical projection of the outermost PVC pipes onto the field and **below the surface of the net**.

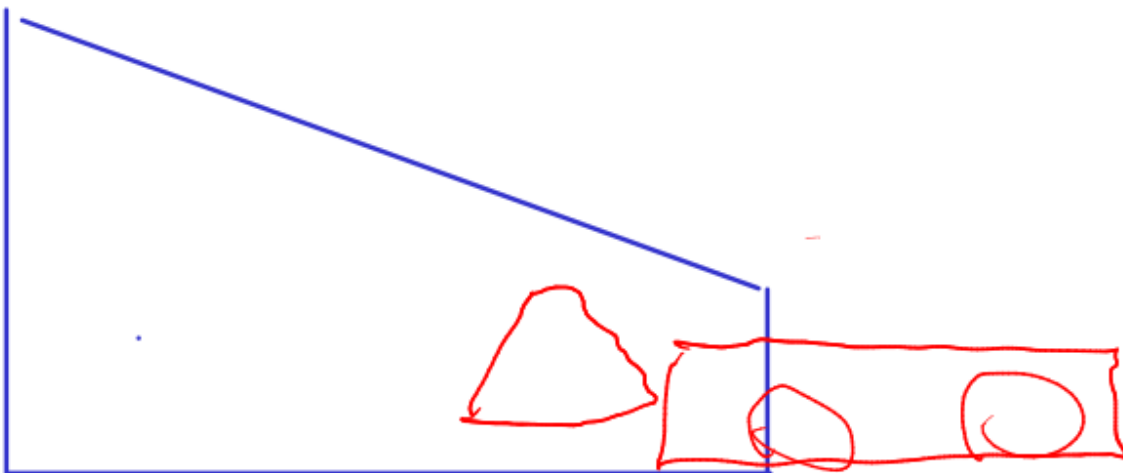
The scoring boundaries in the first linked image do not exactly line up with the wording, as the boundaries are not angled with the net to keep with the below the net verbiage. This is inconsequential in the case of scoring as it is clearly stated scoring is under the net.

However taking this into the confines of SG8

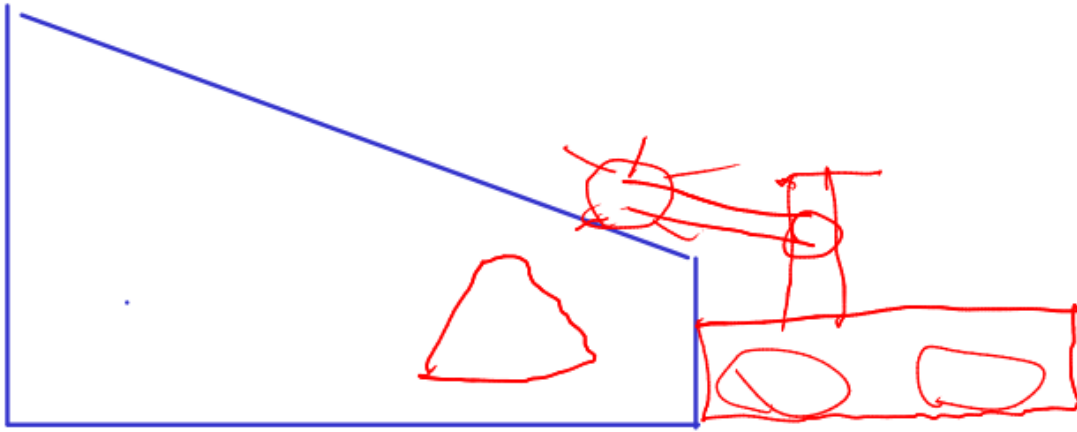
<SG8> Stay out of your opponent’s Goal unless they are Double-Zoned. During the time when an Alliance meets the definition of Double-Zoning, opposing Robots are permitted to “break the plane” of the Double-Zoning Alliance’s Goal, such as to remove Triballs.

Particularly in autonomous robots score their alliance triball within the opponents goal. Scoring this can be challenging without breaking the plane of the goal resulting in SG8 violations being frequent and furthermore with the somewhat contradictory goal bounds only being for the purposes of scoring interpretations for breaking the plane of the goal these range from:

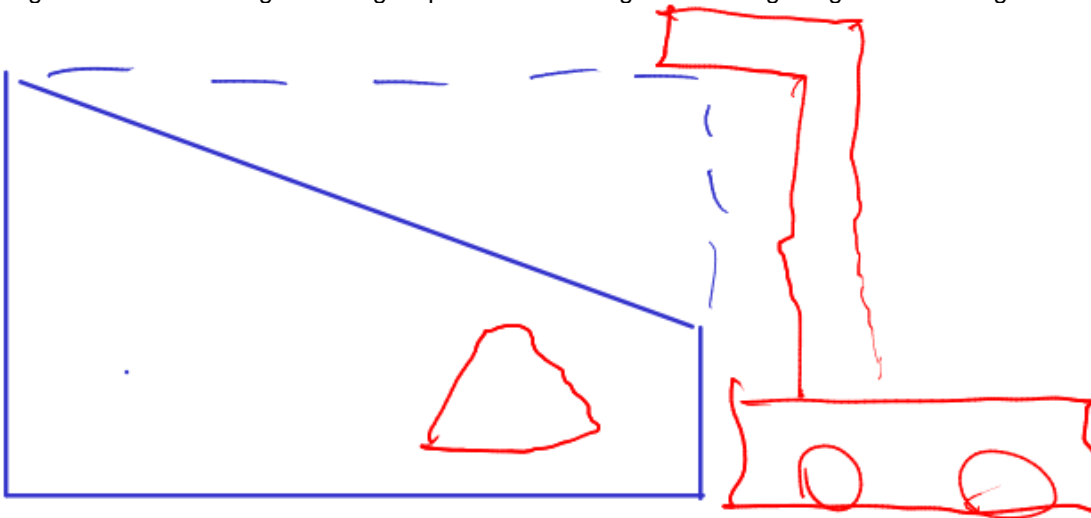
1: Going under the goal (this is a clear violation when considering the spirit of the rules) - second image



2: Going above the goal such as a mechanism for intaking triballs riding up the goal as the bot approaches- Third image



3: Going above the total height of the goal presented in the goal bounding image - fourth image



From these cases multiple questions arise:

- Should the plane of the goal be treated as an infinite vertical projection, where case three would be a violation?
- Should robots interacting above the goal be a violation at all such as a robot which has a roller for grabbing the triballs rolling up the top side of the net, designed in a way in which it avoids entanglement as it pushes the triball in?
- Should there be any lenience on violations of SG8 in autonomous where robots minorly break the plane under the goal in the attempt to add triballs to the opponents goal? I expect that robots should be designed with this rule in mind but we still see violations in this way frequently.

Many of these issues have been argued within our region with conflicting rulings made at the mall of America and Haunted signature events (not to disparage any referees at these events, they do an amazing job) which has led tod a desire for greater clarity so that our region can stay consistent.

Thanks

Answered by committee

Effectively, the phrase "*For the purposes of scoring*" could be interpreted as "*For the purposes of scoring and gameplay*".

As stated in the definition of Goal (bold text added for emphasis), "'Goal' refers specifically to the three-dimensional volume bounded by a vertical projection of the outermost PVC pipes onto the field and **below the surface of the net**.'" Therefore, entering the space above a goal does not qualify as breaking the plane of that goal.

To directly address your specific questions:

- No. The plane of the Goal is not an infinite vertical projection, it is a projection downward onto the field below the surface of the net. Figure 16 is intended to demonstrate which PVC pipes are being referenced, how the planes interact with the bases, etc.
- No. Robots interacting above the Goal is not a Violation if they are not Entangled with the Net.
- No. Clause D of Rule [<SG8>](#) states that "Entering an opponent's Goal is not permitted at any time during the Autonomous Period." Please see [this related Q&A](#) for more information.

Entering opponents goal

13-Oct-2023

SC7 SG8

[<SG8>](#) <SG8(d)> states "Stay out of your opponent's Goal unless they are Double-Zoned." (d) "Entering an opponent's Goal is not permitted at any time during the Autonomous Period."

[<SC7>](#) <SC7(d)> states "An Autonomous Win Point is awarded to any Alliance that has completed the following tasks at the end of the Autonomous Period:" (d) "Not violated any other rules."

Many teams are pushing (or attempting to push) their alliance triball under the opponents goal for the five points in the Autonomous Period. While it is possible, it is not easy at all to score the triball without the robot breaking the plane. SG8(d) is very clear that you can't enter the opponents goal (break the vertical plane with your robot) in auton.

1. If, while scoring their own Alliance Triball in the opponents goal, the robots breaks the plane, a) is it a minor or major penalty? b) If it is a minor penalty that affects the winner of the Autonomous Bonus, is it then a major penalty (awarding the Autonomous Bonus to the opponent)? c) To determine if it is autonomous impacting - is it a five point differential (the difference between the triball scored in a goal (5 points) and a triball touching your robot (0 points)) or is it a three point differential (the difference between the triball scored in a goal (5 points) and a triball scored in the offensive zone (2 points))?
2. Does this also mean loss of AWP (whether it is a major or minor) via SC7(d) even if all of the tasks to achieve the AWP were completed without violation (essentially, this violation did not help them complete the tasks needed for AWP).

EDIT: Including question about how to score a potentially illegally placed triball.

Answered by committee

1a & 1b: If a Robot breaks the plane of the opponent's Goal while Scoring their Alliance Triball during the Autonomous Period, the Head Referee will first need to determine whether that Alliance outscored their opponent and by how much.

- If their score is more than five points higher than their opponent's, the infraction did not affect the outcome of the Autonomous Period and they should be awarded the Autonomous Bonus.
- If their score is 1-5 points higher than their opponent's, the infraction has affected the outcome of the Autonomous Period and the Autonomous Bonus should be awarded to their opponent as described in rule [<G12>](#).

Any Violations committed during the Autonomous Period that affect the outcome of the Autonomous Bonus—whether they are Match Affecting or not—will result in the Autonomous Bonus being automatically awarded to the opposing Alliance.

In either case, the [<SG8>](#) Violation should be recorded for consideration at the end of the Match to determine whether or not the Violation was Match Affecting and should receive a Minor or Major Violation. Match Affecting can **only** be determined at the end of a Match once the scores have been calculated.

1c: Because the Alliance Triball begins the Match in contact with the Robot, and unscored, it is counted as a 5-point differential in this scenario.

2: Yes. Rule [<SC7>](#) says explicitly (bold text added for emphasis):

An Autonomous Win Point is awarded to any Alliance that has completed the following tasks at the end of the Autonomous Period: d. Not violated **any** other rules.

Contacting Outside PVC Pipe of the Goal

11-Oct-2023

[SG8](#)

The definition of Goal states "For the purposes of scoring, the "Goal" refers specifically to the three-dimensional volume bounded by a vertical projection of the outermost PVC pipes onto the field and below the surface of the net."

Rule [<SG8>](#) states "During the time when an Alliance meets the definition of Double-Zoning , opposing Robots are permitted to "break the plane" of the Double-Zoning Alliance's Goal, such as to remove Triballs."

The fourth point of Rule [<SG8>](#) states "This rule only applies during the Driver Controlled Period. Entering an opponent's Goal is not permitted at any time during the Autonomous Period."

Does contacting the outside of the outermost PVC pipes count as "breaking the plane" of goal (making it not permitted in autonomous)?

Thank you!

Answered by committee

Does contacting the outside of the outermost PVC pipes count as "breaking the plane" of goal (making it not permitted in autonomous)?

Based on the definition of Goal, as quoted in your question, it may be possible for a Robot to contact the outermost surface of the PVC support of the Goal without breaking the plane of the Goal. However, this distinction may be impossible for a Head Referee to see during a Match. Therefore, a Robot that uses contact with the PVC supports as part of their Autonomous or Match strategy does so with a reasonable chance of an [<SG8>](#) Violation and any resulting penalties.

descoring your own triballs

25-Sep-2023

[SG8](#)

if red alliance is not double zoned and they are pushed under their goal by a blue alliance robot and they have no choice but to descoring some of their triballs on the way out. would the blue alliance robot that pushed the other into the goal get a penalty? The blue alliance robot technically didn't descoring the triballs, and [<SG8>](#) has no mention of this strategy. Also, if the red alliance robot gets stuck in their own goal after a blue alliance robot pushes them in and blocks the exit, does anyone get a penalty? [<SG8>](#)

Answered by committee

There are no rules that prevent the interaction you've described, unless the blue Alliance Robot enters the red Goal in Violation of rule [<SG8>](#). De-scoring Triballs is neither defined nor prohibited by the rules.

If a Robot becomes Entangled during any interaction, including the one you've described, they will be subject to a Disablement as described in rule [<SG5>](#). In your scenario, if the Head Referee determines that the Entanglement was caused by the blue Alliance Robot, the blue Robot will also be subject to (at minimum) a Disablement and may receive other penalties at the Head Referee's discretion.

Clarification of Intent of SC4 and SG8

31-Aug-2023

SC4 SG8

The *intent* of [<SG8>](#) appears to be to prevent descoring of triballs scored in goals, except when double zoning. However [<SG8>](#) allows alliance triballs scored in the opposing alliance goal to be removed. In addition [<SC4>](#) states that a triball is scored if two points are within the 3D volume of the goal, and it is not in contact with an robot of the same color as the goal, however this allows robots descoring opposing alliance triballs scored in their goal simply through contact. Is this an intended part of the gameplay of Over Under? Thank you for your time, 334V

Answered by committee

Yes.

Descoring Question

12-Aug-2023

SG8

[<SG8>](#)[<SG8>](#) In the over under game, if both robots on the opposing alliance are elevated, not contacting the long barrier or any foam tiles in their offensive zone, would that make it legal to descoring from the opposing alliance's goal?

Answered by committee

Per rule [<SG8>](#), a Robot can only break the plane of their opponent's Goal when the opposing Alliance is Double-Zoned. In most cases, this also prevents Triballs Scored in Goals from being legally de-scoring except during Double-Zoning.

The definition of Double-Zone reads as follows:

An Alliance meets the definition of being "Double-Zoned" if both Robots from the Alliance are in the same Offensive Zone. To be considered "in the Zone" for the purposes of this definition, Robots must meet the following criteria:

1. Contacting the gray tiles within the Zone
2. Not contacting the Long Barrier
3. Not contacting any Elevation Bars

And point #2 in the definition of Elevated reads:

A Robot is considered Elevated at the end of the Match if ... The Robot is not contacting any Field Elements other than those listed in point 1. This includes gray field tiles, the field perimeter, Goals, the opposing Alliance's Elevation Bar, etc.

One definition requires contact with the floor tiles, and the other prohibits it. Therefore, **an Alliance with one or more Elevated Robots can never meet the definition of Double-Zoned, and opponent Robots may not break the plane of their Goal.**

Double-zoning Question

21-Jul-2023

SG8

[<SG8><SG8>](#) It is stated in the manual that double-zoning occurs when both teams are contacting tiles on the same side of the field. It is also stated that contacting the long bar separating the two zones ends a double-zone. What would happen in a scenario as shown in the image with a robot contacting the tiles on both sides of the bar, yet not contacting the bar itself? would it be considered double-zoning no matter what? [img](#)

Answered by committee

Per the definition of Double Zone, the Robot you describe is in contact with both Offensive Zones. A Robot that is in contact with both Offensive zones counts toward a Double Zoned status in any situation in which their Alliance partner is in contact with the gray tiles and not in contact with the Long Barrier or Elevation Bars.

<SG8> on Lifted Robots

23-Jun-2023

SG8

The definition of "in the zone", criteria III necessitates contact with the gray field tile. Given this would a robot **lifted** in such a way that it is not in contact with a gray field tile not be eligible for double-zoning?

Thank you for your time,

334V

Answered by committee

You are correct. A Robot that is not in contact with the gray tiles does not count toward a Double-Zoned status.

Definition of Possession

19-Jun-2023

SC1 SG8

[<SC1>](#) Before rules, the definition of "Possession" seems impossible. It awkwardly tries to allow very limited forms of pushing (plowing isn't really an appropriate word). It talks about changing the direction of motion of the triball, implying that a blade cannot cause lateral motion. In fact pushing on the left and then on the right (through steering) has the same effect as a curved blade. I suspect the intent is to say "When only one triball in contact with the robot at any time, but excludes a robot with a stationary straight blade pushing one or more triball(s)."

After thought.... by current definition, you can only REMOVE one triball from a net at a time <SG8>. My initial thought was a sweep, but that is controlling more than one triball at a time. What is the intent of the game? How do you incorporate removal into "Possession" definition?

Answered by committee

How do you incorporate removal into "Possession" definition?

The definition of "Possession" should not be interpreted any differently when referring to interactions with Triballs that are Scored in Goals.

Regarding the other comments, please be sure to review the [Q&A Usage Guidelines](#) before posting, specifically note 1, "The Q&A system is for rules clarifications only". As noted, 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.