

Q&A

VRC 2019-2020: Tower Takeover

Tagged: T7



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 Tower Takeover 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 Tower Takeover rules questions.

- For event, registration, or other competition support questions, please contact your [REC Foundation Regional Support 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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294: <T7> Are tournaments required to run all qualification matches on the schedule?

4-Jun-2019

T7

In Rule <T7>, it is stated that "Qualification Matches follow the Qualification Match schedule." Does this rule prohibit tournaments from choosing to not run all of the qualification matches on the schedule?

Answered by Game Design Committee

In Rule <T7>, it is stated that "Qualification Matches follow the Qualification Match schedule." Does this rule prohibit tournaments from choosing to not run all of the qualification matches on the schedule?

Not necessarily. There are many extreme circumstances that could result in an Event Partner making changes to the Qualification Match schedule with REC Foundation approval. We will update this rule to state this more clearly in the June 14th Game Manual update.

2933: Allow Use of a Mechanical Level

20-Nov-2025

T5 T6 T7

<T7>

At a recent event, we were told that using a mechanical level was illegal or against the rules. After reviewing the rules and the official Q&A, I have not been able to find any such rule.

Is there any clarification on whether a device may be used to determine if a field is within the allowed parameters?

Answered by Game Design Committee

Using a tool to check that Fields are within the allowed parameters isn't expressly illegal, but the Head Referee can disallow it through rule <GG3> if the Students are delaying the start of a Match. We advise that your Students work with the Event Partner to do this checking on Fields before Matches begin to ensure there's time to address any issues that arise.

2557: Rapid loading rule violation

19-Feb-2025

RSC4 T7

During our last VEX IQ competition, we noticed a significant rule violation that led to an unusual ruling. During autonomous a team was rapid loading from Starting Zone 1 instead of Starting Zone 2, which violates Rule <RSC4>. However, when we raised this issue, the judges allowed the team to redo both of their autonomous runs despite Rule <T7> stating that match replays should only be granted under specific conditions.

This raises important questions: Should match replays be granted for rule violations that went unnoticed?

Answered by Game Design Committee

As stated in rule [<T7>](#),

Match replays (i.e., playing a Match over again from its start) are at the discretion of the Event Partner and Head Referee.

The examples in [<T7>](#) are not all-encompassing, and the Head Referee and Event Partner can declare a Match be replayed at their discretion.

2360: Field Tolerance Issues of Strapless Portable Skills Field

7-Dec-2024

T7 T10

During our skills run at the WPI signature event, we encountered a skills run affecting the outcome of our score. The portable skills field was not equipped with a strap causing teams that drove into the wall stake at speeds that should not have tampered with the overall construction. Due to the field not having the strap that it comes equipped with, the field perimeters expanded and the wall stakes fell off the field far past the 1 inch tolerances (almost 1.5) as described in rule T10, and this led to the rest of the run being off. Our previous run in driver utilized a macro to test the field and adjust according to this problem that many people had been facing. The run executed perfectly and we planned to run the same thing in programming skills, however when we did so, the field perimeter was pushed past the tolerance not due to sheer force of the robot, but the incomplete field setup which was inevitably deemed "unfortunate circumstances". This run was originally classified by the head ref as a replay before he later changed the ruling after the skills run had been deleted and instead re-added it. We were just wondering whether this would be classified as a robot issue or an incomplete field setup.

Answered by Game Design Committee

Each VEX Portable Competition Field Perimeter must be assembled with the two included velcro straps (276-7596-018) as shown on pages 9, 20, & 21 of the [PDF Field Assembly Instructions](#).

Per rule [<T11>](#):

All competition fields at an event must be set up in accordance with the specifications in Appendix A and/or other applicable Sections. Minor aesthetic customizations or repairs are permitted, provided that they do not impact gameplay (see [<T4>](#)).

Per page A-1 of Appendix A:

Instructions and specifications for these field perimeters are available in separate documents and are important for the field assembly.

2358: T7 and foreign objects in the field

7-Dec-2024

T7

[<T7>](#)

Hello, I wanted to seek clarification on T7 and whether replays are permitted for foreign objects being present in the field?

Scenario 1: Before the beginning of a match, a referee places a scoring tablet on the field whilst tying their shoelace and forgets to pick it up at the start of a match. This remains on the field for 30-40 seconds until the referee spots it and removes it from the field. No robots interacted with the tablet. Should the match be replayed? Would this be different if a robot drove over the scoring tablet / it impeded a robot's movement for a second or two? In this scenario would the match

score be considered at all (For instance a team losing 40-5 compared with a 20-21 scoreline)?

Scenario 2: A drive team member accidentally drops there safety glasses onto the field, they remain there for a few seconds as a robot is in the immediate area, once the robot moves away a scorekeeper referee removes them from the field.

Cheers!

Answered by Game Design Committee

As stated in our response to your previous and related question, [Q&A 2281](#), the Event Partner and Head Referee can agree on a Match replay **for almost anything**.

As part of any decision about whether a replay is warranted, the Head Referee and Event Partner should consider whether the issue negatively impacted any Team in the Match. Considering whether the impacted Team won or lost the Match, and how much of the Match was affected, is also a good idea. Some of your scenarios are unlikely to have negatively impacted Teams, and probably don't warrant replays. Others do, and replays would be reasonable.

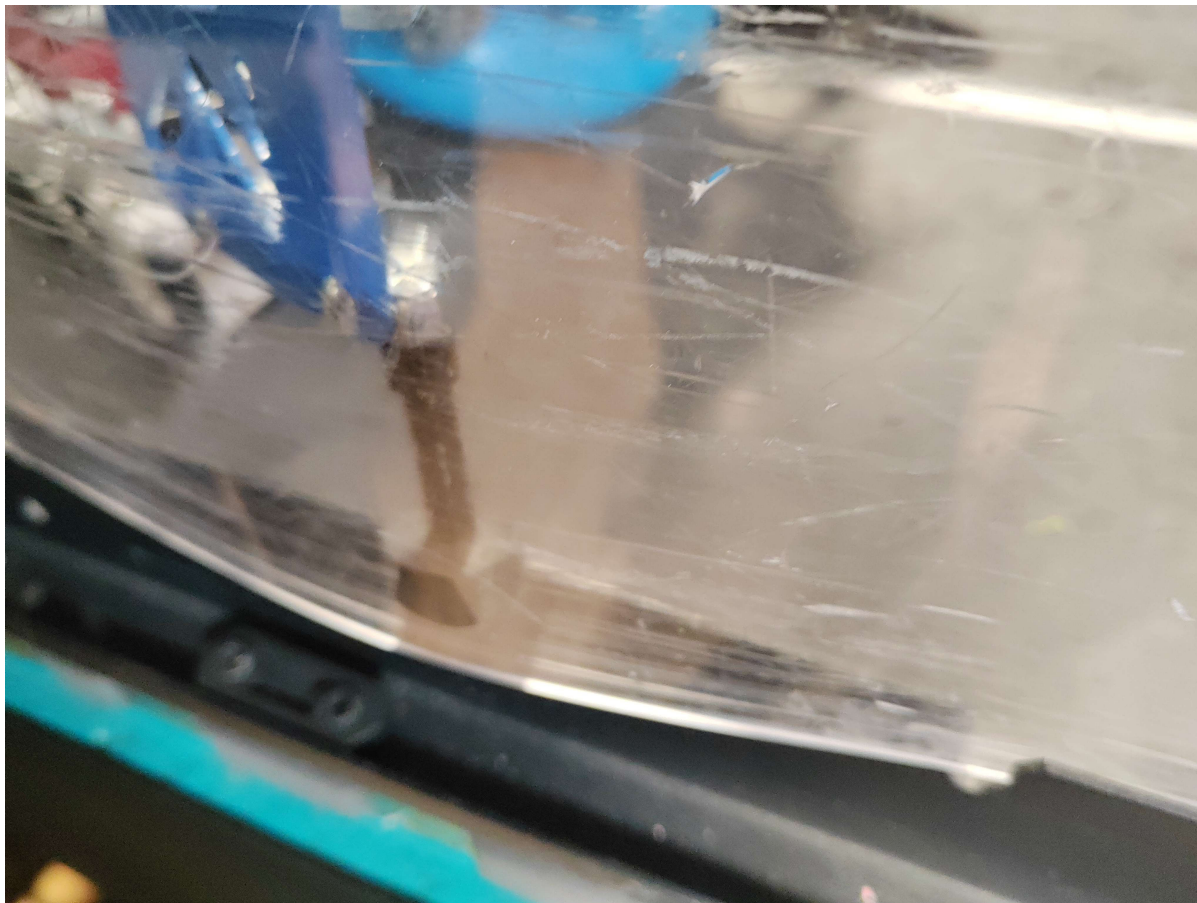
2308: Clarification on field tolerance issues affecting replay eligibility

17-Nov-2024

T7 T10

[<T7>](#) [<T10>](#)

At a tournament, our alliance partner's robot had a mechanism get jammed in the wall of a legacy field perimeter due to the plexiglass flexing outward, preventing them from moving for the duration of the match. Given that T10 states "Field Element tolerances may vary from nominal by up to ± 1.0 inches," the ref had a hard time deciding whether or not to replay the match, but chose to not replay in the end, which was a match-affecting decision in finals. I'd like to know if this replay eligibility ruling still applies for field perimeters and specifically legacy metal competition fields, which are not intended to flex in this manner but still can, unlike the new portable fields that are physically impossible to deform. With the rising popularity of mechanisms such as the one our alliance partner used, it is also possible that this situation may happen again in future tournaments, which is why our team wants clarification on this rule.



Answered by Game Design Committee

If the Field Perimeter panel was already flexed outward in this position prior to the start of the Match, it could be a reasonable justification for the Event Partner and Head Referee to agree on a Match replay if it has a negative impact on gameplay.

However, if a Robot moved the Field Perimeter panel into this position during the Match and then got stuck, that is not a Field tolerance issue or a reasonable justification for a Match replay. That is a gameplay interaction that the Drive Team is responsible for.

Based on your description, in this Match the panel was moved out of tolerance by the Robot, and the Head Referee ruled it the same way we would have.

2302: Rapid relay ball tolerance and related match replays

16-Nov-2024

T7 T10

<T10> Section T10 of the game manual states that Field element tolerances (likely including the ball) can vary between +/- 0.5 inches ("Field Element tolerances may vary from nominal by up to ± 0.5 " [25.4mm], unless otherwise specified."), and it only specifies ball weight, so therefore the 0.5 inch rule likely applies to ball width/diameter. Suppose that an ball was outside of this tolerance. T7 states that match reruns may occur if "Field Elements detaching or moving beyond normal tolerances, not as a result of Robot interactions". If a match started with a ball outside this tolerance, and the head referee was notified in time, could a match rerun occur?



Answered by Game Design Committee

The Rapid Relay Balls are manufactured to a +2, -13mm specification. Because they are soft and plush, actual dimensions may vary, and it is impossible to guarantee exact specifications/dimensions/tolerances in any given Match. Teams should be prepared for variance in Ball shape/size, and it is expected that Balls will change shape during the course of a Match and/or event. Event staff may periodically or at a Team's request attempt to re-shape the Balls, but are not required to do so.

Ball dimensions should not generally lead to a replay, except potentially in cases where the Ball is significantly damaged in a way that impacted game play.

2281: <T7bi> Match replays for misinterpretations of a rule violation

10-Nov-2024

T7

Hello!

<T7>

As per <T7bi> match replays are permitted when:

Head Referee Disables a Robot for misinterpretation of a rule Violation.

Would this be similarly applied for a circumstance where a head referee misinterprets a rule violation and falsely disqualifies a team after referencing T1?

Similarly, if the Head Referee notices this immediately after the match has been finalised after discussing with other Head Referees present at an event and realises they made the wrong call / misinterpreted the game manual, would a match replay be permitted?

Answered by Game Design Committee

In most cases in which a Disqualification has been incorrectly applied, the best solution will be for the Head Referee to discuss the Match and outcome with all Teams from the Match and remove/reverse the DQ in the Tournament Manager software. If possible, this change should be explained to all event attendees.

If the Match and score cannot be restored without the DQ (for example, if both Alliances in an Elimination Match were given incorrect DQs and the correct scores were for some reason not entered), that could reasonably lead to a replay. The Event Partner and Head Referee can agree on a Match replay for almost anything, although as described in rule <T7>, replays should only be used in the most extreme circumstances.

2094: Clarification on external impacts on matchplay and replays.

7-Aug-2024

T7

<T7>

Hello!

This morning we had an event and also experienced an earthquake in our state. Currently as per T7, the only grounds for a replay are

Score Affecting "Field fault" issues (Switches not being reset before the Match starts / Field Elements detaching or moving beyond normal tolerances not as a result of Robot interactions) Score Affecting Game Rule issues (A field is reset before the score is determined)

Our interesting experience this morning does raise the question: In the event of external forces such as minor earthquakes impacting scores and moving non-field elements out of tolerance (like a switch, which is meant to be scored/toggled) should a match be replayed?

Cheers,

Answered by Game Design Committee

We're happy to point out that the list in [<T7>](#) only represents "some examples" (quoted from the game manual) that may warrant a replay.

In any situation where the Head Referee and the Event Partner agree that a replay is warranted, it's within their discretion to grant one "in the most extreme circumstances."

Non-gameplay issues like fire alarms---and earthquakes!---that have a negative impact on Matches could reasonably be called extreme circumstances, and replays would be entirely reasonable.

1811: T10 - Does the Field Variance Tolerance Cover Incorrectly Assembled Field Elements

3-Dec-2023

T7 T10

[<T10>](#) states (in part):

Field Element tolerances may vary from nominal by up to ± 1.0 ", unless otherwise specified.

At a recent event we noticed part way through the finals matches that the goals on the competition fields were not assembled correctly. The top horizontal beams were 10.5" above the field floor because the corner chassis connectors were placed in the highest pair of holes on the uprights, rather than the second-highest pair.

Should this sort of variance be considered a [<T10>](#) condition that teams should design around (meaning a robot would need to be designed to clear ~11.5" vertically for anything going over the top of the goal), or would it be a [<T7>](#) field fault?

Answered by Game Design Committee

Yes, this would be included in the [<T10>](#) tolerance. Since there are no flexible Field Elements, improper assembly is the most common source of such variances. Of course, whenever a Team finds that a field has been assembled incorrectly, they should bring it to the attention of the Head Referee and/or Event Partner as soon as possible.

With that being said, a Match Replay is always an option at the Head Referee / Event Partner's discretion; the list of situations provided in [<T7>](#) are intended to be representative examples, not an all-inclusive list. In the case of improper field assembly, they will usually take the following considerations into account when making this decision:

- The severity of the error (e.g., on an Autonomous Coding Skills field, a Starting Peg in the incorrect location would be far more significant than a Starting Peg rotated in the wrong direction)
- If any Teams claim that the error was Score Affecting
- When the error was found (e.g., if the event has already run until Finals, then it is unlikely that the error impacted Teams directly enough to warrant concern)

1764: Follow up: Proper Action if Net Clamp comes loose?

13-Nov-2023

T7

Further to <https://events.vex.com/VRC/2023-2024/QA/1738>:

Per T7 [<T7>](#), if the net falls off as a result of a robot running into the net, T7 a, ii seems to suggest this does not meet the requirements for a replay. However in Q&A 1738 this is not mentioned.

TIA

Answered by Game Design Committee

The examples listed in [<T7>](#) are intended to be descriptive examples to help guide Head Referees and Event Partners, since deciding whether or not to replay a Match is usually a very subjective decision. They are not an exclusive, rigid, or exhaustive list.

You are correct that point iii includes the phrase "*not as a result of Robot interactions*". We had interpreted Q&A 1738 to be asking, "if a loose net falls due to robot contact, is that a valid extension / exception to the example provided in T7?"

To which our answer is, "yes".

1714: Starting tolerance for the Blocks

21-Oct-2023

SG1 T7

Upon looking through the manual, i could not find reference to any tolerance for the starting position of the block. This makes the wording for [<T7>](#) 1)a. undefined and subject to interpretation. There is the general tolerance as defined in [<T8>](#) however this refers to Field elements, which the game Blocks are not apart of. Additionally a tolerance for the block starting position could affect the legal starting positions of robots per [<SG1>](#) as, hypothetically, the blocks may start offset from their "perfect" starting position and the game would still be allowed to start since the robot is not contacting a block that, if the block was perfectly positioned, it would be.

As such, could i get clarification on:

1. What is the tolerance of the "correct position" of the blocks? Both distance from their "perfect position"and, if possible, angle/orientation
2. can a block be moved within this tolerance (if provided) to allow for a robot to be in a legal starting position (i.e. not touching a block)? 2a) if not, would it be up to the head referee's judgment as to if the robot is starting legally with respect the the blocks starting position
3. If there is a tolerance, can a team ask for cubes to be set in specific positions/orientations?
4. can teams ask for cubes to be positioned closer to their "perfect position"? If so, and the team is never satisfied, can the head referee in their judgment determine that it is sufficiently close to its "perfect position" and start the match?

Answered by Game Design Committee

1. What is the tolerance of the "correct position" of the blocks? Both distance from their "perfect position"and, if possible, angle/orientation

The following rules of thumb can be used:

- Red Blocks: The Block's curved face should be balancing on the two halves of the Starting Peg. Neither of the gray Starting Peg plates should be able to "nest" inside of the red Block's triangular notches.
- Purple Blocks: The angled corners should not cross over any black line. Similarly, the Block should not be covering any holes in the field tiles. [This example](#) would be at the edge of tolerance.
- Green Blocks: The angled corners should not cross over any black line. [This example](#) would be at the edge of tolerance.

2. can a block be moved within this tolerance (if provided) to allow for a robot to be in a legal starting position (i.e. not touching a block)?

Please see this similar Q&A: <https://events.vex.com/VIQRC/2023-2024/QA/1705>

3. If there is a tolerance, can a team ask for cubes to be set in specific positions/orientations?

Technically yes, but as always, [<T6>](#) ("Robots must be placed on the field promptly") and the note in [<RSC6>](#) ("the definition of 'prompt' is at the discretion of the Event Partner and Head Referee") would apply.

4. can teams ask for cubes to be positioned closer to their "perfect position"? If so, and the team is never satisfied, can the head referee in their judgment determine that it is sufficiently close to its "perfect position" and start the match?

We believe this is effectively the same question (and answer) as question 3 above. If this is not the case, please feel free to rephrase and re-submit.

1674: Net Lifted Open

3-Oct-2023

T7

What is the correct ruling for when the net is opened and drops on top of a opposing robot and causing them to be entangled? Would it be a replay per [<T7>](#) "Field Elements detaching for moving beyond normal tolerances"?

Or would the match play on and a [<G13>](#) violation be issued?

Answered by Game Design Committee

Based on the brief description you have provided, it is impossible to issue a blanket answer beyond what is written in the Game Manual that encompasses all possible situations. Any ruling made by a Head Referee must consider the full context of the Match.

However, as described in rule [<SG5>](#),

...because heavy Robot-to-Robot interaction is expected around the Goals, and Entanglement carries a high risk of playing field damage, any Robot that becomes Entangled must be Disabled regardless of fault.

In your scenario, at a minimum the Entangled Robot must receive a Disablement. If the Head Referee determines that their opponent was responsible, the opponent Robot must also receive a Disablement, as also noted in [<SG5>](#):

Causing an opponent to become Entangled with the net is considered a violation of [<G15>](#) and, at a minimum, will result in a Disablement for both Teams.

Based on the interactions and actions that lead to the lifting of the net and the resulting entanglement, additional pertinent rules and Violations could include:

- [<G7>](#): Don't clamp your Robot to the field.
- [<G13>](#): Don't destroy other Robots.
- [<SG8>](#): Stay out of your opponent's Goal unless they are Double-Zoned.

1595: Dented Triballs

21-Jul-2023

T7

In a scenario where triballs are dented as shown in the picture, what is the way for the head ref or event provider to deal with this? Is it supposed to be replaced, pumped back up in some way, or is it just expected that this is something that

teams will have to play through? If the answer is that the triball is replaced or pumped back up, could this happening in a match due to normal gameplay be a reason to replay a match? [img](#)

Answered by Game Design Committee

In general, damage to Triballs during Match play should be addressed the same way as damage to any other field elements would be treated.

The Head Referee should make a judgment whether the damage was due to a particular Robot mechanism and/or action, per [<R5>](#) and [<S1>](#). Repeated offenses by the same Robot will influence this decision.

Triballs are expected to withstand standard Robot interactions, and truly incidental damage should be rare. However, if the Head Referee judges that the damage was Match Affecting but is unable to identify the Robot responsible for the damage, Match Replays are always an option that may be used at the discretion of the Head Referee and Event Partner per [<T7>](#).

Repairing damage that occurs outside of Match play is typically outside the scope of the Game Manual / Q&As, as there are limitless possibilities for root causes and severity. Per [<T11>](#), repairs which do not affect gameplay may be made at the Event Partner's discretion. If any field elements have been damaged beyond repair, Event Partners should contact support@vex.com for further guidance or to order a replacement. As a quick solution, we recommend swapping severely damaged Triballs with those from a practice field or un-used Robot Skills Challenge field.

1590: Field Tolerances Impacting Gameplay

17-Jul-2023

S1 T7 T10

(via team 920B) [<T10>](#) [...] Field Element tolerances may vary from nominal by up to ± 1.0 " [<T7>](#) Match Affecting "field fault" issues. [...] iii. Field Elements detaching or moving beyond normal tolerances (not as a result of Robot interactions). Grant Cox (chairman of the GDC) clarifies here (<https://youtu.be/V0fb47-Zd5Q?t=37>) that the goals should be built such that you cannot easily roll the triballs into the goals; they must be pushed with a reasonable amount of force to get them under the PVC bar that defines the outside of the goal. After much experimenting with the field and observing other fields, it has become apparent to us that sometimes the vertical PVC pipes on the corners of the goals will sometimes become raised up due to intense robot interactions. This drastically changes how triballs interact with the goal, namely how easy they roll under. With this and the above rules in mind, we would like some clarification as to how these rules should be interpreted in certain situations. We are not looking for a blanket ruling, and we know that it is impossible to issue one. Instead, we would like a ruling on what the correct ruling should be in the following situations (assuming no other rules are being violated): Situation 1: A robot is pushing triballs into their alliance goal in an act of reasonable normal gameplay. As they are doing so, the vertical PVC pipe in one of the corners of the goal loosens up a little bit and raises up $\frac{3}{4}$ ". Since it is still within the ± 1 " allowable tolerance, it is not in violation of [<T10>](#). However, it now allows triballs to be easily rolled under the net from several feet away, such that they don't even contact the horizontal PVC pipe. This does not meet any of the criteria of [<T7a>](#), so the way I read the rule, no replay should be awarded. However, one alliance clearly had an advantage due to their goal being raised up allowing for easier scoring in the goal. After the match, it is determined that the alliance who had the goal that raised up $\frac{3}{4}$ " won, but only because the goal had become raised up. The head referee recognizes this as affecting the outcome of the match, but cannot classify it as match affecting as it does not violate [<T7>](#). What should be done? Should the match be replayed (if so, under what rule)? Should the team that caused the goal to raise up be given a warning (if so, how should the referee determine which robot to penalize)? Situation 2: A robot at the beginning of the match intentionally presses upward on the goal, causing the vertical PVC pipe to slide $\frac{3}{4}$ ", causing the outcome described in Situation 1 (including the head referee determining that it did affect the outcome of the match). The robot did utilize the fact that triballs can easily be rolled into the goal. Does the fact that it was intentional change any of the answers to the questions in Situation 1? Situation 3: The head referee determines after a match has ended that the match had begun with one of the goals raised up $\frac{3}{4}$ " as described in Situation 1. It leads to the same outcome as in Situation 1, where the head referee sees that it did affect the outcome of the match. Situation 4: After a match, the head referee sees that one of the alliance goals is $\frac{3}{4}$ " lower than normal (they are unsure how or when it happened). It is still within the ± 1 " tolerance set by [<T10>](#). However, this impacts the ability to score triballs in the goal so much that the head referee determines that it did severely affect the outcome of the match. From my observations, it would be unsafe and likely to damage triballs (in violation of [<S1>](#)) to design and compete with a mechanism capable of pushing triballs under the bar if it were $\frac{3}{4}$ " lower than normal. What should be done in this situation? Should the match be replayed (if so, under what rule)? Or should the outcome of the previous match just be left as-is and the field be fixed for the next match? Again,

we are only looking for answers to these specific situations, not a blanket answer (as we know you cannot provide one). Assume no other rules are being violated in these situations. Thank you for your time and consideration.

Answered by Game Design Committee

Thank you for your questions. We'll start by noting that the tolerances for the opening of the Goal between the PVC pipe and the foam tiles was revised to +0.25" / -0.00" in version 1.0 of the game manual on June 27, 2023. This change predated your Q&A post and has a significant impact on your scenarios. As always, we encourage users to review and follow the [Q&A Usage Guidelines](#), which include "Quote the applicable rule from the latest version of the manual in your question. Often, you'll find that by quoting the rule, you'll answer your own question."

In all scenarios in which the Goal is or becomes out of tolerance due to normal gameplay or incorrect assembly (including your Situations 1, 3, & 4) a Match replay may be warranted under clause aiii of rule [<T7>](#), "Field Elements detaching or moving beyond normal tolerances (not as a result of Robot interactions)," at the discretion of the Head Referee and Event Partner. In these scenarios, no Teams should be penalized.

In scenarios in which the Goal is moved out of tolerance intentionally (including your Situation 2), would merit a Major or Minor [<S1>](#) Violation depending on whether the Head Referee determines that the Violation is Match Affecting or not.

To keep events on schedule, Teams that are concerned about a Goal height should notify the Head Referee or event staff prior to the Match.

1527: [<T7>](#)[<SG2>](#) Can a Match Replay occur from an incorrect Head Referee call regarding size limits?

6-Jun-2023

[SG2](#) [T7](#)

[<SG2>](#) Horizontal expansion is limited. Once the Match begins, Robots may expand, but no horizontal dimension may exceed 36" (914.4 mm) at any point during the Match. a. This limit refers to "horizontal" expansion relative to the playing field (i.e., it does not "rotate with the Robot"). For example, Robots which tip over during a Match or change orientation while Elevating are still subject to a 36" horizontal limit.

[<T7>](#) Match replays are allowed, but rare. Match replays (i.e., playing a Match over again from its start) must be agreed upon by both the Event Partner and Head Referee, and will only be issued in the most extreme circumstances. Some example situations that may warrant a Match replay are as follows:

[...]

c. Match Affecting game rule issues.

- i. Head Referee disables a Robot for a misinterpretation of a rule Violation.
- ii. Head Referee starts the Driver Controlled Period of the Match without determining the outcome of the Autonomous Period winner.
- iii. The field is reset before a score is determined.

Scenario:

In a Head-to-Head Match, the Head Referee informs a Team that they are breaking the horizontal expansion limit. They attempt to get back in size for a significant duration of the Match. The Team loses the Match. After the Match ends, the Head Referee realizes that the Team never broke the horizontal expansion limit, and he was incorrect to warn the Team. The Head Referee and Event Partner feel that if he did not make this warning, the Team would have likely won this Match.

Should this Match be replayed as per [<T7c>](#)?

Answered by Game Design Committee

Thank you for your question. Replays are never guaranteed, and are always awarded at the discretion of the Event Partner and the Head Referee based on the specific Match and its context within the event. The list of examples provided in rule [<T7>](#) is not exhaustive, and the scenario you describe *could* warrant a replay if deemed appropriate by both the Head Referee and the Event Partner.

1452: <G8><T7> Cable Error Issue

12-Feb-2023

G8 T7

At an event today, SF1-1 started off the Autonomous Period as usual and both Blue Robots moved and scored for their alliance. At the end of the Autonomous Period, as I was starting Driver Control, one of the Blue teams stopped me due to them saying that their robot lost connection to the field. *We were running the V5 Brains.* I verified that I had a connection to the controller on the brain screen and started Driver Control. When it started, the Blue controller in question was unable to reestablish the link to the robot. *They were not permitted to touch the robot as they moved and scored during the Autonomous Period.* At this point, the only orange text showing under their tab on the V5 Brain was "No Robot" and "No Program".

As the match was progressing, they unplugged and plugged in the V5 cable to their controller multiple times, without being instructed by the Head Referee or one of the Scoring Referees. Once this occurred, the V5 Brain began displaying "Cable Error on the team's tab.

What is the proper course of action in this scenario?

1. Replay the match due to a field connection issue < T7 >.
2. Let the final score stand due to it being a "Robot Issue" rather than a field issue and give the team a warning per < G8 >.

Thank you,

Cowboy Chris

Answered by Game Design Committee

We cannot provide a blanket answer that would encompass all possible scenarios in which a Match may (or may not) qualify for a replay under rule <T7>. Either of the solutions you propose could be reasonable in this situation, but the choice would require more context and understanding of the Match than can be provided in a snapshot description.

While Match replays should be rare, any Match can be replayed if agreed upon by both the Event Partner and the Head Referee based on the context and circumstances of the Match. The examples provided in rule <T7> identify some instances in which a replay may be justified, but are not a complete list.

1415: High Goal Out of Tolerance

28-Jan-2023

T7 T25

Rule < T25> states:

Be prepared for minor field variance. Field Element tolerances may vary from nominal by ± 1.0 ", unless otherwise specified in this Game Manual, official Q&A, or Appendix. Disc weights may vary from nominal to ± 20 grams. High Goal heights may vary from nominal to ± 1.0 " (25.4mm). Teams are encouraged to design

their Robots accordingly. Please make sure to check Appendix A for more specific nominal dimensions and tolerances.

The high goal has no secure attachment to the white pole, allowing it to slide side-to-side along the white pole up to several inches in each direction. This is largely because the black pole connecting the high goal to the center pole of the net has a lot of leeway. This often leads to the goal being out of the ± 1 " tolerance, especially when the high goal gets bumped during field reset. This leads to inconsistent autonomouses (due to the field being out of tolerance) and unequal scoring areas for each alliance.

The only way we see for teams to ensure the field is in tolerance before every match is to manually check it every time. However this is not an optimal solution, as it is impractical to have to inspect the high goals before every match.

1. Are there any other ways teams can ensure that the high goals are in tolerance at the beginning of each match?
2. Additionally, if the high goal is found to be out of tolerance after/during the match, would that warrant a match replay as per rule < T7 a. i.>?
3. If the answer to the previous question was yes, then how should event partners/head referees deal with more than just a few match replays (if the high goal was found to be out of tolerance in more than just a few matches)?

These images were taken from the exact same location to illustrate how far the goal can move with minimal effort (a little push, something that could easily happen during field reset)





Answered by Game Design Committee

The only way we see for teams to ensure the field is in tolerance before every match is to manually check it every time. However this is not an optimal solution, as it is impractical to have to inspect the high goals before every match.

1. Are there any other ways teams can ensure that the high goals are in tolerance at the beginning of each match?

Referees are expected to briefly and quickly check the Field setup, including Disc and Field Element positions, before each Match (see the Responsibilities section in the [VRC Referee Guide](#)). Additionally, as described in rule [<G9>](#), Teams may also visually check the Field before each Match and raise any concerns with the Head Referee before the Match starts. Manually checking the Field before each Match is the only way to confirm that the Field is correct and ready.

2. Additionally, if the high goal is found to be out of tolerance after/during the match, would that warrant a match replay as per rule [< T7 a. i.>](#)?

As stated in rule [<T7>](#), beginning a Match with Field Elements in incorrect starting positions may warrant a Match replay, but only in the most extreme circumstances. Determining whether or not a specific Match is replayed is a decision made by the Event Partner and Head Referee immediately following the Match, and based on the full context of the Match.

3. If the answer to the previous question was yes, then how should event partners/head referees deal with more than just a few match replays (if the high goal was found to be out of tolerance in more than just a few matches)?

If a Field Element is found to be out of tolerance only after several Matches, and no Teams in the earlier Matches disputed the Match due to the Field setup, those Matches should not be replayed.

1308: Blackscreen caused by a Glitch on the Brain - Replay?

20-Nov-2022

T7

Hi!

At a recent competition in the finals match, our Brain randomly turned off during the match, causing us to be Disabled for the rest of the match (since we couldn't turn the Brain back on after we had moved). Our battery was at four bars, and when we turned the Brain back on after the match had been scored, it turned on perfectly fine. This seemed to be a glitch, but the referees didn't replay the match, saying that since it wasn't a whitescreen, it didn't qualify for a replay. Would this qualify for a replay, since it isn't the Team or the Field Control's fault?

Thanks in advance!

Answered by Game Design Committee

Thank you for your question. The situation you've described does not meet the requirements of rule [<T7b>](#), and would not warrant a replay.

The Event Log on the V5 Brain can be used to help troubleshoot an issue by checking the included diagnostics, as described in [this VEX Library article](#). If you believe there is an issue with your Robot brain or another component, please [contact VEX support](#). They would be happy to help you resolve that issue.