

Q&A

VIQRC 2023-2024: Full Volume

Tagged: SC4

Welcome to the official VEX IQ 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 VIQRC **Full Volume** rules clarifications, and the clarifications made here from the Game Design Committee (GDC) are considered as official and binding as the written [Game Manual](#) itself.

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

- For event, registration, or other competition support questions, please contact your [REC Foundation Manager](#).
 - For VEX technical support, contact support@vex.com or sales@vex.com.
- For game questions, suggestions, or concerns outside of specific and official rules questions, contact GDC@vex.com

Index

[Single bean bag leaning on higher level with probable contact](#)

[SC4 Don't touch my toggle ... where?](#)

[Clarification on regarding temporary restriction of Toggle movement using a C-Channel](#)

[6 pins in a stack SC4](#)

[Regarding QA 2672 and using a block to park](#)

[GG18 Intentionally Using Block to Park](#)

[Clarification on Parked Criteria](#)

[Rulings for Repeated <SG4> Violations](#)

[Vertical Expansion Clarification](#)

[Is it legal to reach into the Target with your robot?](#)

[SC4 Switch Scoring Clarification](#)

[Robot Pushes ball through Goal](#)

[When is a ball considered in play?](#)

[End of Game - Final Shot - 2 Balls Stuck - Switch Stuck](#)

[Counting Rings Scored in a Skills Match](#)

[<SC4> Is a ball touching a switch considered cleared?](#)

[Switch Force](#)

[Switches becoming Un-Cleared During the Game](#)

[Ball stuck in the goal wall after scoring](#)

3187: Single bean bag leaning on higher level with probable contact

12-Jul-2026

SC4

[<SC4>](#)

We had several instances where a **single** bean bag would be on the L1 goal leaning on the side of the L2 goal and part of the bean bag was above the L2 platform leaning over a bit. It always seemed like there was some likely contact with the gray of the level 2 goal, so we would often credit the team with the higher goal. However, the contact was always minimal. Should teams be given the benefit of the doubt in this scenario?

Answered by committee

We agree with your handling of these scenarios, where Teams were credited with scoring in the higher goal.

In scenarios where a Referee cannot sufficiently determine whether or not a Bean Bag is contacting a Goal, Teams should be given the benefit of the doubt (i.e., assume the Bean Bag is contacting the Goal).

3171: SC4 Don't touch my toggle ... where?

25-Jun-2026

SC4

Thanks all for Automate session June 22, nothing like breaking the game on our first spin - several questions ...

#1 Da Rule [<SC4>](#) [<SC4>](#) A Toggle is considered set to a color when it meets all of the following criteria at the end of the Match: a. The Toggle must be fully seated, such that there is a face of the Toggle in contact and parallel with its mounts on the Field Perimeter at rest. (see Figure SC5-1) **b. The Toggle is not in contact with a Robot from either Alliance.**

Da Question - Is the black bracket included in the "touch" of a toggle that would cause us to ignore the color of the toggle for scoring

Answered by committee

The Toggle consists of all parts included in the assembly that spins and moves up/down within the slots of the metal brackets, but does not include the metal brackets themselves.

3135: Clarification on regarding temporary restriction of Toggle movement using a C-Channel

14-May-2026

GG9 SC4

Rule Quote: [<GG9>](#)

Robots may not intentionally grasp, grapple, hook, attach to or otherwise Entangled with any Field Elements. Strategies with mechanisms that react against multiple sides of a Field Element in an effort to latch or hook onto said Field Element are prohibited. The intent of this rule is to prevent Teams from unintentionally damaging the Field and/or from anchoring to or otherwise Entangling themselves with the Field. Whenever possible, Head Referees should alert Teams to potential Violations before they happen to prevent actual Violations. If a Robot takes immediate action to avoid or resolve the issue, and if the Head

Referee determines that the issue had no effect on the Match, no Violation should be recorded.

<SC4>

SC4> A Toggle is considered set to a color when it meets all of the following criteria at the end of the Match:

- a. The Toggle must be fully seated, such that there is a face of the Toggle in contact and parallel with its mounts on the Field Perimeter at rest. (see Figure SC5-1) b. **The Toggle is not in contact with a Robot from either Alliance.**

Question: In the context of the current game, is it legal for a robot to position a piece of C-channel underneath the Toggle mechanism to prevent it from rotating?

The mechanism is not "clamped" or "grasped" in a way that prevents the robot from driving away (no permanent attachment), but the geometry of the C-channel effectively wedges the Toggle so it cannot be turned by an opponent. Does this "jamming" action constitute "attaching to a field element", or is it considered a legal defensive strategy provided the robot can move away freely?

Video I saw on youtube of this idea: <https://www.youtube.com/shorts/Kyow3GVag-0>

Answered by committee

A Robot mechanism interacting with the Toggle as described is not inherently a GG9 violation.

Provided the Robot does not violate R18 and/or S1, this may be considered a legal gameplay interaction.

The Game Design Committee will continue to monitor Robot interactions with Toggles throughout the season, and this ruling may be subject to change if needed, based on observed gameplay.

3015: 6 pins in a stack SC4

5-Jan-2026

SC4

<SC4><SC4>

SC4 A Stack that includes more than one color (blue, red, orange, or gray) of Scoring Object receives additional points based on the number of colors in that Stack, up to three colors.

If a triangle goal had one stack of 6 pins, would the pins count for six points, but for only one three color stack? 21 points?

Answered by committee

Each Stack, regardless of its height, can only receive up to one bonus from <SC4> (for including 2 or 3 different colors), up to one <SC6> bonus (for being connected to a Beam and/or Placed in a Matching Goal), and up to one bonus for being Placed on the Standoff Goal.

The Stack in your example, which consists of 6 Pins and 3 colors, would receive one point per Connected Pin (6 points) and a 15-point bonus for including 3 colors (15 points), for a total of 21 points. If the bottom Pin in this Stack matches the color of the Triangle Goal it's Placed in, it would also earn the 10-point Matching Goal bonus, making the Stack worth 31 points.

2985: Regarding QA 2672 and using a block to park

10-Dec-2025

SC4 SG11

[<SC4>](#)

Per rule SC4, and including clarification provided in Q&A [2672](#), if blue team uses a block as support to keep their robot from touching tiles outside the parking zone, would red team be in violation of SG11 if they use a mechanism to remove the block from underneath blue team's robot without touching blue's robot or the parking zone?[<SG11>](#)

Answered by committee

The red Team in this scenario has used a Block to accomplish an action that would be otherwise illegal if attempted by Robot mechanisms, and should receive an [<SG11>](#) Violation via rule [<GG18>](#).

2918: GG18 Intentionally Using Block to Park

14-Nov-2025

GG18 SC4

Clarification of Q&A 2672 regarding GG18

Would it be legal for a team to put the match preload into a mechanism that would be used to help them park at the end of the match? The team's idea is to put the preload into a "holder" with part of the block exposed. During the protected time, the team would drive into the parking zone and initiate a mechanism that would use the block to keep their robot from touching the field tiles outside the parking zone. This satisfies all criteria of SC4. Would this be considered using the block as a "glove" as outlined in GG18 and therefore be illegal?

[<SC4>](#)

[<GG18>](#)

Answered by committee

Hi, Team 47126A.

This would be legal, as long as the Robot and Preload meet all criteria of rules [<SG1>](#) and [<SG5>](#) at the beginning of the Match.

2852: Clarification on Parked Criteria

14-Oct-2025

SC4

[<SC4><SC4>](#)

The Parking criteria (SC4 Section A part b) specifies:

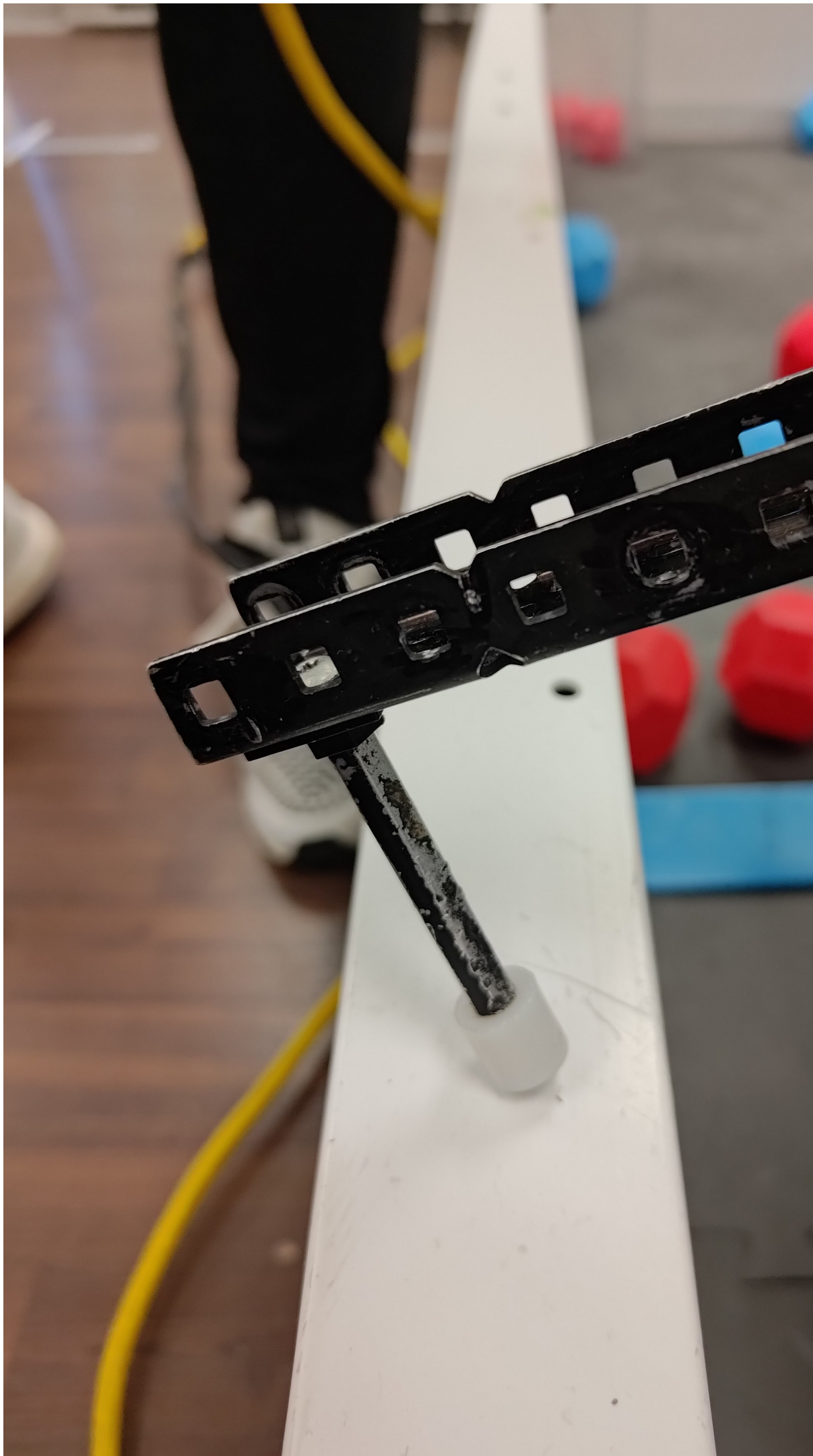
- b. The Robot is not contacting any Field Elements other than the **inside face of the Field Perimeter Floor inside of its Alliance-colored Park Zone, and/or the plastic extrusions and connectors of the Park Zone. Contact with these allowed elements is not required.

What is constituted as the inside face of the Field perimeter, is the top of perimeter consider inside face?

Cases (assume all cases the parked robot satisfy all other requirement of SC4 except section A part b)

1. The robot is in the park zone only contact the top of the perimeter.
2. The robot is in the park zone contact inside face of the field perimeter and top of the perimeter.
3. The robot is in the park zone contact inside face of the field perimeter, top of the perimeter and the outfacing perimeter.

4. The robot is in the park zone not contacting anything but has parts extended outside of the perimeter.



Answered by committee

Hi, Stanley, and thanks for your question!

The top surface and outside face of the Field Perimeter do not count as the inside face of the Field Perimeter. Therefore, the Robot would only be considered Parked in case #4.

2807: Rulings for Repeated <SG4> Violations

23-Sep-2025

SC4

Scenario: Team A violate rule <SG4> after their third match by causing a Block to leave the playing field.

What is the ruling if this is the team's first time with an <SG4> violation?

What is the ruling if this is the team's second time with an <SG4> violation?

What is the ruling if this is the team's third time with an <SG4> violation?

What is the ruling if the Block leave the field during autonomous period?

Answered by committee

Thanks for your questions, Team 66799X!

If the Violation isn't deemed blatantly intentional and/or Match Affecting by the Head Referee, most <SG4> Violations should be considered Minor (see violation note 4). The appropriate penalties for repeated, accidental, non-Match Affecting Violations are described below.

- 1st Match with an SG4 Violation: Minor Violation, unless 3 or more Blocks were removed from the Field in a single Match (violation note 1)
- 2nd Match with an SG4 Violation: Minor Violation, unless 3 or more Blocks were removed from the Field in a single Match (violation note 1)
- 3rd Match with an SG4 Violation: Minor Violation, unless 3 or more Blocks were removed from the Field in a single Match (violation note 1)
- 4th and any additional Matches with SG4 Violations: Major Violation and Disqualification for the current Match

For clarifications on Blocks that leave the Field during the Autonomous Period, see our response to [Q&A 2798](#). We hope this helps!

2736: Vertical Expansion Clarification

27-Jul-2025

SC4 SG3

<SG3> a states: "No part of the Robot may exceed an overall height of 22" at any point during the Match (must always be able to fit within a hypothetical 22" x 22" x 22" cubic sizing box)."

Is the "overall height" with reference to the Floor or to the lowest point on the Robot? Also, does it rotate with the Robot? I.e., does the hypothetical cube need to remain in contact with the Floor, and can it rotate such that the bottom plane isn't parallel with the Floor?

The confusion behind this rule comes from the change in Figure SC4-2 between Game Manuals V0.1 (left image) and V0.2 (right image). Some teams think that the Figure was updated because "overall height" is with reference to the field tiles. However, clause <SG3b> which specifies this was deleted in the in Game Manual V0.2. Figure SC4-2 from Game

Manual V0.2 also has the Robots on an angle suggesting that the hypothetical cube rotates with the Robot.

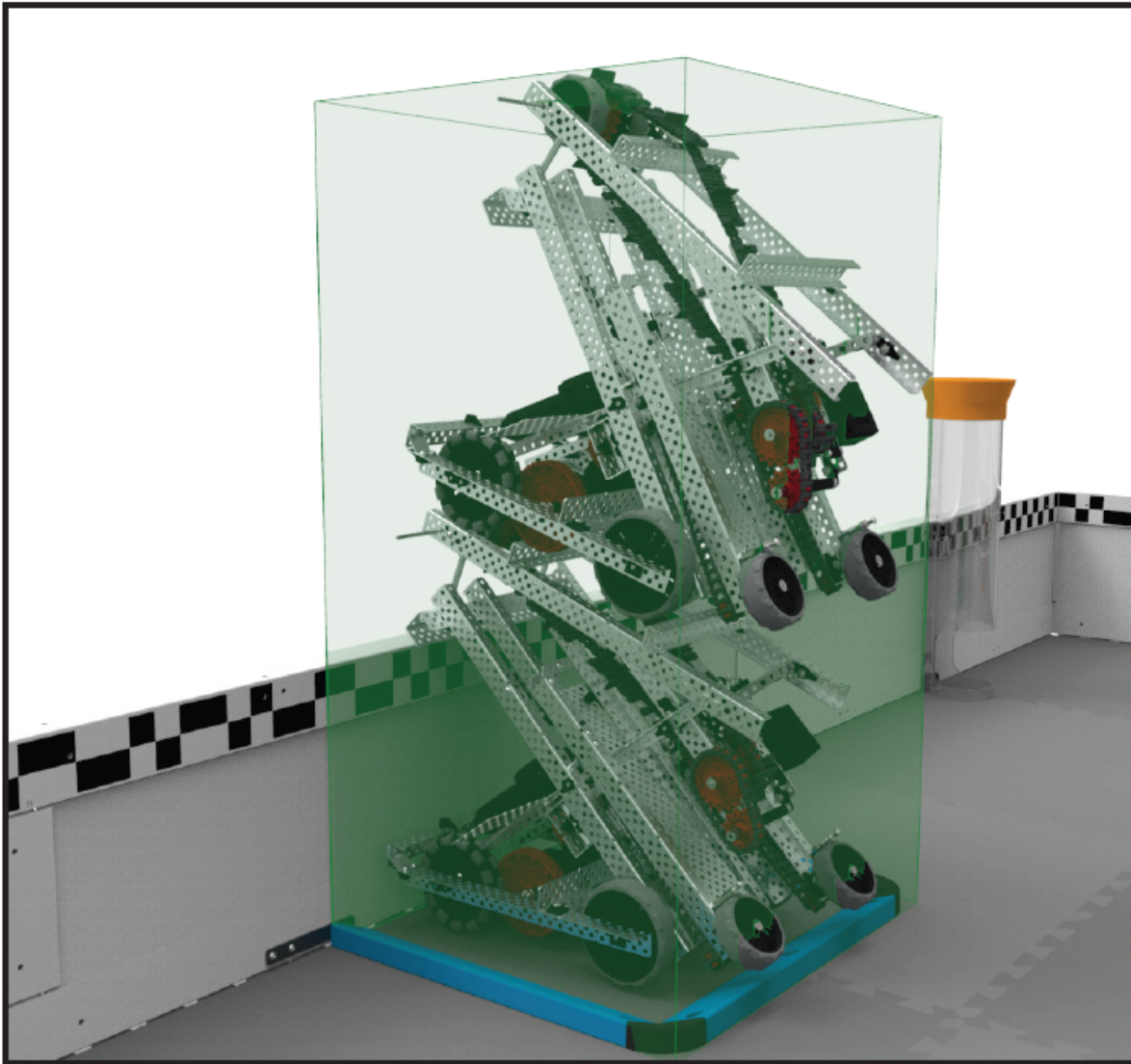


Figure SC4-2: Both of these Robots would be considered as *Parked*, as they satisfy all the criteria listed above.

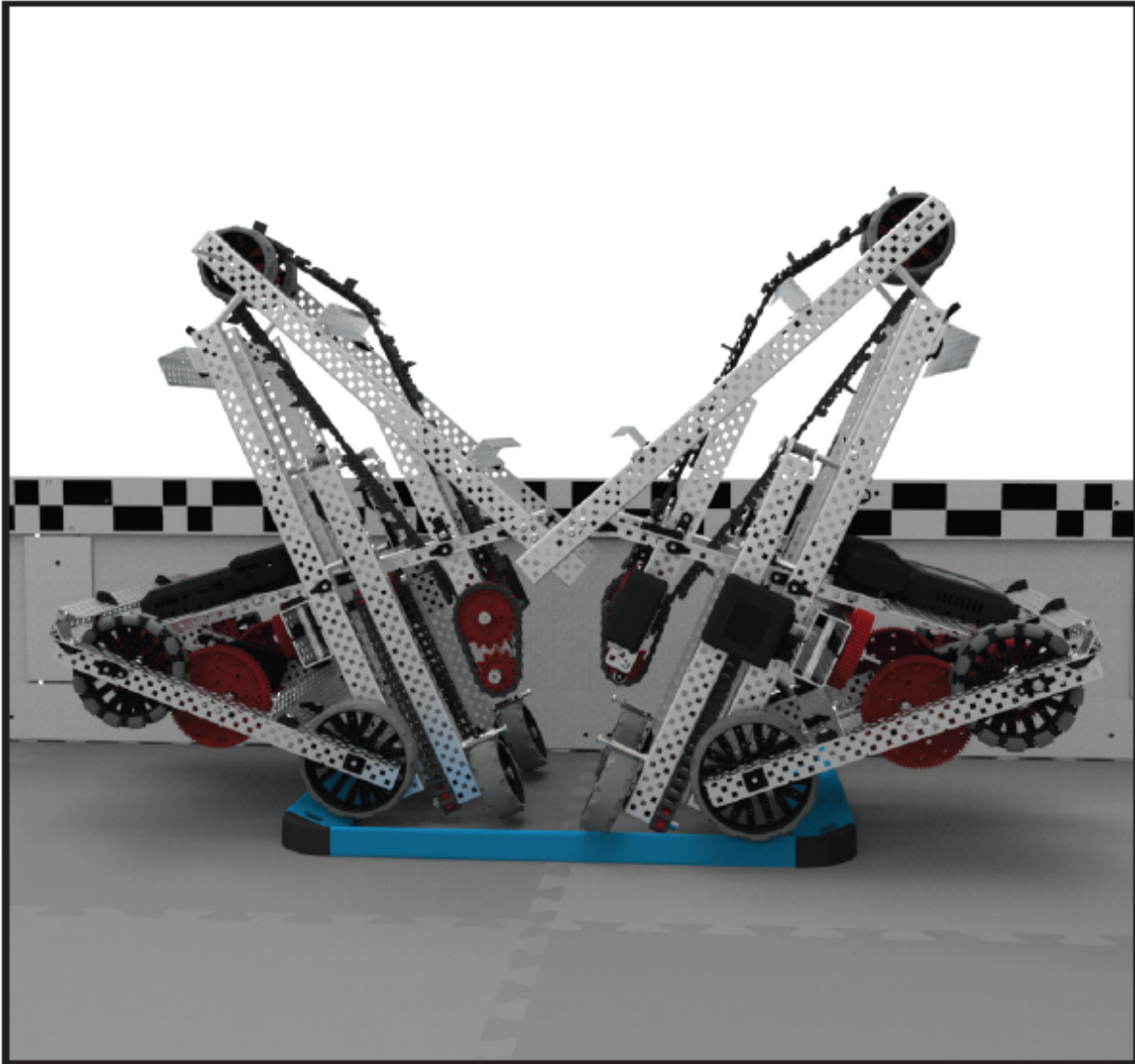


Figure SC4-2: Both of these Robots would be considered as Parked, as they satisfy all the criteria listed above.

Answered by committee

The "overall height" is in reference to the lowest point on the Robot, and rotates with the Robot. If the Robot can always fit within a 22" cubic volume, it meets the requirements of rule [<SG3>](#), whether it's in contact with the Floor or not.

2556: Is it legal to reach into the Target with your robot?

19-Feb-2025

SC4

Our team is thinking about a design that would extend into the low Target without touching the switch. We would like to confirm whether this is legal. The action in question is shown in the following image: [img](#)

We couldn't find any rules disallowing it, although the manual does clearly state that the robot should never come in contact with the switch. As long as there is absolutely no robot contact with the switch, would this be considered legal?

[<SC4>](#)

Answered by committee

Yes, this would be legal. Much of our answer to [Q&A 2324: Robot Pushes ball through Goal](#) applies your question as well.

2454: SC4 Switch Scoring Clarification

22-Jan-2025

SC1 SC4

[<SC4>](#)

Hello GDC thank you for your tireless work so far this season! We've seen two different interpretations of SC4 / SC1 in our region:

1. Anytime a switch meets the description in SC4 the teams should receive credit for that switch being cleared (even if it later becomes uncleared and doesn't end the match cleared).
2. A switch only counts if the switch is in a cleared position after the match ends.

Based on other scoring rules, we can see either as reasonable and justified. Which is correct?

Answered by committee

Thank you for your question! Your second interpretation is correct, and a Switch should only be recorded as Cleared if the Switch is in a Cleared position after the Match ends.

2324: Robot Pushes ball through Goal

24-Nov-2024

SC3 SC4

[<SC6>](#) ***At league this past week we had a robot that would shoot the ball into the goal and it would miss occasionally hitting the target and go back into their loader. They would then use their flywheel to push the ball in. The robot touched the ball as it pushed it the entire way through goal. The robot was contacting the ball through its journey into the goal.

I took this to mean this is score impacting because according to SC3 below-- a scored goal is once a ball is no longer in contact with a robot and has fully passed through the target. I also conferred with our REC rep who was at league to make sure my interpretation was correct and he agreed with me. *

SC3--An Alliance Scores a Goal once a Ball is no longer in contact with a Robot and has fully passed through a Target (i.e., from the "outside" of the Goal Wall structure into the "inside" of the Goal Wall).----

**** However- as I read on it says an addendum under SC4 of---don't over think this rule---- and there is no restriction on what type of robot action, mechanism, strategy or technique is used to score balls or clear switches. Which I think leaves some gray area as to is pushing considered a technique or strategy??? (See reference to SC4 below) **** We have some new teams who designed a Clawbot for this and I am afraid this may become a bigger issue at our league as they want to push the ball into the goal and drop it too. ** So clarification on if the robot is pushing a ball through the target/goal with a shooter, arm, flywheel, or another mechanism from their robot and the robot is still contacting the ball as it is going through goals is this illegal????

I believe what is trying to be said above in SC3 is that students are to engineer or program a solution that would make it so the ball is to not be touching both robot and goal to be considered scored, but the over thinking rule and part of SC4 leaves some gray area and the rule open to some debate on if this is strategy or action. Thanks**

<SC4> A Switch is Cleared once it has been struck by a Ball and is no longer parallel with the front face of the Goal Wall. Robots may not Clear Switches by contacting them directly (i.e., without it being part of the process of scoring a Ball through that Target).

Please don't over-think this rule.

Sometimes a Switch gets Cleared without scoring a Ball through the Target, or a Ball is Scored through a Target but the Switch is not Cleared. That's okay. Switches must be Cleared as part of normal gameplay, and by Balls, not Robots or humans. Beyond that, there are no restrictions on what type of Robot action, mechanism, strategy, or technique is used to Score Balls and Clear Switches.

[<SC3>](#)



<SC3> An [Alliance Scores a Goal](#) once a [Ball](#) is no longer in contact with a [Robot](#) and has fully passed through a [Target](#) (i.e., from the “outside” of the [Goal Wall](#) structure into the “inside” of the [Goal Wall](#)).

- a. A [Ball](#) that passes through a [Target](#) and then bounces back out into the playing field does not count as a [Scored Ball](#), and the [Ball](#) remains in play.

Effectively, this should correspond with the [Ball](#) falling through the [Goal Wall](#) and landing in the [Pickup Zone](#), and that “land in the [Pickup Zone](#) moment” can be used for most scoring needs. However, in the event of any jams or other malfunctions, the [Ball](#) is still considered [Scored](#) even if it does not touch down to the [Pickup Zone](#). See [<SG6>](#).

<SC4> A [Switch is Cleared](#) once it has been struck by a [Ball](#) and is no longer parallel with the front face of the [Goal Wall](#). [Robots](#) may not [Clear Switches](#) by contacting them directly (i.e., without it being part of the process of scoring a [Ball](#) through that [Target](#)).

Please don't over-think this rule.

Sometimes a [Switch](#) gets [Cleared](#) without scoring a [Ball](#) through the [Target](#), or a [Ball](#) is [Scored](#) through a [Target](#) but the [Switch](#) is not [Cleared](#). That's okay. [Switches](#) must be [Cleared](#) as part of normal gameplay, and by [Balls](#), not [Robots](#) or humans. Beyond that, there are no restrictions on what type of [Robot](#) action, mechanism, strategy, or technique is used to Score [Balls](#) and [Clear Switches](#).

Violation Notes:

- All [Violations](#) of this rule are inherently [Score Affecting](#), and therefore [Major Violations](#).

Answered by committee

[<SC3>](#) specifies that a Ball cannot count as Scored while it is in contact with a Robot, even if the Ball meets the other requirement of having fully passed through a Target. Once the Robot in your scenario drops the Ball so they are longer in contact with it, the Ball will count as Scored. It is legal for a Robot to be in contact with the Ball as it is going through the Target.

[<SC4>](#), including the blue box note within it, defines the requirements for a Cleared Switch and makes it abundantly clear that a Robot is not allowed to directly contact a Switch to Clear it. It is legal for a Switch to be Cleared by a Ball that is in contact with or in the possession of a Robot.

It is also legal (but extremely risky) for a Robot to hold the Ball as the Ball passes through a Target and Clears a Switch; if the Robot directly contacts the Switch while Clearing it, the result will be a Major Violation of rule [<SC4>](#) and a Disqualification for that Match. That extreme risk is why the game manual includes the following [<SC4>](#) violation note:

Violations of this rule should be rare, as Robots should never be designed to contact Switches directly.

2323: When is a ball considered in play?

24-Nov-2024

SC4

[<SG4>](#) The field is defined as the entire playing Field, being six (6) field tiles wide by eight (8) field tiles long (totaling forty-eight (48) field tiles), including the Field Perimeter. The Pickup Zone is defined as the area of the Floor underneath the Goal Wall, bound by the Field Perimeter and the yellow PVC pipe that runs the length of the Field. The Pickup Zone refers to the Floor itself; it is not a 3-dimensional volume. See [<SG6>](#) With these two definitions in mind in either teamwork or skills: • A robot scores a ball through the goal, it lands in the pick up zone, which is part of the field. • Another ball is still on the field “in play” SO.. • A loader cannot load a ball through the loading station or in rapid load until the ball in the pick up zone is picked up and off the field otherwise there would be 3 balls on the defined field. Is this correct? It would be helpful if committee defines if there is any part of the field that considers a ball out of play.

[<SG4>](#) Using the Loading Station. Balls Loaded through the Loading Station must meet the following criteria:

1. No more than two (2) Balls may be in play at any one time (i.e., the next Ball should not be Loaded until a previous Ball is either scored or leaves the Field). 2083 - Loaders can load new ball immediately after current ball is Scored

SG4 seems to support that three balls could be on the field if one of those balls is in the pick up zone

Answered by committee

SG4 seems to support that three balls could be on the field if one of those balls is in the pick up zone

This is correct. The third Ball can be Loaded after one of the two Balls in play has been Scored (i.e., has passed completely through the Goal Wall).

2310: End of Game - Final Shot - 2 Balls Stuck - Switch Stuck

18-Nov-2024

SC3 SC4

At the end of a finals match recently, a robot capable of throwing a two balls at once launched balls before the buzzer. One ball went fully through the top goal, one ball went through the bottom goal, but not fully. If a straight edge across the face of the goal was used it would have contacted the ball that went through the bottom goal, but it did stay in this position after the match and the majority of the ball was through the goal. The top switch had been cleared earlier in the game, but the bottom switch had not. In the process of this final two ball shot, the switch was pinned between the two balls after the match at a 45 degree angle. Again, this was the final state of the match.

Per the most the game manual: <SC3> An Alliance Scores a Goal once a Ball is no longer in contact with a Robot and has fully passed through a Target (i.e., from the "outside" of the Goal Wall structure into the "inside" of the Goal Wall).

A. Ball that passes through a Target and then bounces back out into the playing Field does not count as a Scored Ball, and the Ball remains in play.

<SC4> A Switch is Cleared once it has been struck by a Ball and is no longer parallel with the front face of the Goal Wall. Robots may not Clear Switches by contacting them directly (i.e., without it being part of the process of scoring a Ball through that Target).

My expectations for this situation is:

- 1 - The ball that passed through top goal counts as a goal as it fully went through the goal.
- 2 - The switch is considered cleared as it ended the match no longer being parallel with the front face of the goal wall per SC4.
- 3 - The bottom goal does not count as it still had a small portion of the ball that had not fully passed the plane of the goal established by its border and a straight edge going across would have touched the ball. The ball has not fully passed through the goal per SC3.

Please determine if this is the correct interpretation.

If this is the correct interpretation, please define passing through the goal in more detail for this static end of game occurrence? If a straight edge across the more forward 2x plates that create the border of the goal count as the goal plane for this situation or is it the 2x plates that are further back? Not to be too specific, but I am sure a situation where this difference determines an outcome will inevitably occur.

However, Q&A 2081 states If a Scored Ball gets stuck inside the Goal Wall structure and does not make it to the Pickup Zone, a referee must free it by carefully reaching into the Goal Wall. If this action takes place the ball that has not fully passed through the goal is likely to fall. If the second ball that is teetering then falls, is this ball scored as well?

If neither is correct, could you please explain how an end of game situation like this should be scored. I would also expect the possibility of the balls falling during inspection of this situation. What would be the correct procedure if the balls fell after the match ended and prior to touching the balls during inspection of a close call that was not visually obvious?

Answered by committee

My expectations for this situation is:

- 1 - The ball that passed through top goal counts as a goal as it fully went through the goal.
- 2 - The switch is considered cleared as it ended the match no longer being parallel with the front face of the goal wall per SC4.
- 3 - The bottom goal does not count as it still had a small portion of the ball that had not fully passed the plane of the goal established by its border and a straight edge going across would have touched the ball. The ball has not fully passed through the goal per SC3.

We agree with these interpretations.

In a case where a Head Referee must determine whether or not a Ball has fully passed through a Target, they should move a straight-edged tool or beam across the 2x beams that define the top and bottom boundaries of the Target. If a Ball falls during this assessment, it is likely that the straight edge contacted that Ball in order to move it, meaning that Ball had not passed fully through the Target and would not count as Scored.

2278: Counting Rings Scored in a Skills Match

10-Nov-2024

SC4

The tournament software used to score Skills Matches asks the scoring referee to input the number of "Rings Scored" and the number of "Top Rings Scored". However, we have experienced some confusion regarding this at a local competition because, while the wording of "Rings Scored" suggests that the total number of red rings that are scored on a stake (including the top rings) should be entered, Note 1 of [SC4](#) states that "A Ring that is considered a Top Ring does not also receive points for being Scored on a Stake; i.e., that Ring is worth 3 points, not a total of '3 + 1' points". This would mean that the number entered under "Rings Scored" should not include top rings, and the top rings should be counted completely separately under "Top Rings Scored".

For example, in a Driving Skills Match, Robot A has scored a total of 5 red rings on a mobile goal and 3 red rings on another mobile goal. No other rings, red or blue, are scored on any other stakes. How should this be scored?

- 8 Rings Scored and 2 Top Rings Scored
- 6 Rings Scored and 2 Top Rings Scored

Answered by committee

In Tournament Manager, "Rings Scored" is a total count of every Ring that is Scored, including Rings that are considered Top Rings. The "Top Rings" count is a +2 point bonus that is being added to the 1 point already accounted for in the "Rings Scored" count.

In the provided example where 5 red Rings are Scored on one Mobile Goal and 3 red Rings are Scored on another Mobile Goal, the correct counts in TM would be 8 Rings Scored and 2 Top Rings Scored.

2273: <SC4> Is a ball touching a switch considered cleared?

9-Nov-2024

SC4

per <sc4> Since a switch is scored when it "is no longer parallel with the front face of the Goal Wall"

Q- Would a ball touching the switch mean it no longer being parallel? Such as in the image on QA 2152

The specific positioning and state of the ball may or may not cause the switch to move by tiny amounts since it would need to overcome the force of the switch rubber bands. Therefore it is hard to surmise which case it would be with eyes alone.

Answered by committee

For a Switch to qualify as Cleared ([SC4](#)), it must no longer be parallel with the front face of the Goal Wall, in a way that is clearly visible to the referee/scorekeeper.

Merely being contacted by a Ball is not enough to consider a Switch Cleared. Referees and scorekeepers are not expected to check this status with "paper tests" or other methods that give the Team the benefit of the doubt. If the referee or scorekeeper cannot clearly determine that a Switch has moved out of being parallel with the Goal Wall, then that Switch should not be considered Cleared.

On the other hand, contact with a Ball does not make a Switch ineligible to be considered Cleared. If the Switch meets the criteria of rule [SC4](#), it should be considered Cleared. If it does not, it cannot be considered Cleared.

2236: Switch Force

28-Oct-2024

SC4

I am asking this as a coach and an event provider.

Out of the box the pulley rubber that is used to hold the switches are new and tight. A ball rolled onto the lower switch may not cause the switch to clear. A ball launched to the top switches has a very high probability of bouncing off. After being used for some time the pulley rubber stretches and switches are much easier to clear. Teams in their facility will therefore have very easy to clear switches and events that do not use all of their equipment regularly will have either all tight switches or a random combination of loose and tight switches. This will be the case at worlds also.

As an event provider I have seen new fields cause some very low scores because teams are not used to them but I don't want to figure out how to stretch out all these pulleys. As a coach I can't switch out pulleys every week to make sure that teams are getting an accurate indication of robot performance.

What is the force intended to have a switch cleared? Is it meant to be radically different? I know there are field variations but in this one could cause confusion at events and I want to be able to point to a Q&A.

[<SC4>](#)

Answered by committee

Teams must be prepared for variance in the tension of Switch mechanisms, which do change over time with use, and should anticipate that any event they attend might use new Field Elements.

If the event schedule allows it, Teams may ask for (and events may offer) opportunities to calibrate Robots to the Field. This allowance, if offered, is at the discretion of the Event Partner and/or the Head Referee, and should not delay the Match schedule.

Note: If Field Elements must be repaired or replaced (e.g., the elastic component of a Switch), Event Partners should ensure that replacement parts match those included with the original game set. [<T11>](#)[<T11>](#) clause a, "Replacing a damaged or missing VEX IQ Field component with an identical part of any color" still applies.

2209: Switches becoming Un-Cleared During the Game

21-Oct-2024

SC1 SC4 SC7

Per [<SC4>](#) a switch is cleared once it has been struck by a ball and is no longer parallel with the front face of the goal wall. If a switch is cleared and then through normal game play the switch returns to the uncleared position where it remains till the end of the match, per [<SC1>](#) scoring statuses are evaluated after the match ends should the switch be evaluated based on the final position, even though [<SC7>](#) states that rapid relay is designed to be scored in real time.

Example: A ball becomes wedged in the switch, without fully passing through the target, holding the switch in a partially flipped position. The ball is later dislodged by a robot and falls back into the field, which causes the switch to return to its starting position, and is untouched till the end of the match.

How should cleared switches be scored with respect to [<SC1>](#) and [<SC7>](#)?

Answered by committee

Based on the nature of the game, Passes and Goals must be scored in real-time, so [<SC7>](#) states that "Passes and Goals should be recorded at the time they occur." Cleared Switches are only evaluated and recorded at the end of the Match, per [<SC1>](#).

2081: Ball stuck in the goal wall after scoring

2-Aug-2024

SC4

[<SC4>](#)



Based on question asked earller that a robot can possess two balls and score at once, if a ball gets stuck in the goal wall (Attached picture) and if robot is unable to clear it, can the drive team member or referee reset the switch/balls and allow start over? There is no specific mention of this scenario in SC4 or Violation notes. Appreciate clarity on this situation.

<https://events.vex.com/VIQRC/2024-2025/QA/2014>

<https://events.vex.com/VIQRC/2024-2025/QA/2033>

Answered by committee

As described in the blue box in rule [<SG6>](#),

If a Scored Ball gets stuck inside the Goal Wall structure and does not make it to the Pickup Zone, a referee must free it by carefully reaching into the Goal Wall.

This only applies to Balls that have passed through a Target, and which meet all of the criteria for a Scored Goal in rule [<SC3>](#). Balls that have not passed entirely through the Target may not be retrieved by a referee, although it is expected that they may fall into or out of the Goal Wall after the already-Scored Ball is removed.

Note: This answer was revised on 11/13/2024 to specify that a referee **must** free a Scored Ball that is stuck inside the Goal Wall structure. Additionally, the December 3 game manual update will specify that the referee should retrieve the Ball as quickly as possible when it's safe to do so.