Preguntas y respuestas

VRC 2021-2022: Tipping Point

Etiquetado: SG1

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.

Please review the Q&A Usage Guidelines before posting. This system is only intended for specific VRC Tipping Point 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.

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679: RSC1 Skills Start - Home Zone Straddling?

22-Oct-2020
SG1

RULE Appendix B pg iii RSC 1 Robots may start the Robot Skills Match per SG 1 in either Home Zone with the Drive Team Members standing in the Alliance Station that corresponds with that Home Zone

DEFINITION Appendix A pg 8 Home Zone - One of two (2) areas, one (1) for each Alliance, where Robots start the match and defines the location of the Alliance Home Row. The Home Zones are defined by the inner edges of the field perimeter and the outer edge of the tape line that runs across the field adjacent to the Alliance Stations, i.e. the tape line is part of the Home Zone. The Alliance Home Zone is closest to their Alliance Stations The Home Zone refers to the foam field tiles; it is not a 3-dimensional volume

Question - confirm assumptions below

= assumption 1 - robot may not be contacting the gray foam field tiles outside of the Alliances Home Zone?

= assumption 2 - robot may not be contacting the gray foam field tiles on other side of 2nd white line in an adjacent area of Alliances Home Zone?

= assumption 3 - maybe same question, robot may not be contacting the gray foam field tiles, essentially straddling both areas in home zone, even if the robot is not not contacting the gray foam field tiles outside of the Alliances Home Zone?

> **Respondido por committee**
>
> We apologize, but we are not going to be able to answer this question without additional clarifying details and context. Please re-phrase and re-submit, perhaps with a photo or detailed diagram of the scenario in question, and we would be happy to provide a better answer.

576: Starting Position Clarification

26-Feb-2020
SG1

According to <SG1.a> it states:

> <SG1> Starting a Match. Prior to the start of each Match, the Robot must be placed such that it is: a. Contacting the field perimeter wall on the side that coincides with their Alliance's Goal Zone and Alliance Station.

`My question is which of the following 2 interpretations is correct:`

1. The robot may be placed anywhere along the field perimeter that is parallel to the Alliance Station as long as it satisfies all other <SG1> requirements.

2. The robot is required to be placed withing the bounds of the Alliance Station. This interpretation is due to the use of the word coincides, which according to the oxford dictionary means to meet; to share the same place. Oxford Dictionary: coincides

   Also, if you examine the given example in "Figure 18: Four examples of Robots in valid starting positions" on page 20 of the Game Manual, it's obvious that all four robots are within the bounds of the Alliance Station.

Respondido por committee

My question is which of the following 2 interpretations is correct:

1. The robot may be placed anywhere along the field perimeter that is parallel to the Alliance Station as long as it satisfies all other <SG1> requirements.

2. The robot is required to be placed withing the bounds of the Alliance Station. This interpretation is due to the use of the word coincides, which according to the oxford dictionary means to meet; to share the same place. Oxford Dictionary: coincides

Your first interpretation is correct. The following Q&A also provides some additional clarification on this point: https://events.vex.com/VRC/2019-2020/QA/396

509: touching side

27-Jan-2020
SG1

When robots are in start position, I know they have to be touching the side of the arena. How much has to be touching? Can one screw that is sticking out from the robot be all that is touching?

Respondido por committee

Please review the Q&A Usage Guidelines, specifically point 1, "Read and search the manual before posting." This question is answered by rule SG1:

<SG1> Starting a Match. Prior to the start of each Match, the Robot must be placed such that it is:

a. Contacting the field perimeter wall on the side that coincides with their Alliance's Goal Zone and Alliance Station.

b. Contacting a foam field tile.

c. Not contacting a Tower.

d. Not contacting any Cubes other than the Preload.

e. Contacting a Preload.

The Preload must be contacting exactly one (1) Robot.

The Preload must be fully within the field perimeter.

f. Not contacting a Goal Zone or a Barrier.

g. Not contacting another Robot.

There is no criteria listed in SG1 for how much of the Robot much be contacting the field perimeter wall.

399: Definition of Possession and Cube Starting Positions

28-Oct-2019
G12 SG1

Rule SG1 Section E states that at the beginning of a match a robot must be “Contacting a Preload. 1. The Preload must be contacting exactly one (1) Robot. 2. The Preload must be fully within the field perimeter.” Recently at an event, a team had brought up that the way this rule is written, it would allow teams to place their preload inside of a goal zone so long as the robot is contacting the cube and not contacting the goal zone as defined as “ the inner edges of the Barriers and the field perimeter” or the barrier (both of which as per SG1 section f).

The only rule that we see that may contradict this is G12 section d which states “Game elements in possession of a Robot are an extension of that Robot.” Because possession is not defined in the current game manual, without looking back at the Turning Point or In the Zone game manuals (which as it is known, previous rules do not apply to current game rules), it is difficult to properly rule whether the cube is in possession. This is question number 1 and 2: Is there anything that we are missing when coming to the conclusion of the starting position mentioned above, and can you define possession?

Now, once you define possession, if a cube is considered in possession of a robot, while the robot is in its starting position and if this cube is contacting either the barrier or the goal zone; would this be in violation of SG1 as per G12 “Game elements in possession of a robot are an extension of that robot,” because technically the robot through the extension of the cube is contacting the barrier/ goal zone? Would we also be correct to assume that this same violation would apply if the cube in possession of the robot were contacting any other items covered by SG1 (such as another cube or Tower) then this would be a violation due to G12? Thank you.

Respondido por committee

First - the rules and definitions quoted in your question are incomplete, and have a strong impact on how to interpret this situation.

The full text of SG1 is as follows:

> <SG1> Starting a Match. Prior to the start of each Match, the Robot must be placed such that it is:
>
> a. Contacting the field perimeter wall on the side that coincides with their Alliance’s Goal Zone and Alliance Station.
>
> b. Contacting a foam field tile.
>
> c. Not contacting a Tower.
>
> d. Not contacting any Cubes other than the Preload.
>
> e. Contacting a Preload.
>
> 1. The Preload must be contacting exactly one (1) Robot.
> 2. The Preload must be fully within the field perimeter.
>
> f. Not contacting a Goal Zone or a Barrier.
>
> g. Not contacting another Robot.
>
> Note: If a Robot is not present for their Match, then their Preload will instead be placed randomly by the Head Referee such that it satisfies all conditions 1-7 laid out above (contacting the field perimeter wall, not contacting a Robot, etc).

The full definition of Goal Zone is as follows:

> Goal Zone - One of four (4) areas of foam field tiles defined by the inner edges of the Barriers and the field perimeter in which Robots can Score Cubes. The Barrier and field perimeter are not considered part of the Goal Zone.

The Goal Zones are explicitly defined as the foam tiles, not the 3-dimensional volumes above them.

With that in mind, rule SG7 is the rule that directly applies to this situation, not G12:

> <SG7> Use Cubes to play the game. Cubes may not be used to accomplish actions that would be otherwise illegal if they were attempted by Robot mechanisms. Examples include (but are not limited to):
>
> • Encroaching upon an opponent’s Protected Zone per <SG3>.
>
> • Interfering with an opponent’s Autonomous Period per <SG2>.

Therefore, a definition of possession is not necessary in the context of this question. Starting with a Preload Cube that is contacting the Goal Zone (foam tiles, not the space above it) would be considered a violation of SG1 via SG7, and would not be a legal starting configuration.

396: <SG1> Legal starting location

27-Oct-2019
SG1

<SG1> Starting a Match. Prior to the start of each Match, the Robot must be placed such that it is: a. Contacting the field perimeter wall on the side that coincides with their Alliance's Goal Zone and Alliance Station.

Does "on the side that coincides" refer to the 12ft of field perimeter directly next to the Alliance station? or does "SIDE" refer to the entire half of the field on that Alliance's side of the field?

The first interpretation give a little less than 12ft of perimeter wall to start on.

If its the later interpretation, FIELD side, that gives an additional length of wall to start on (extending towards the center autonomous line on each end of the field).

Respondido por committee

> Does "on the side that coincides" refer to the 12ft of field perimeter directly next to the Alliance station? or does "SIDE" refer to the entire half of the field on that Alliance's side of the field?

Your first interpretation is correct.

Although "Starting Wall" is not a defined term, Figure 3 in the Game Manual denotes the side that is parallel to the Alliance Station / Autonomous Line as the intended starting position to help make SG1 more clear. The walls that are perpendicular to the Alliance Stations / Autonomous Line are not considered "coincident" with the Alliance Station, and are not valid starting positions.

316: Robot placement at start of the match SG1

11-Jul-2019
SG1

In rule SG1 it states "b. Contacting a foam field tile." does this mean exactly one tile or can a robot straddle 2 tiles?

Respondido por committee

> In rule SG1 it states "b. Contacting a foam field tile." does this mean exactly one tile or can a robot straddle 2 tiles?
>
> Robots are not limited to one foam field tile; contacting more than one would still satisfy the intent of SG1b.

3097: Double Park Mechanism

16-Feb-2026
R7 SG1 SG7

We have built a double park mechanism that is a cage that holds a block. It follows the rule of SG1 and SG5. We are concerned about R7. We use one screw to tighten the c channel into a stand off to keep the block in the robot. We would need to unscrew it to get it out. R7 states easy removal and without power. Would unscrewing one screw to remove the block be considered easy removal?

> **Respondido por committee**
>
> Even though it's only one screw, you shouldn't have to take a Robot apart to any extent to remove Scoring Objects. Removing a Block from your Robot mechanism as described would not be considered easy removal, and would therefore be in violation of <R7>.
>
> It's acceptable to have to use your hands to rotate a mechanism out of the way (e.g., spin some rollers, pull open a claw, etc.) in order to remove Blocks. Generally speaking, that is all considered easy removal. It's not acceptable to require a Robot to be powered on to actuate those mechanisms, nor is it acceptable to have to unscrew parts, unhook rope/mesh, disconnect wires, or otherwise dismantle any part of your Robot to remove Scoring Objects.

3096: Does mere contact with the park zone barrier satisfy SG1(f)?

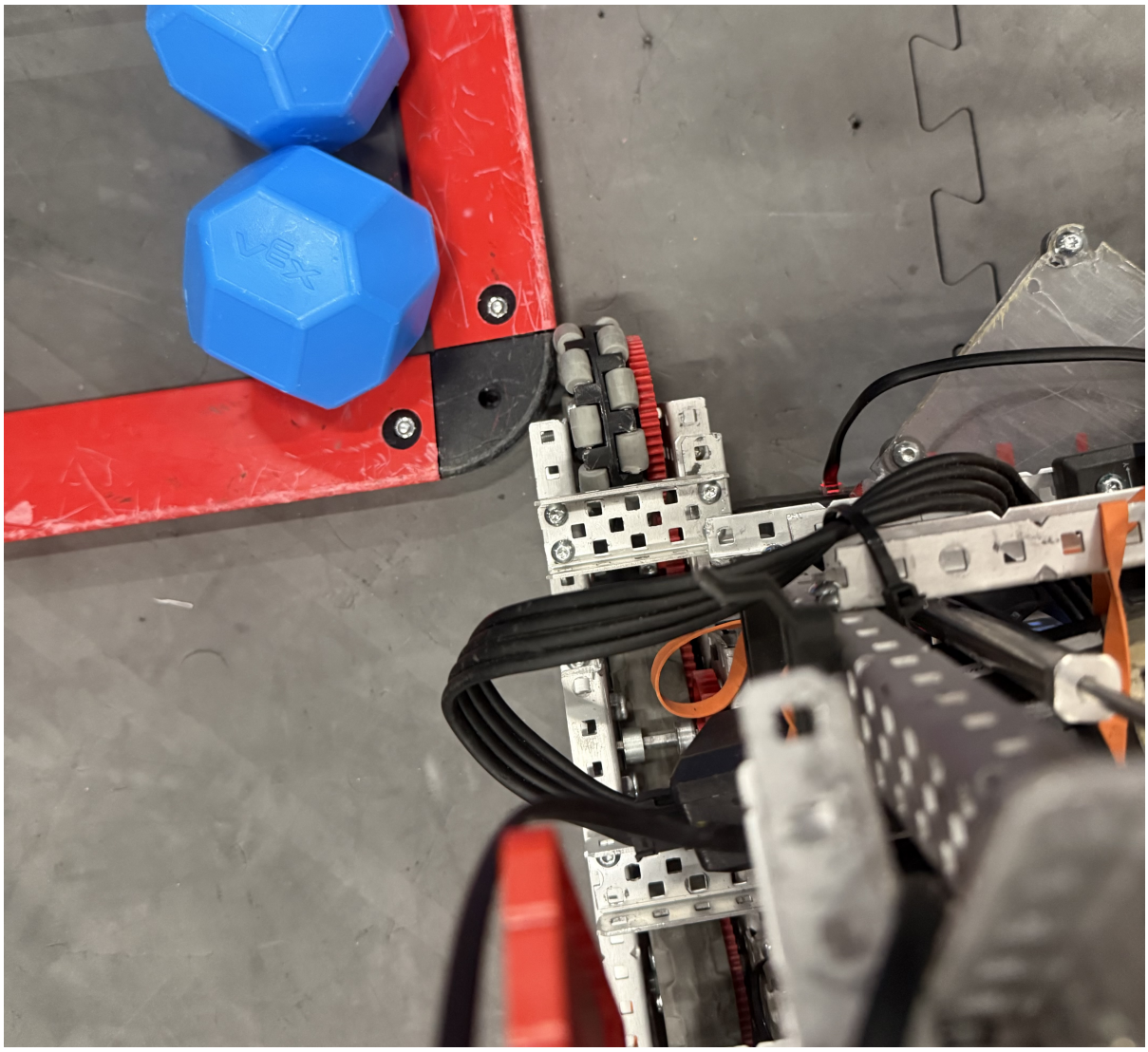
15-Feb-2026
SG1

<SG1>

In the recent manual update, SG1(f) was changed to state that a robot's starting position must be "At least partially within the vertical projection of its Alliance-colored Park Zone," a change from requiring contact with the park zone barriers.

Does "within the vertical projection" still include merely contacting the park zone barrier? If mere contact with the park zone barrier is not sufficient, there can be some close calls where it is hard to determine whether the robot is actually breaking the plane of the park zone (and therefore whether it is "within the vertical projection" if contact alone is not enough). This photo is one example – in this case the wheel and the corner of the drive base c-channel was determined to be just hanging over the outside edge of the park zone and therefore "within the vertical projection" requirement. It's a much simpler call if contact alone is sufficient.

Your clarification of this is appreciated, thanks!



Respondido por committee

Thanks for your question, Sophia! A Robot that is in contact with the Park Zone Barrier meets the intent of clause F of rule <SG1>.

3066: Does preload pin count toward robot's starting dimensions?

31-Jan-2026
R5 SG1 SG5

I haven't seen it yet this season, but would like a pre-emptive clarification - are robots expected to be inspected with or without a preload pin? If without, can a preload pin legally extend beyond the starting dimensions 11x20x15"? For example, part of the pin sticking above 15" or outside of the 11x20 dimensions?

Respondido por committee

The Preload does not have to fit within the starting volume required by clause A of <SG1>.

However, the Robot must be fully contained within that starting size limit even with the Preload in or on the Robot. For example, if the Robot is within size before the Preload is added, but the Robot becomes out of size when the Preload is added, this is a violation of <SG1> and must be corrected before the Match can begin.

3039: SG1/SG4 - Preload Affecting Starting Size

16-Jan-2026
SG1 SG5

<SG1> and point a) state:

> Prior to the start of each Match, the Robot must be placed such that it meets all of the following critera: a. No larger than 18" (457.2mm) long by 18" (457.2mm) wide by 18" (457.2mm) tall.

<SG5> states that each Robot gets one Block as a Preload.

Suppose a Team arrives at a Match with a Robot that fits within the 18" x 18" x 18" starting size, but then in the process of placing the Preload Block in their Robot, a mechanism on the robot expands outside the stated starting size of 18" x 18" x 18". Should the Head Referee begin the Match with the Robot in this configuration since it came to the field within the legal starting size but only expanded due to the Preload, or should the Team be asked to adjust the Preload so that it causes the Robot to get back inside the 18" x 18" x 18" box before starting the Match?

Thank you for your time!

> **Respondido por committee**
>
> The Preload must be adjusted to ensure the robot does not exceed 18"x18"x18" in its starting configuration. The Preload itself does not need to be within the 18" cubic volume, but all parts of the Robot do.

3000: Skills Auton Starting Size

19-Dec-2025
RSC3 SG1

<RSC3><RSC3>, "the Robot and Field are set up the same as for a Head-to-Head Match (e.g., the Robot must meet the requirement of <SG1><SG1>)" <RSC3><RSC3>

b. "The robot must start the Robot Skills Match in a legal starting position for the red Alliance."

Just wanted to clarify that teams are to be in legal starting position, based on requirements of SG1, the height and width of the robot should be measured from the field tiles while starting the Skills Match. If propped up on a preload or the parking barrier, it needs to be in legal starting position (18"x18"x18") as placed before beginning of the skills match.

1. For example, a robot is placed on top of a preload or on top of the barrier and placed so it is inside the Parking Zone. The robot must be in legal starting position (18"x18"x18") from the tiles to the top of the robot, and would include the preload or barrier underneath the robot?

2. Also, are there any limits on robots starting a skills match upside down or placed on its side?

Thank you!

> **Respondido por committee**
>
> There is no requirement that a Robot start the Match in contact with the Field tiles, and no requirement that the Robot be measured from the Field Tiles to the top of the Robot.

> If the Robot fits inside the 18" cubic starting size, it doesn't matter exactly where that Robot is (e.g., on or off of the Field Tiles) if it meets all requirements of <SG1>. It also doesn't matter whether the Robot is right-side-up, sideways, or upside down. Deciding which side is "up" is for the Team to define and implement.

2956: Clarification on RSC5 Handling Robots during an Autonomous Coding Skills Match

2-Dec-2025
RSC5 SG1

In <RSC5> states that "Upon handling the Robot, it must be immediately brought back to a legal starting position", is this "legal starting position" share the same definition as <SG1> which said For Teamwork Challenge Matches, the Team listed as Team 1 (printed Match list) or Red Team(RobotEvents.com) must place their Robot in contact with the red Triangle Goal.

The reason ask about this is in previous years, after starting the match driver can handle Robot and put any way as long as contacting the wall, for young teams they often use this as a strategy? implemented through segments.

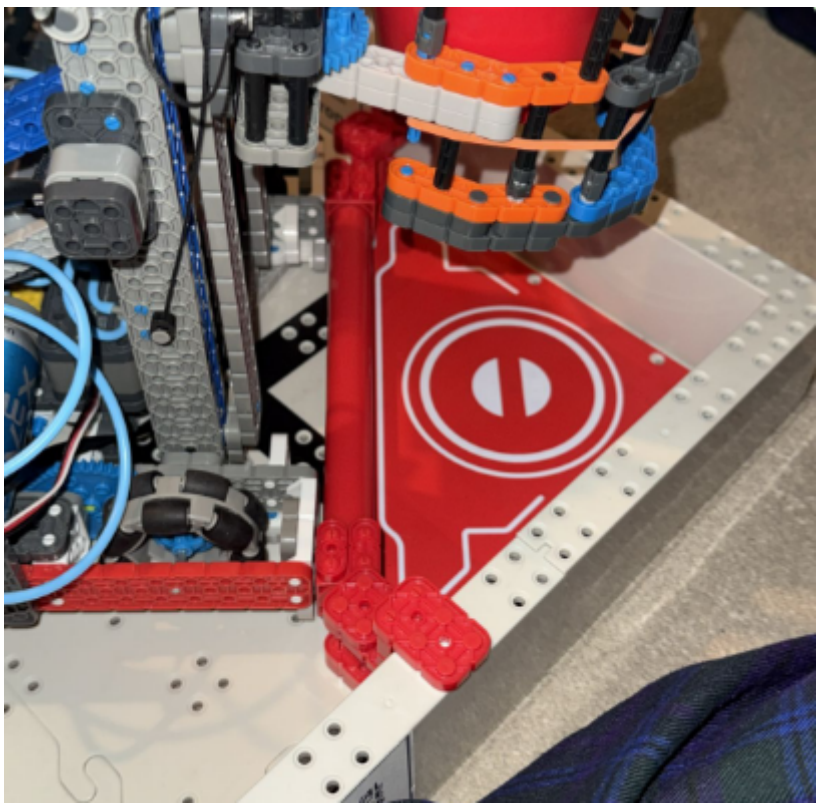
> **Respondido por committee**
>
> As described in clause C of rule <RSC3>, "The Robot must be placed in contact with the structure of the red Triangle Goal at the beginning of the Match and after the Robot is reset under rule <GG10> or <RSC5>."

2944: Autonomous starting point

24-Nov-2025
RSC1 SG1

<SG1><RSC1>

Is it possible to start autonomous mode with a pin over the red triangular goal with the robot in contact as shown.



Thank you

Respondido por committee

A Preload can begin the Match over the red Triangle Goal as shown in your image, but cannot be in contact with the Field Perimeter or the structure of the Goal.

2928: Are pins required to have their top notches aligned with the field in exactly the manner shown in field layout images?

18-Nov-2025
RSC3 SG1

<RSC3><SG1>[<FO>] (https://www.vexrobotics.com/mix-and-match-manual#fieldover)

When setting up the pins for either teamwork or skills matches, must each pin be horizontally rotated exactly like the game manual images show? In other words, do the pin notches have to all be aligned with the black lines on the field floor, or is the rotation of the pins irrelevant?

I haven't seen any robots yet that rely on the pin notches to be oriented in a particular way, but it is conceivable that some teams' autonomous code might expect the pin notches to be oriented a particular way.

Another consequence of this requirement is that field resets take additional time to make sure all pins are rotated correctly.

Respondido por committee

Thanks, Cory, for your question.

Rule <T5> will be expanded in the December 4 game manual update to reflect that the rotation of Pins is not specified. If a Pin is within tolerance, either on the Field or on a Starting Pin Support, it should not be adjusted before the Match. This change is effective immediately.

2892: Clarification on Robot Starting Position – Projection Beyond Field Perimeter

1-Nov-2025
SG1

According to rule <SG1> in the VIQRC Mix and Match Game Manual, a Robot must begin the Match in contact with the red Triangle Goal structure. However, the rule does not explicitly mention whether the Robot’s vertical projection (as viewed from above) must be completely within the Field Perimeter at the start of a Match.

To clarify:

Is it legal for any part of the Robot’s projection (such as an arm or intake structure) to extend outside the inner edge of the Field Perimeter before the Match begins, as long as the Robot is touching the red Triangle Goal?

Or must the entire Robot, including its vertical projection, be fully contained within the boundaries of the Field Perimeter when the Match starts?

Thank you for your clarification.

Respondido por committee

Hello, Team 6655X, and thanks for your question!

There is no requirement that a Robot be completely within the Field Perimeter at the start of a Match, as long as it meets all of the requirements of rule <SG1>, which includes that the Robot can only be contacting the Floor and the structure of its assigned Triangle Goal. In other words, the Robot can extend over the Field Perimeter, but can't be in contact with the Field Perimeter or anything outside of the Field.

2848: SG1 - Legal Starting Position for a Match, Skills Driving or Autonomous

12-Oct-2025
SG1

In Q&A 2721 - The clarification to SG1 states "The VEXIQ pieces that support the PVC pipe are part of the Triangle Goal's structure" and SG1 clause C states "Contacting the structure of one of the two Triangle Goals" as a legal pre-match starting position. Does the contact between the robot and the Triangle Goal structure have to be "as shown" in the field image below the SG1 rule statement and supporting clauses, or can any part of a robot be touching the structure of one of the triangle goal corresponding to the assigned Team 1 or 2 color? For example, can a corner of the robot touch triangle structure rather than a full side, such as the rear of the robot shown in the image on page 37 of the game manual? We are asking because an event we attended required us to start in the same position as shown in thge image on page 37. However, in the past, if a rule did not state as such, it was acceptable to orient the robot in a different way, as long as some part of the robot was touching the required structure or field wall. Our assumption is that any clarification would apply to match and skills starting positions.

Respondido por committee

Hello, team 6634D, and thanks for your question!

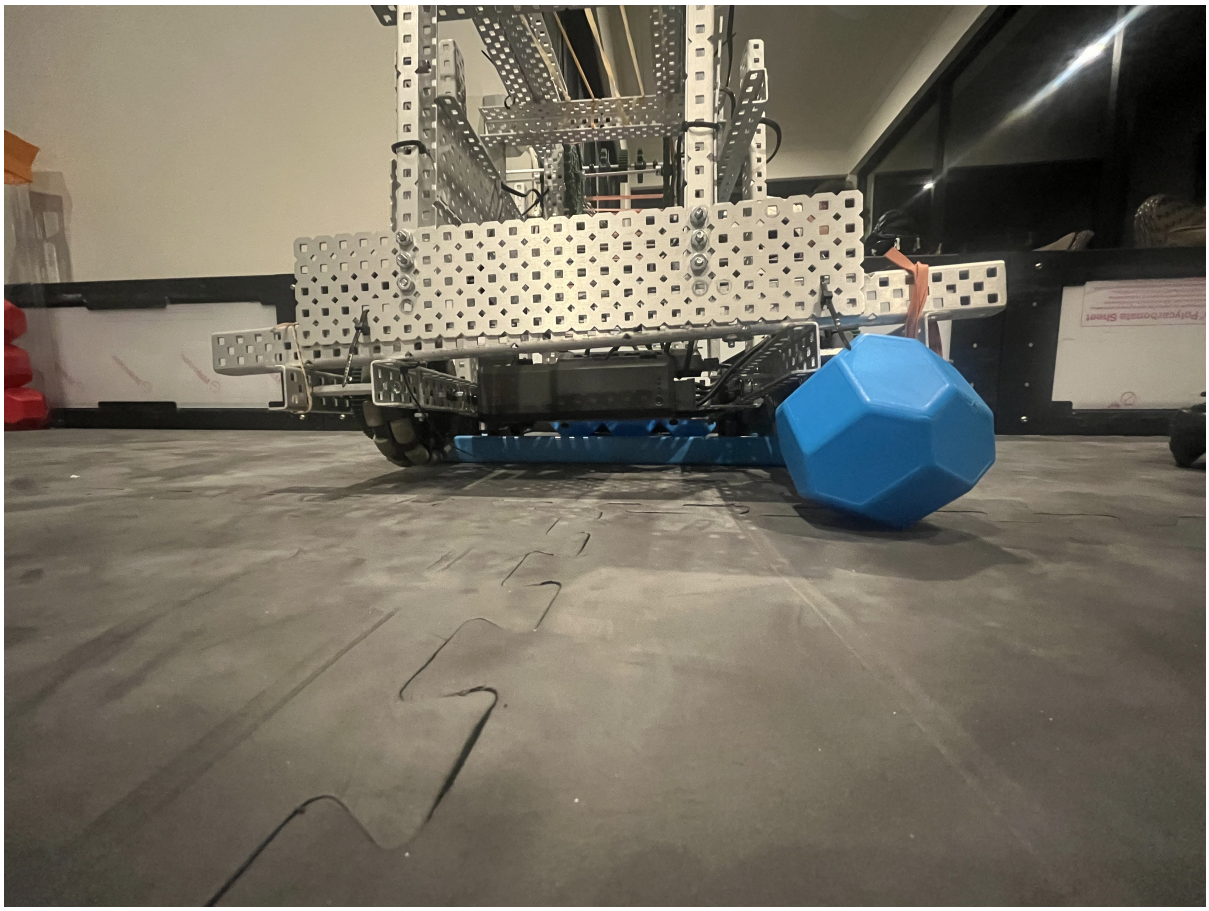
Figure SG1-1 shows one of many potential examples of a legal starting position. That example is **not** the only legal starting position.

<SG1> clause C simply requires that some part of the Robot is in contact with the correct Triangle Goal structure. There are no specific requirements for which part of the Robot is in contact with it, how much of the Robot is in contact with it, etc.

2806: Skills Auton Start

23-Sep-2025
SG1

From SG1: "b. Not contacting any Blocks other than a maximum of one Preload." Does this mean we are allowed to use our preload to prop up the robot to score the 15 points in the Autonomous Skills period, and move one or two rollers to make the robot "move"?



Respondido por committee

Hello, Team 62345A! Thanks for your question, which is related to but slightly different than Q&A 2771.

You're correct.

If the Robot and the Preload meet all criteria of rules <SG1> and <SG5> prior to the start of the Match, there's no rule against this starting position (including in an Autonomous Coding Skills Match).

There's also no minimum amount of "movement" defined in clause E of rule <RSC2>.