

Q&A

VRC 2021-2022: Tipping Point

?????: 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 Tipping Point 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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622: <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.**

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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.

608: <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,

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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.

601: 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 descends 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?

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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.

597: 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:

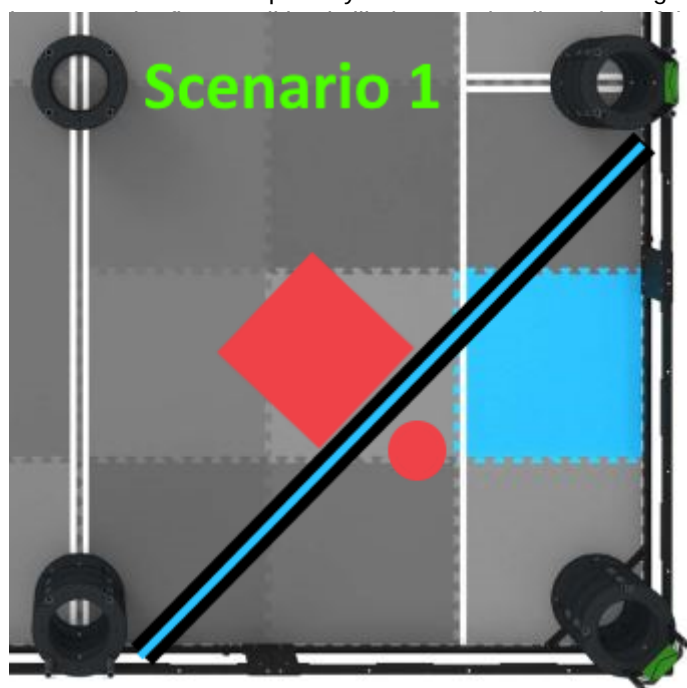
- The Robot is carrying, holding or controlling the movement of a Ball such that if the Robot changes direction, the Ball will move with the Robot. Pushing/plowing Balls is not considered Possession, however using concave portions of your Robot to control the movement of Balls is considered Possession.
- 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

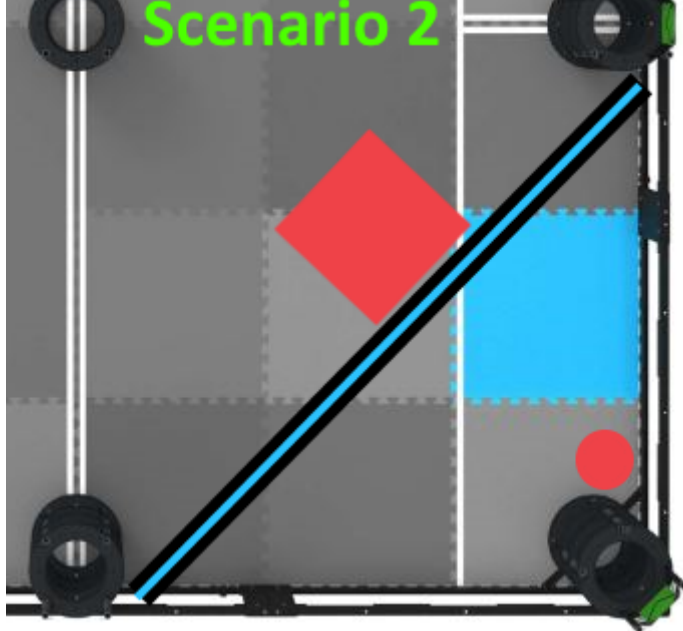
Head Referee as to what is considered “from close range.”
precedent for Head Referees to base their decisions upon.



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

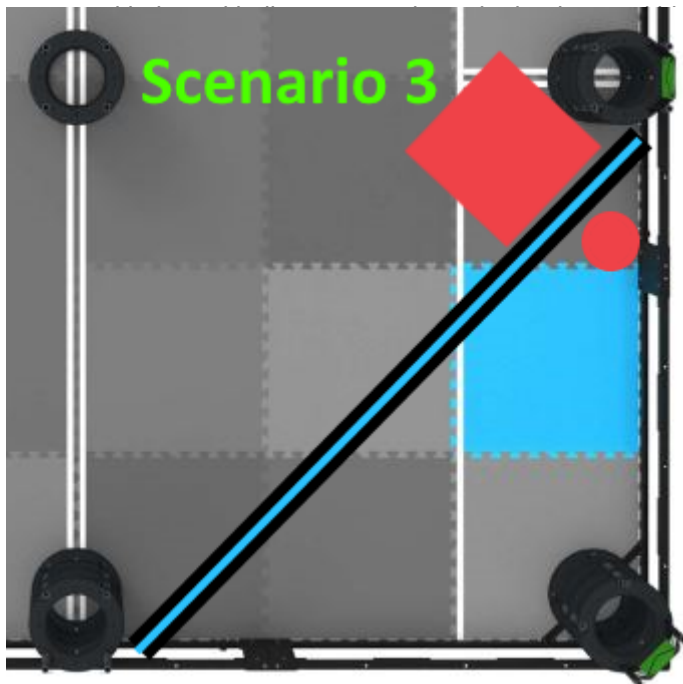
post. A blue robot has deployed a stationary wall in the corner. The wall is tall enough so that no robot can reach over the wall and make contact with balls. A red ball is directly behind the blue wall. A red robot is directly on the other side of the wallbot. The Red robot is attempting to make contact 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?

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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.

2529: Clarification on Interfering with an Autonomous Routine by a “Ring Rush” <G17>, <SG8> and <SG7>, Q&As 2066 and 2421

12-Feb-2025

G17 SG7 SG8

In a “Ring Rush” a robot (let’s say a blue robot for clarity) rapidly goes toward the eight rings on the autonomous line -- gameplay elements intended to be utilized by either Alliance during the Autonomous Period. The robot pushes the top two red rings off the two lower blue rings so they can intake the two blue rings. In doing so, the blue robot pushes the four rings on the top of the stack (two blue and two red) into or further into the opposing alliance side. These rings can travel at least one ring diameter into the red side of the field. See photo sequence for clarification.

In Q&A 2066 the committee said (with emphasis added):

Pushing a Ring (or Mobile Goal) that starts on your side (**or on**) the Autonomous Line to the other side could result in a <G17> Violation if that Ring or Mobile Goal interferes with the opponent’s autonomous routine.

In Q&A 2421 the committee said:

Knocking over a stack of Rings that begins on the Autonomous Line is still legal even if it results in an opponent picking up the “wrong” color of Ring during the Autonomous Period. It’s part of the risk described in rule <SG9> (assuming you meant <SG8> here). If you move an object all the way from your side to theirs and it clearly messes up their autonomous routine, it should probably be an <SG7> penalty and you should likely be ineligible to receive all or part of the Autonomous Bonus and/or an AWP.

Again, for the sake of clarity, assume that the four rings end up on the other side of the autonomous line a significant distance from where they started (as in the pictures). Question 1: What constitutes “messing up” or “interfering with” an opponent’s autonomous routine to the level of an <SG7> violation? Obviously taking rings from them is okay, but is putting several rings from the autonomous line into their path interfering (assuming the opposing alliance robot goes to that part of the field)?

<SG8> c. says

Intentional, strategic, repeated, or egregious offenses may still be deemed a Violation of <G12> , <G13> , <G14> , <SG7> , <G1> and/or <S1> at the Head Referee’s discretion.

Question 2: Since one of the incidental benefits of pushing those four rings into the opposing alliances side is that it does interfere to some degree with their autonomous routine, does that make it inherently intentional and/or strategic?

As a number of teams are using a mechanism that does this, a clarification of the legality of this would be greatly appreciated.

Thank you!



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As we said in our answer for [Q&A 2421](#), "Knocking over a stack of Rings that begins on the Autonomous Line is still legal even if it results in an opponent picking up the "wrong" color of Ring during the Autonomous Period. It's part of the risk described in rule [<SG9>](#)." Rushing to the Rings and making a mess of the stack to extract the Rings of your color is fine.

Messing up the stack to such an extreme that you interfere with opponent Autonomous routines that *aren't* trying to interact with those stacks should be considered a strategic or egregious offense and a Violation of rule [<SG7>](#) through [<G17>](#). The Team should not be eligible to receive any part of the Autonomous Bonus or an Autonomous Win Point.

2499: Autonomous Period Goal/Ring Rush in Regards to <G15> , <SG7> , and <SG8>

3-Feb-2025

G15 SG7 SG8

A question about a potential situation was asked this past weekend at an event and **the way the rules are currently written**, it could be answered in two different ways.

For Reference:

<G15> You can't force an opponent into a penalty. Intentional strategies that cause an opponent to break a rule are not permitted, and will not result in a Violation for the opposing Alliance.

Violation Notes: In most cases, if a Team causes their opponent to break a rule, the Head Referee will simply not enforce the penalty on that opponent, and it will be considered a Minor Violation for the guilty Team. However, if the forced situation becomes Match Affecting in favor of the guilty Team, it will be considered a Major Violation.

<SG7> Don't cross the Autonomous Line. During the Autonomous Period, Robots may not contact foam tiles, Scoring Objects, or Field Elements which are on the opposing Alliance's side of the Autonomous Line.

Note: Scoring Objects, Wall Stakes, and portions of the Ladder that contact or are positioned above the Autonomous Line are not considered to be on either side, and may be utilized by either Alliance during the Autonomous Period.

Violation Notes: • All Violations of this rule (Major or Minor) will result in the Autonomous Bonus being awarded to the opposing Alliance. See SG8b for a potential exception caused by Autonomous Line interactions. • Intentional, strategic, or egregious Violations, such as intentional contact with an opposing Robot while contacting the foam tiles on the opposing side of the Autonomous Line, will be considered Major Violations.

<SG8> Engage with the Autonomous Line at your own risk. Any Robot who engages with Scoring Objects and/or Wall Stakes on the Autonomous Line should be aware that opponent Robots may also choose to do the same. Per G11 and G12, Teams are responsible for the actions of their Robots at all times.

During the Autonomous Period, when Robots from opposing Alliances are both engaged with the same Scoring Object or Wall Stake:

- a. If a possible <G13> Violation occurs (e.g., damage, Entanglement, or tipping over), a judgment call will be made by the Head Referee within the context of G13 and G14 (just as it would if the interaction had occurred during the Driver Controlled Period).
- b. Incidental Violations of <SG7> will not be penalized, nor will they result in an automatic loss of the Autonomous Bonus as described by G12. However, this allowance only applies when opposing Robots are interacting with the same element.
- c. Intentional, strategic, repeated, or egregious offenses may still be deemed a Violation of G12, G13, G14, SG7, G1, and / or S1 at the Head Referee's discretion.

These gameplay elements are intended to be utilized by either Alliance during the Autonomous Period. This will inevitably result in Robot-on-Robot interactions, both incidental and intentional. The overarching intent of SG8 is for the vast majority of these interactions to result in no rule Violations and/or penalties for either Alliance, just as no rules Violations occur in 99% of Driver Controlled interactions.

The Situation: RED1 and BLUE1 both interact with the mobile goal positioned on the autonomous line. RED1 is the stronger robot and pulls the mobile goal and BLUE1 across the autonomous line. BLUE1 crosses, but per SG8b, BLUE1 is not penalized as RED1 and BLUE1 were interacting with the same element. However as the autonomous period continues, BLUE1 releases the goal clamp and continues with it's autonomous program. While the program is continuing, BLUE1 crosses over the autonomous line again, this time **not** interacting with the same element as RED1 or RED2.

The Question: How should the *second* autonomous line cross of BLUE2 be called?

Potential Answers:

1. BLUE1 should have the protections of G15 and SG8b as the interaction with the same element as RED1 (autonomous line mobile goal) caused their (BLUE1) autonomous program to run off course. RED1 cannot force BLUE1 into a violation per G15, so this situation is a no-call scenario and the autonomous period is scored as

normal.

2. BLUE should forfeit autonomous due to violating SG7 when they crossed the autonomous line a second time. Performing a goal/ring rush is a strategy that has risks associated with it and teams should account for those risks in their programming strategy.

Thank you for your time, -Cowboy

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The blue Robot's second crossing of the Autonomous Line would not be considered incidental, and would be a Violation of [<SG7>](#). Therefore, they are not eligible for any part of the Autonomous Bonus or an Autonomous Win Point. Performing a Mobile Goal or Ring rush is a strategy with associated risks, and Teams should account for those risks in their coding strategy.

248: 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

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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.

2421: Ring Rushes in Relation to SG7 + G17 + SG8 and Q and A 2066

5-Jan-2025

G17 SG7 SG8

[<G17><SG7><SG8>](#)

Hi!

Q and A <https://events.vex.com/V5RC/2024-2025/QA/2066> asks a question regarding sending Rings from one side of the field to the other and those interfering with the opponents autonomous.

The response that was given was "Pushing a Ring (or Mobile Goal) that starts on your side (or on) the Autonomous Line to the other side could result in a <G17> Violation if that Ring or Mobile Goal interferes with the opponent's autonomous routine."

To me, this means means that if for example the Blue Alliance grabs the bottom Rings on their side of the autonomous line, from the middle stack on the Negative side (which are blue), but in the process slightly knocks over the Blue Rings on the top of the middle stack on the other side of the auton line, which the Red Alliance then intakes, then this would automatically be an autonomous win for Red. This is pictured in the photo below with 2145Z who is on the Red Alliance.



Would this be the correct interpretation of the rule? If so, what are teams supposed to do in order to not knock over the Rings, and at what point does <SG8>, which states "Engage with the Autonomous Line at your own risk. Any Robot who engages with Scoring Objects and/or Wall Stakes on the Autonomous Line should be aware that opponent Robots may also choose to do the same. Per <G11> and <G12>, Teams are responsible for the actions of their Robots at all times." come into play?

Another example I want to bring up is the Ring rush that was originally developed by our team, 360X. The Ring rush is designed to grab the both of the bottom Rings that start on our side of the autonomus line, but still touching it (those Rings are our color), before the other alliance is able to get to the stack. <SG8>, again regards engaging with the autonomous line, and the note in <SG7> which states "Note: Scoring Objects, Wall Stakes, and portions of the Ladder that contact or are positioned above the Autonomous Line are not considered to be on either side, and may be utilized by either Alliance during the Autonomous Period." essentially saying that either Alliance is allowed to grab any Rings from that stack. Thus, we have this Ring rush to ensure that we grab the Rings before the other Alliance gets to the stack and knocks it over, which is bound to happen even if all you are trying to do is get your own Rings, something permitted by <G17>.

A photo is attached here of the stack after the Ring rush:



I have a few questions related to this. First, is knocking over the stack like we did illegal (and thus an auton forfeit)? Second, if knocking over the stack is legal, but then the other Alliance intakes one of the Rings of our color, is that then illegal (and again, an auton forfeit)? Third, I have the same questions regarding the stack on the right in the video which starts completely on the other Alliances side of the auton line, and is not neutral in any sense.

And again, I pose the question, if the other team intakes the wrong color Ring as a result of us touching the middle stack, what are we supposed to do in order to get those Rings?

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There are a lot of questions in your post, and we're going to skip to your final set with the hope that you'll be able to use those answers to draw your own conclusions about the scenarios you describe. If you feel like we've missed something, please feel free to rephrase (briefly and concisely, please!) and repost.

I have a few questions related to this. First, is knocking over the stack like we did illegal (and thus an auton forfeit)? Knocking over a stack of Rings that begins on the Autonomous Line is legal.

Second, if knocking over the stack is legal, but then the other Alliance intakes one of the Rings of our color, is that then illegal (and again, an auton forfeit)?

Knocking over a stack of Rings that begins on the Autonomous Line is still legal even if it results in an opponent picking up the "wrong" color of Ring during the Autonomous Period. It's part of the risk described in rule [<SG9>](#).

Third, I have the same questions regarding the stack on the right in the video which starts completely on the other Alliances side of the auton line, and is not neutral in any sense.

This example eliminates much of the safety a Robot should get from the divided Field in the Autonomous Period, and could reasonably be deemed an [<SG7>](#) Violation (via rule [<G17>](#) at the Head Referee's discretion).

Generally speaking, we believe that if you knock something off of the Autonomous Line to the other side and it's just an incidental part of normal gameplay, it shouldn't be a penalty. If you use an object from the Autonomous Line as a "glove" to break another rule (entanglement, tipping, damage, etc.), it probably should be. If you move an object all the way from your side to theirs and it clearly messes up their autonomous routine, it should probably be an [<SG7>](#) penalty and you should likely be ineligible to receive all or part of the Autonomous Bonus and/or an AWP. We hope this helps.

212: 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?

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First, to be clear, shooting Balls at Caps is not considered a legal strategy. Please see this relevant similar Q&A post: <https://events.vex.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.

2066: SG7 + G17 + SG8

18-Jul-2024

G17 SG7 SG8

<SG7>

<G17>

If, during autonomous a Red robot were to cause a Ring that started on the Red side (not on the autonomous line) to cross into the Blue side of the autonomous line, is that action solely enough to trigger an <SG7> violation? For example, perhaps neither Blue robot runs an autonomous and therefore the "Interfering with an opponent's Autonomous routine" clause is not applicable? Or perhaps both Blue robots do run autons but the ring that crossed over to the Blue side has no impact on Blue's autons.

For example, SG8b, which is referenced in SG7's red text says:

Incidental Violations of <SG7> will not be penalized, nor will they not result in an automatic loss of the Autonomous Bonus as described by <G12>

Likewise, would referees then need to track these incidents and potentially apply the "repeated" logic mentioned in SG8c (which is not referenced by SG7) in a "3-strikes and then it becomes a violation" approach?

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The scenario you've described doesn't break any rules, and shouldn't be recorded as a Minor or Major Violation.

Pushing a Ring (or Mobile Goal) that starts on your side (or on) the Autonomous Line to the other side could result in a <G17> Violation if that Ring or Mobile Goal interferes with the opponent's autonomous routine.

1916: <G12> Determining if an Autonomous Violation should be in Match Affecting Calculations

31-Jan-2024

G12 SG8

<G12> All rules still apply in the Autonomous Period. Teams are responsible for the actions of their Robots at all times, including during the Autonomous Period. 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.

Q&A 1694:

If their score is 0-5 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>.

Scenario:

During the Autonomous Period, Red enters Blue Goal while scoring 1 Red Triball, breaking <SG8> (d). At the end of the Autonomous Period, Red is ahead by 2 points. Q&A 1694 states that the Autonomous Bonus should be awarded to Blue. No other rules are broken, and Red wins this Match by 1 point.

Should the Red Robot that violated <SG8> be DQ'ed? One could argue that their illegal action should not be in the Match Affecting calculations, since they caused the score difference to go from +0 to +6 for Blue.

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Note: The game manual update on April 2nd included more comprehensive guidance on how rule Violations that occur during the Autonomous Period will be handled by Head Referees at the VEX World Championship. This answer does not apply to matches at the VEX Robotics World Championship.

Because the red Alliance earns 5 points for the Triball that was illegally scored during the Autonomous Period, those 5 points should still be considered when determining whether the Violation was Match Affecting. The Red Alliance should receive a DQ for that <SG8> Violation if they win the match by 5 or fewer points, or if they tie.

190: 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.

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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.

1892: Multiple minor violations of <SG8> in autonomous

24-Jan-2024

SG8

Per <https://events.vex.com/VRC/2023-2024/QA/1694>

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.

Specifically considering SG8 in autonomous:

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.

Per the flowchart in Figure 3 of the Game Manual, how would repeated minor violations of SG8 in autonomous be considered? Would the consequences of multiple minor violations of SG8 in autonomous be covered by the consequences outlined in Q&A 1694 above or could multiple minor violations of SG8 in autonomous result in a major violation and **automatic match DQ**? Would this decision be up to the head referee's discretion per the definition of violation in the game manual?

Multiple Minor Violations within a Match or tournament may escalate to a Major Violation at the Head Referee's discretion.

Thank you for your consideration of this specific circumstance.

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Would this decision be up to the head referee's discretion per the definition of violation in the game manual?

Generally speaking, this would be the correct answer, with a few caveats / guidelines that apply to all escalating Violations (not just SG8).

- Disqualifications should never be given until a Match has ended, even if the action that warranted the Disqualification occurs early in the Match.
- When multiple repeated Minor Violations are at risk of escalating to a Major Violation, there is an expectation that the Team has been warned for the Minor occurrences and given an opportunity to rectify their actions.

1839: SG8 - Definition of entering opponents goal

19-Dec-2023

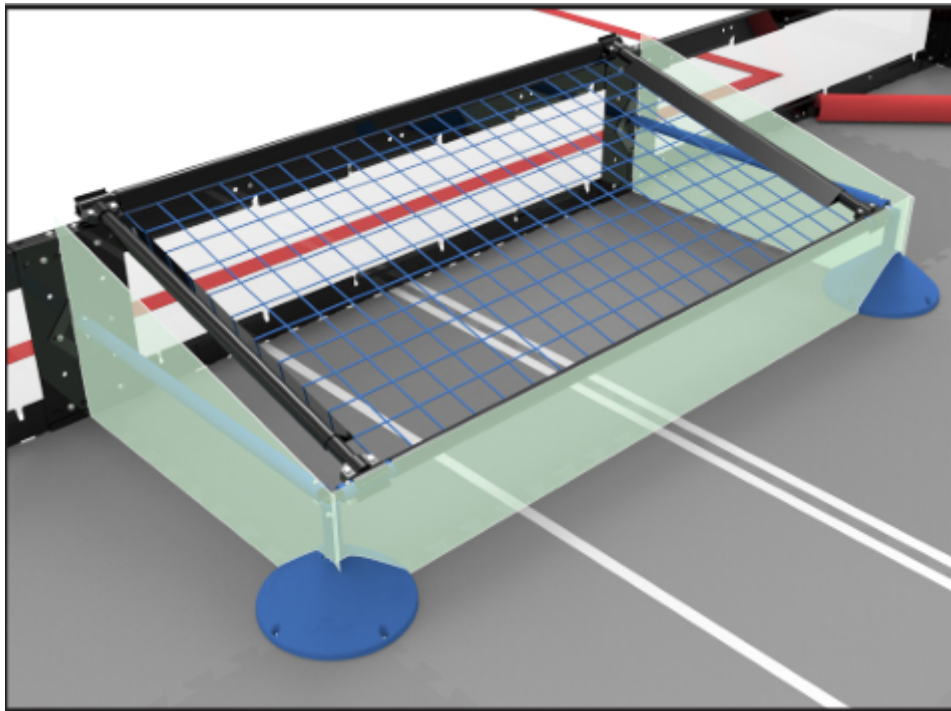
SG8

SG8 states you may not enter an opponent's goal unless they are double zoned. This includes the autonomous period.

[<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.

The definition of the Goal in the manual is defined specifically for scoring:

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 question posed pertains to the definition of entering an opponent's goal. Is going directly above the PVC pipe on the sides of the goals without going underneath the net considered entering the goal? This would be entering the "triangle" like area shown in the picture, above the pvc pipe. There have been slightly different interpretations of this rule at competitions.:

1. The definition referenced earlier is only meant to be used for scoring, and this action is not entering the goal itself, therefore it is not a violation. (A robot is only in violation of SG8 if they go below the net or PVC pipe)
2. If they are going over the pvc pipe low enough to be underneath the goal net, and therefore entering the "triangle" portion referenced earlier, it is considered a violation, even if they do not go under the net itself.

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As mentioned in [this similar Q&A](#), the phrase "*For the purposes of scoring*" can effectively be interpreted as "*For the purposes of scoring and gameplay*".

The question posed pertains to the definition of entering an opponent's goal. Is going directly above the PVC pipe on the sides of the goals without going underneath the net considered entering the goal?

Yes.

1832: SG8 Descoring while exiting the goal

15-Dec-2023

SG8

<SG8>

SG8 states that "opposing Robots are allowed to "break the plane" of the Double-Zoning Alliance's Goal, to descoring Triballs." This question doesn't relate to entering the goal, instead actions while exiting the goal.

The timing of descoring a triball as the double zoned robot returns to the offensive side and the allowance ends. If a robot "broke the plane" while opposing team is double-zoned to descoring triballs, at the point the opposing team comes back to the offensive side, what if a triball is descored as they are exiting the goal? How is this handled? Is the triball put back into the goal?

Thanks for clarification, my students are building with descoring in mind and have asked me this question, I could not find an answer on forums or Q&A. [<SG8>](#)

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Please review the [Q&A Usage Guidelines](#) before posting, specifically point 2, "Read and search existing Q&As before posting." We believe [our response to Q&A 1554](#) answers your question; if it does not, please feel free to rephrase and re-submit.

1830: SG8 - Descoring Clarifications

15-Dec-2023

SG8

[<SG8>](#)

Rule SG8 states that "when an Alliance meets the definition of Double-Zoning, opposing Robots are permitted to 'break the plane' of the Double-Zoning Alliance's Goal"

Point SG8B states that "entering an opponent's Goal at any other time is prohibited. This includes staying inside of an opponent's Goal after they end their Double-Zone status."

What would the ruling be in these scenarios:

- a) The red alliance is double zoning, and a blue robot enters the red goal to descoring. However, when the blue robot enters the goal, the red alliance stops double zoning, and the blue robot descoring triballs after the red alliance stops double zoning, but the blue robot had entered the goal while the red alliance was still double zoning.
- b) The red alliance is double zoning, and a blue robot enters the red goal to descoring. However, when the blue robot enters the goal, the red alliance stops double zoning, and the blue robot attempts to exit the goal, but inadvertently knocks out a few triballs while exiting.
- c) The red alliance is double zoning, and a blue robot enters the red goal to descoring. However, when the blue robot enters the goal, the red alliance stops double zoning, and the blue robot attempts to exit the goal, and knocks no triballs out when exiting.

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The appropriate rulings for your scenarios are as follows:

Scenarios a & b: The blue Robot has Violated rule [<SG8>](#) and should receive a DQ if the offense is determined to be Match Affecting by the Head Referee.

Scenario c: The blue Robot has Violated rule [<SG8>](#), but because they have not descoring any Triballs it is likely a Minor Violation that would escalate to a Major Violation if it's a repeated offense.

See related [Q&A 1554](#) for additional information.

1816: How consider violations during Autonomous in regards to <SG8d>, <G12>, and <SG9>

6-Dec-2023

G12 SG8 SG9

Hello,

This issue came up several times during a recent event in our region. During Autonomous, Blue 1 scores their alliance triball into the red goal, however they break the plane of the goal while scoring, thus violating SG8d.

[<SG8d>](#) states that:

Entering an opponent's Goal is not permitted at any time during the Autonomous Period.

The red alliance does not score any points during the autonomous period, meaning that the illegally scored triball would affect the outcome of autonomous, which would be a violation of G12 as clarified in Q&A #1694.

[Q&A #1694](#) states that:

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.

[<G12>](#) states that:

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.

Also during autonomous, Red 1 crosses the autonomous line, which is a violation of SG9

[<SG9>](#) states that:

During the Autonomous Period, Robots may not contact foam tiles, Triballs, or Field Elements on the opposing Alliance's side of the Neutral Zone, or in the opposite Offensive Zone from which they began the Match.

In the violation notes, it states that

All Violations of this rule (Major or Minor) will result in the Autonomous Bonus being awarded to the opposing Alliance.

The Question is:

In this scenario, who would be awarded the autonomous bonus? Would the blue alliance be awarded the bonus due to the red alliance's violation of SG9? Would the red alliance be awarded the autonomous bonus due to the blue alliance's violations of SG8d and G12? Or, would there be no autonomous bonus awarded due to the violation of SG8d and G12 by the blue alliance and the violation of SG9 by the red alliance?

If the answer to the above question is that no autonomous bonus is awarded to either alliance, would the same logic be able to be applied to other scenarios where the blue alliance violates SG8d and G12 and the red alliance violates some other rule that would award the autonomous bonus to the blue alliance?

Thank you for your time.

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The remainder of rule G12 states the following:

If both Alliances commit Violations during the Autonomous Period that would have affected the outcome of the Autonomous Bonus, then no Autonomous Bonus will be awarded.

1802: bumping opponent's goal during autonomous.

30-Nov-2023

During autonomous period, if a robot *bumps, touches, or hits* an opponent's goal putting their alliance triball into the opponent's goal. Would this be considered a violation of SG8 d.? This rule only applies during the Driver Controlled Period. **Entering an opponent's Goal is not permitted at any time during the Autonomous Period.**[<SG8>](#)

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If the Robot does not break the plane of the Goal in Violation of rule [<SG8>](#) or violate any other rule in the process, there is no rule against bumping, touching, or hitting the opponent's Goal during the Autonomous Period or at any other time during a Match.

1766: <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[Example Image]

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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://events.vex.com/VRC/2023-2024/QA/1737>

1762: 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?

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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.