Q&A

VRC 2022-2023: Spin Up

Tagged: RSC2

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.

Please review the Q&A Usage Guidelines before posting. This system is only intended for specific VRC Spin Up rules questions.

- For event, registration, or other competition support questions, please contact your REC Foundation Manager.
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- For game questions, suggestions, or concerns outside of specific and official rules questions, contact GDC@vex.com.

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725: Setup of Risers' Crossbeams on playing Field

16-Jan-2021
RSC2

Do the risers have to be set up with the cross beam exactly at 90 and 180 degrees to the field, or can it be in any crossbeam orientation as long as the riser is located correctly overall? The manual states that the risers are positioned "as shown in the diagram below" but does not mention the crossbeams orientation specifically.

It has been brought to my attention that the robot "grip" of the riser is affected slightly based on whether the crossbeam is exactly at 90/180 or not.

This comes into play especially with autonomous programming since the robot interfaces a bit differently depending on the cross beams starting position crossbeam-degree-orientation and there is no way to respond to this autonomously if the setup is different with respect to the crossbeams:

<RSC2> Skills Field Layout. For each Skills Match, the Field will be setup as shown in the diagram below. All of the Goals are in the same locations and only the Risers have been rearranged on the Field.

skills_field_setup_png

`skills_field_setup_jpg.jpg`

`![img](https://events.vex.com/storage/markdown/uploads/R3gZS7QMi2xtweyOBeBPI8jYsbq6y1Zxq7ZL6AaV.p`

`(https://events.vex.com/storage/markdown/uploads/Viez6C6r9cN80ry4fxSaTMcbZZCHD9DBSKcUCXsd.png)`

> **Answered by committee**
>
> Please see this similar Q&A post, which we believe answers your question. If not, please feel free to rephrase and re-submit.
>
> https://events.vex.com/VIQC/2020-2021/QA/689
>
> Similarly, this is also discussed in the relevant VIQC Referee Training video:
>
> https://www.youtube.com/watch?v=ytyoRqxDjnE

3124: Definitions of "within" and "removed" when looking at blocks and Loader

9-Mar-2026
RSC2 SC6

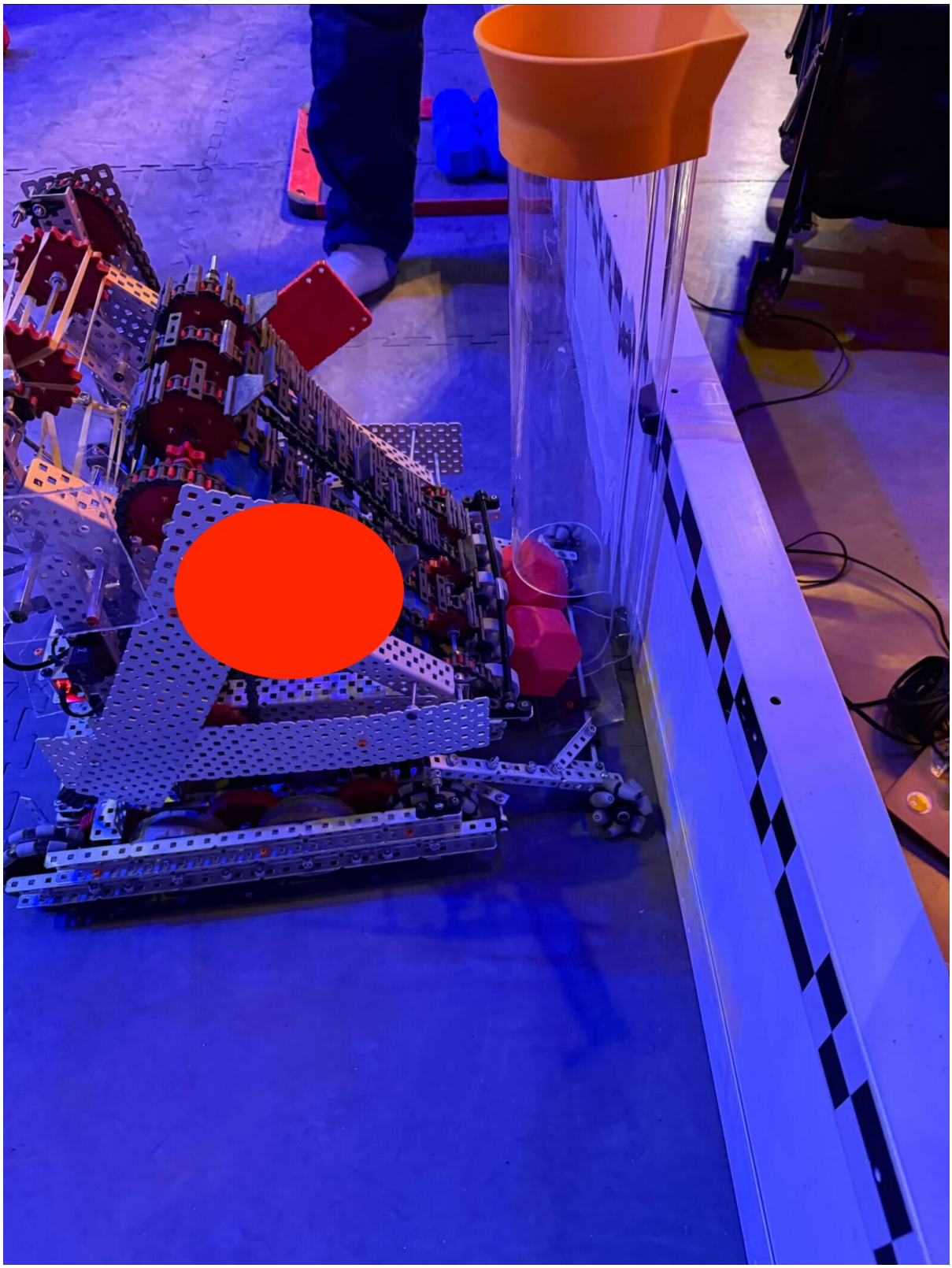
The two blocks are not touching the loader in any way. They are being ‘held’ by the robot. Is the loader cleared for a skills match? This was for a skills run.

This could happen for AWP as well if the blocks were 2 of 3 blocks the alliance needs to remove from loader for AWP and this is where auton ended.

Didn't see anything in <RSC2>d for what ‘within’ means. “d. The Team will earn points for a cleared Loader if no Blocks are within that Loader at the end of the Match.”

For AWP <SC6>Point 3 , the manual says: “At least three (3) Blocks of the Alliance’s color have been removed from Loaders adjacent to the Alliance’s Alliance Station.”

So are the two blocks in the picture: A) within the loader and not removed ? or B) not within the loader and removed?



Answered by committee

Thanks, Katie! For the remaining events before the 4.0 game manual update, we suggest that Head Referees consider whether the Block had to be removed from the Loader to get into its new position. If it has clearly been removed, the Head Referee should generally count it as removed. If it's unclear whether the Block had to be removed to get into the ending position, the Head Referee should probably not count it as removed. Because there is some judgment required, the same logic should be applied to every Match at the event when needed.

> Your photo, in which two side-by-side Blocks are partially within the volume of a Loader (but not in a "Loaded" position) should generally count as removed. They couldn't get into their current position if a Robot hadn't already removed them from a Loader.
>
> We'll try to better clarify this in the 4.0 update.

2903: Clarification on RSC2e

9-Nov-2025
RSC2

In rule <RSC2>, it is stated that the robot has to have "moved during the match". Does this include movement of subsystems (such as spinning an intake roller, extending a descore wing, etc.), or does it only include drivetrain movement?

> **Answered by committee**
>
> Any movement, including spinning an intake or moving/extending any part of the Robot, meets the "moved during the Match" requirement in <RSC2>. The intent is that a Team must create and run a program that makes the Robot do *something* during the Skills Match. Movement on the Field would qualify, but is not required.

2866: What is considered as a full control zone for a long goal in skills

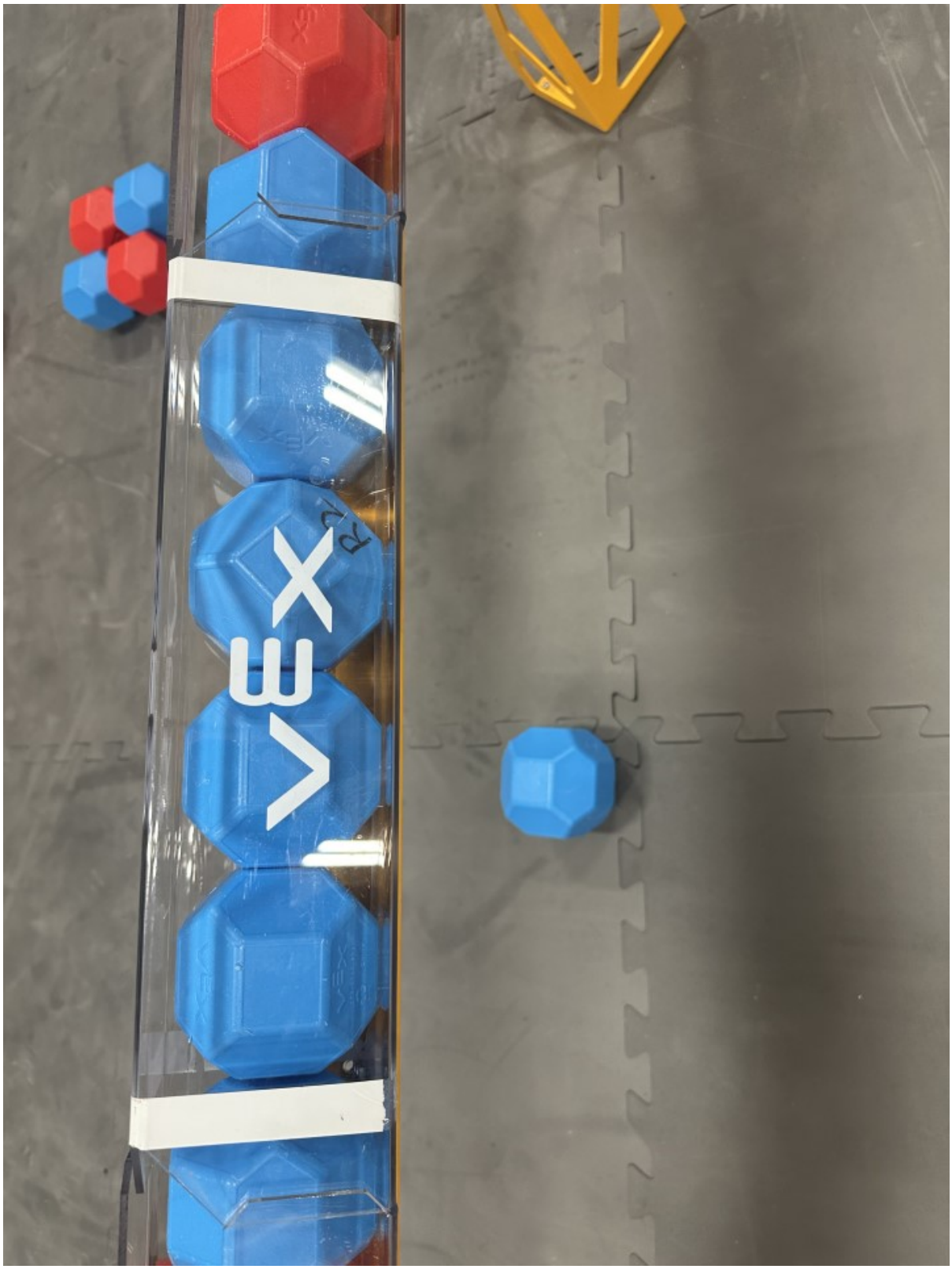
20-Oct-2025
RSC2

In the rulebook for skills, getting control of the long goal section in skills leads to a 5 point bonus. And, "A Control Zone is considered filled if it ends the Match containing its maximum number of ScoredBlocks, and if all Blocks in that Control Zone are the same color."<RSC2>.

Our question revolves around this part of RSC2, specifically regarding the scenario when the center control zone has as many blocks as it can have but it does not have 3 blocks "scored" in it.

Many times in skills, a team scores and gets all the balls in the control zone with the same color, as seen in the image attached, however it is only technically considered as 2 balls scored. If, a control zone is clearly filled with balls of the same color, but does not meet the criteria of 3 "scored balls" in the long goal, is there any room for lenience for the extra 5 points, or does it count as not being in the control zone.

Thank you so much for reading our Q&A, Team 2550R



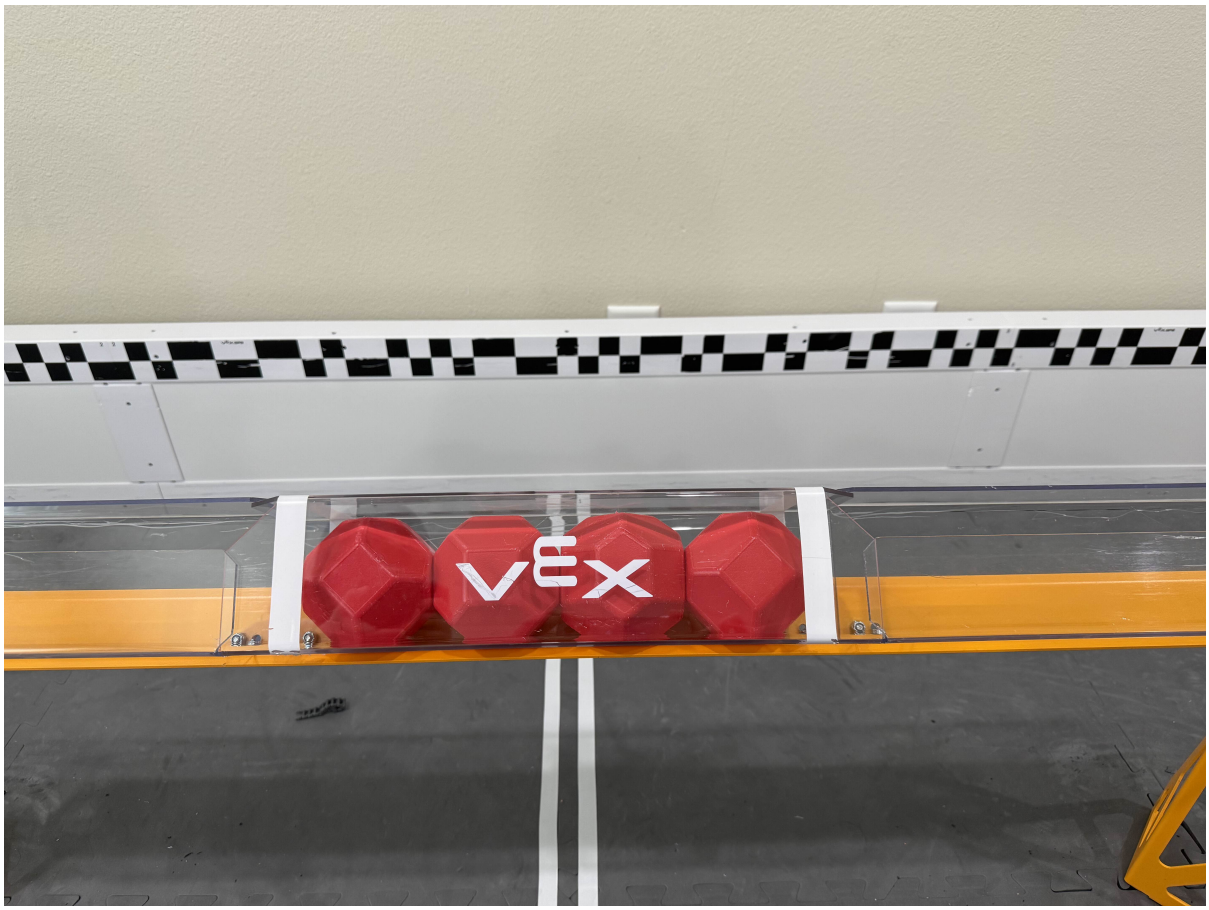
> **Answered by committee**
>
> We believe our answer to Q&A 2863 addresses your question; if it does not, please feel free to rephrase and re-submit.

2863: Skills Long Goal Control Zone Clarification

19-Oct-2025

RSC2

<RSC2>



Hello, our team has a question regarding the long goal control zones for skills. As seen in the attached picture, the control zone has 4 blocks of the same color (touching each other). The outer two blocks are outside the inner edge of the tape line. Would this control zone be considered filled? Considering that the entire goal is filled, this would fit the definition of "maximum number of scored blocks," as per RSC2. In the scenario that the blocks line up this way in a skills match, it becomes a matter entirely of luck as to whether or not the team is awarded points for the control zone. We are hoping to hear back from you soon. Thank you!

> **Answered by committee**
>
> ***Note: This question was revised by the GDC to better comply with the Q&A Usage Guidelines.***
>
> Hello, Team 1840A, and thanks for your question.
>
> Clause B.ii. of rule <RSC2> will be revised in the next game manual update to read, "A Long Goal must include one or more of the following to be considered filled in a Robot Skills Match: a. three Blocks of the same color between the inner edges of the Control Zone tape lines; b. four Blocks of the same color between the outer edges of the Control Zone tape lines." This change is effective immediately.

2844: regarding skill score

9-Oct-2025
RSC2

<RSC2> In a Robot Skills Match, a Center Goal Control Zone must contain at least seven (7) Blocks to be considered filled. Does that mean both the upper center goal and the lower center goal must each contain 7 blocks of the same color?

If so, there would need to be fourteen blocks in total to meet this requirement. Or does the rule mean that the 7 blocks are counted as a combined total from both the upper and lower goals?

> **Answered by committee**
>
> Thanks for this question, Team 1065A!
>
> There are two Center Goal Control Zones, one for the Upper Center Goal and one for the Lower Center Goal.
>
> In a Robot Skills Match, the Upper Center Goal must contain at least seven Blocks for the Upper Center Goal's Control Zone to be considered filled, and all seven of those Blocks must be the same color. The Lower Center Goal must contain at least seven Blocks for the Lower Center Goal's Control Zone to be considered filled, and all seven of those Blocks must be the same color.
>
> Note that the two Goals don't have to Match in color; if the Upper Center Goal contains seven red Blocks and the Lower Center Goal contains seven blue Blocks, the Team would earn points for filling both Control Zones (if all other criteria are met).

2794: Skills Scoring, what is the effect of a block leaving the field from the top of the Loader?

16-Sep-2025
RSC1 RSC2 SG4

<RSC1> says: a. Removing Blocks from the Field in a Robot Skills Match is not a Violation. Blocks that leave the Field cannot be returned.

<RSC2> provides that: d. The Team will earn points for a cleared Loader if no Blocks are within that Loader at the end of the Match.

If a team during skills autonomous/driving hits the bottom of the loader and a block leaves the field from the top of the loader, and the team then clears the loader, the violation of <SG4> would be score affecting, as the block leaving the field from the top of the loader contributed to clearing the Loader. However, <RSC1> says there is no violation for the block leaving the field.

In this scenario, should the score be zero, or should the team get the points for the loader being cleared?

> **Answered by committee**
>
> Hello, Richard, and thanks for your question!
>
> <RSC1> changes <SG4> for skills matches, and there is no Violation if Blocks leave the Field through the top of Loaders.
>
> <S1> applies, and a Team that damages a Loader may receive a Disablement and/or Disqualification at the discretion of the Head Referee.
>
> We hope this helps!

2782: Filled control zone requirement in Robot Skills Matches

13-Sep-2025
RSC2

<RSC2>

In RSC2e, each filled Control Zone in a Long Goal will award 5 points, and each filled Control Zone in a Center Goal will award 10 points. Does "filled" mean that blocks should occupy the control zone without gap or there is a defined number of blocks should be in the control zone?

> **Answered by committee**
>
> Hello, Team 13974A, and thanks for your question!
>
> <RSC2> clauses B and B.i. state:
>
> > b. A Control Zone is considered filled if it ends the Match containing its maximum number of Scored Blocks, and if all Blocks in that Control Zone are the same color (e.g., all are blue, or all are red).
> >
> > i. In a Robot Skills Match, a Center Goal Control Zone must contain at least seven (7) Blocks to be considered filled.
>
> For the Long Goal Control Zone, you need to know its maximum number of Scored Blocks, which you can find in its definition: "...holds up to three (3) Blocks." Therefore, a Long Goal Control Zone has to contain 3 Scored Blocks (of the same color) to be considered filled.
>
> We will revise <RSC2> in the next game manual update to make this clearer. We hope this helps!

1904: One Preload must be placed per <SG4> in skills

28-Jan-2024
RSC2

In RSC2, One Preload must be placed per <SG4> in skills. It says clearly the word "MUST". However, in SG4, If a Team does not wish to use their Preloads, or if a Robot is not present for their Match, then the Preloads may be used as Match Load Triball. So I am confused whether both the two red balls in skills can be used as match load, or one of them must be placed on the field. Thanks.<RSC2>

> **Answered by committee**
>
> In Robot Skills Matches, both Preload Triballs can be used as Match Loads if the Team wishes to do so.
>
> The relevant portions of <RSC2> and <SG4> read as follows:
>
> > <RSC2> [...] c. Teams may use the two (2) red Alliance Preloads as follows: i. One Preload must be placed per <SG4>. ii. The second red Alliance Triball may be placed in any non-scored position in the Blue Offensive Zone and not touching the Robot, or may be used as a Match Load per <SG6> and <RSC3>.
> >
> > <SG4> [...] If a Team does not wish to use their Preloads, or if a Robot is not present for their Match, then the Preloads may be used as Match Load Triballs in accordance with <SG6>.
>
> The first Triball can be thought of as "the normal Preload", and must abide by all portions of <SG4>. This includes the portion which gives the option to use it as a Match Load instead. The second Triball can be thought of as "the extra Skills Preload", and must abide by the separate criteria listed in <RSC2>.

1430: <RSC2> Actions Permitted when Moving Between Alliance Stations

5-Feb-2023
RSC2

Note the bold portion in the rule quoted below.

> <RSC2> The Team may utilize fourteen (14) Match Load Discs, within the guidelines set forth by <SG6>.
>
> [...]
>
> i. At any point during the Match, one (1) Drive Team Member is permitted to move between the two (2) Alliance Stations **for the purpose of introducing Match Load Discs**. There may never be more than one (1) Drive Team Member outside of the Alliance Station in which the Team began the Match.

Scenario:

A team is in the middle of a driver skills run. All 3 Drive Team Members started in the Red Alliance Station. A Drive Team Member wishes to move to the Blue Alliance Station. The questions below are about this Drive Team Member.

1. Can they move to the Blue Alliance Station and stay there without placing any Match Loads?
2. If they move to the Blue Alliance Station and use up every Match Load from this area, are they allowed to stay in the Blue Alliance Station?
3. While in the Blue Alliance Station, can they look at Rollers closer to the Blue Alliance Station to check if they're scored?
4. While walking towards the Blue Alliance Station, are they allowed to stop halfway so that they're at a location that's not in either Alliance Station?
5. Can they walk halfway towards the Blue Alliance Station, check if a Roller is scored, and then walk back to the Red Alliance Station?

Thank you for your time.

> **Answered by committee**
>
> > 1. Can they move to the Blue Alliance Station and stay there without placing any Match Loads? 2. If they move to the Blue Alliance Station and use up every Match Load from this area, are they allowed to stay in the Blue Alliance Station? 3. While in the Blue Alliance Station, can they look at Rollers closer to the Blue Alliance Station to check if they're scored?
>
> Yes. All of these are acceptable applications of point b.i. of rule <RSC2> and are allowed.
>
> > 4. While walking towards the Blue Alliance Station, are they allowed to stop halfway so that they're at a location that's not in either Alliance Station? 5. Can they walk halfway towards the Blue Alliance Station, check if a Roller is scored, and then walk back to the Red Alliance Station?
>
> No. A Drive Team Member may move between the Alliance Stations, but they cannot stop to interact with either the Field or other Drive Team Members along the way. Drive Team Members must ensure that they are not blocking the non-Alliance-Station sides of the Field, which must remain open for safety and event volunteers.

1418: Can the Vision sensor be used to sense a disc on the loader in Programming Skills?

31-Jan-2023
G10 SG6 RSC2

Can the vision sensor be used to sense whether a disc has been placed on the loader in programming skills?

Rule G10 states that:

> <G10> Autonomous means “no humans.” During the Autonomous Period, Drive Team Members are not permitted to interact with the Robots in any way, directly or indirectly. This could include, but is not limited to: Triggering sensors (including the Vision Sensor) in any way, even without touching them

And rule SG6a states:

> Match Load Discs may only be introduced once the Driver Controlled Period has begun

But in the programming skills section, RSC2 Note allows the use of Match load discs during Programming, but also references SG6

> Note: This rule applies to both Driving Skills Matches and Programming Skills Matches.
>
> The Team may utilize fourteen (14) Match Load Discs, within the guidelines set forth by <SG6>.

My team would like to sense, during Programming Skills, when the disc has been placed on the loader to then run part of their program that does not violate any other match load/robot interaction as per SG6. Is placing a disc on the loader "triggering the sensor", or is this acceptable use of the sensor during play (just like using the sensor to "see" discs on the field)?

> **Answered by committee**
>
> As you quoted in your question, rule <G10> prohibits Drive Team Members from interacting with the Robots during an Autonomous Period, including triggering sensors.
>
> Placing a Disc on the Match Loader to trigger a sensor on the Robot is a violation of <G10> and is not allowed.

1365: Robot Skills Clarifications

5-Jan-2023
SC2 RSC1 RSC2 RSC3 RSC4 RSC5 RSC6

<RSC7>Here are a couple of questions regarding running teams during a skills match. As per the update on November 1, teams are supposed to be disqualified for coming into contact with anything outside of the field during endgame.

1. How do we mark team as *disqualified* during a skills match? As of December, Tournament Manager does not include an option to disqualify a team during a skills match. The definition of disqualification says that “A Team that receives a Disqualification in a Driving Skills Match or Programming Skills Match receives a score of zero (0) for that Robot Skills Match” Do I simply modify their score to be zero on everything?

2. Also, does the definition of breaking the field perimeter include the top of the field walls, or only the outside? (Would a team be in violation of S2 if a part of their robot is touching the top of the field wall, but not the outside perimeter?)

3. How strict are we supposed to be regarding the expansion rule before endgame (e.g., 18” exactly or 18” +/- 1”)? Many teams may have intake rollers that break 18” during operation. There were also some teams with string that would sway outside of the 18” during driving. (One team also had a piece of metal partially detach and stick outside of 18”). Should we keep a sizing tool at the skills field to show teams what part of their robot would violate the 18” rule during operation?

4. Being able to eyeball the size of a robot on the field is slightly subjective and might cause problems with newer volunteers. What is the best method for teaching them how to spot a violation?

5. Finally, how do we resolve a dispute of a robot going oversize and entering endgame early? Depending on how strict we are supposed to be with the expansion limit, this will be a point of conflict. As per the manual, “The Head Referee has final authority regarding all Robot rules”. Is this only for the designated Head Referee for the event, or does this include everyone that has been certified as a Head Referee by REC?

Answered by committee

Thank you for your questions.

1. How do we mark team as *disqualified* during a skills match?

The Scorekeeper should record a score of 0 for the Skills Match.

2. Also, does the definition of breaking the field perimeter include the top of the field walls, or only the outside? (Would a team be in violation of S2 if a part of their robot is touching the top of the field wall, but not the outside perimeter?)

Rule <S2> specifies that a Robot that comes in contact with the outside face of the Field Perimeter is in Violation of the rule. It does not address or include the top edge of the Field Perimeter.

3. How strict are we supposed to be regarding the expansion rule before endgame (e.g., 18" exactly or 18" +/- 1")?

Any horizontal expansion beyond 18"x18" prior to the Endgame is a Violation of rule <SG4>, including swaying or dragging strings, flexible intakes that cause the Robot to expand beyond 18" while intaking a Disc, and partially detached Robot components that protrude or drag beyond the 18" size limit. When determining the correct penalty, the Head Referee must consider the clauses and Violation Notes of <SG4> as well as any steps the Team takes to remedy the Violation. Having a sizing tool available to the Head Referee at the Field is always a good idea.

4. Being able to eyeball the size of a robot on the field is slightly subjective and might cause problems with newer volunteers. What is the best method for teaching them how to spot a violation?

If your Head Referee and Scorekeeper Referees are available to help with Robot Inspection, it can provide hands-on experience and understanding of Robot sizing.

5. As per the manual, "The Head Referee has final authority regarding all Robot rules". Is this only for the designated Head Referee for the event, or does this include everyone that has been certified as a Head Referee by REC?

The Head Referee for the event (or, in the case of an event with multiple Head Referees, the Division or the Match) is the one person with final authority regarding all Robot rules and Match play. Other Referees may provide information about what they saw during a Match, and may advise the Head Referee as requested, but all rulings are based on the judgment of the Head Referee and must be made by the Head Referee.