

Q&A

VRC 2023-2024: Over Under

Tagged: T10

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 Over Under 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 Over Under 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.

1990: Pushing triballs causes net to lift slightly

5-Mar-2024

T10

[T10a](#) states:

Field Element tolerances may vary from nominal by up to ± 1.0 "

In the event that a goal is fairly full of triballs, and an opponent starts to legally push the triballs out of the goal, the net may incidentally raise and some triballs may escape the goal by going over the bar instead of under. This is quite common when Teams attempt to de-score triballs from an opponent's goal that is full.

Please see this example video demonstrating a scenario in which this can occur:

<https://www.youtube.com/watch?v=cDulLsMaNoM>

It seems to me that this would be considered "normal gameplay" as the intention isn't to lift the net but the net lifting is only a secondary consequence of simply trying to push a large quantity of triballs at once.

Therefore, is it correct to say that a robot that indirectly causes the net to lift slightly incidentally while pushing triballs is not violating T10 or any other rule?

Thank you.

Answered by committee

Therefore, is it correct to say that a robot that indirectly causes the net to lift slightly incidentally while pushing triballs is not violating T10 or any other rule?

Thank you for your very clear video example. Provided no other rules are violated in the process, a Robot that indirectly causes the net to lift slightly while pushing Triballs into or out of the lower portion of a Goal is not violating

rule <T10>; additionally, the Note following rule <SG5> will generally not apply, and this action is unlikely to be an <SG5> Violation if the Robot is not entangled with the net or directly/intentionally lifting or raising the net structure.

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 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)

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 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.

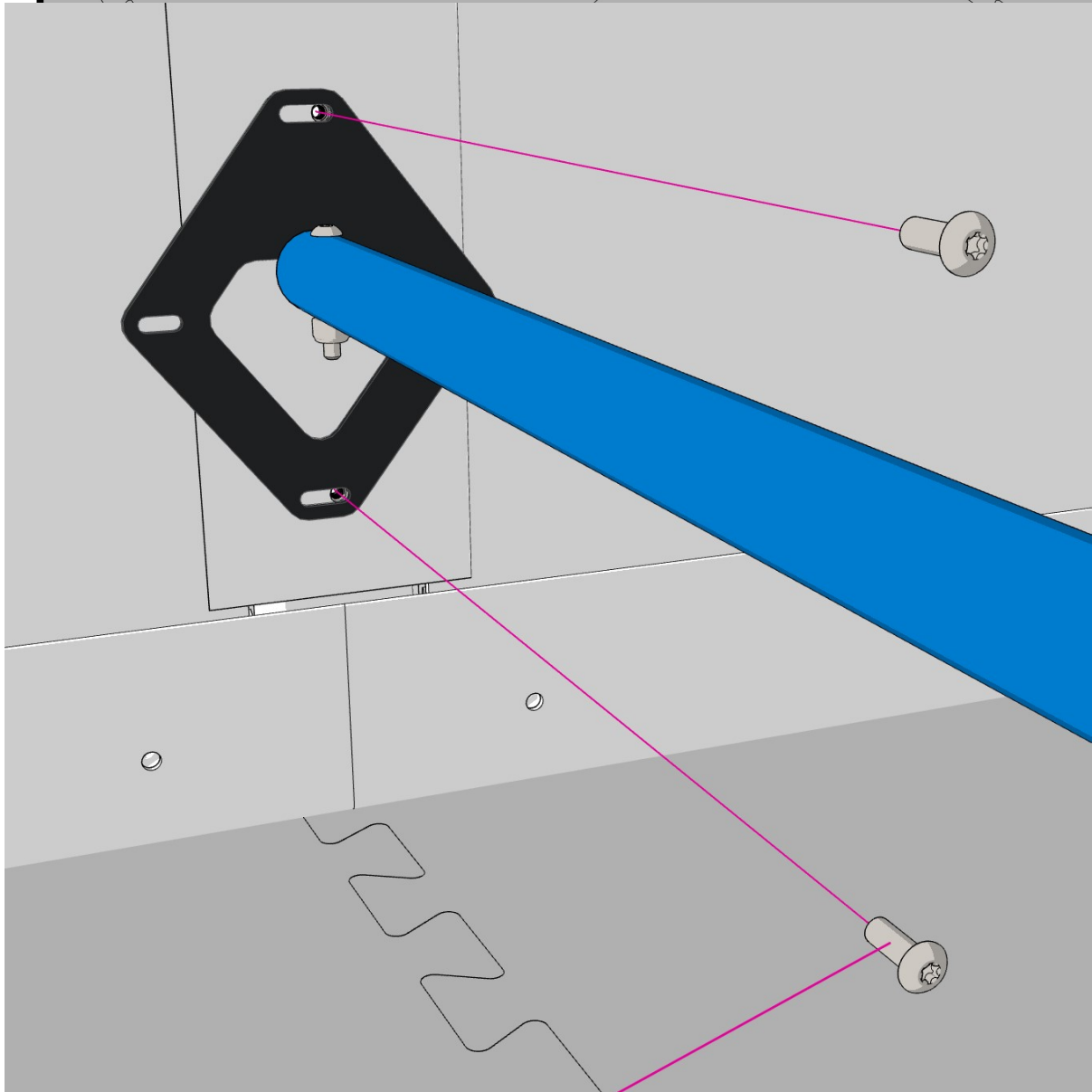
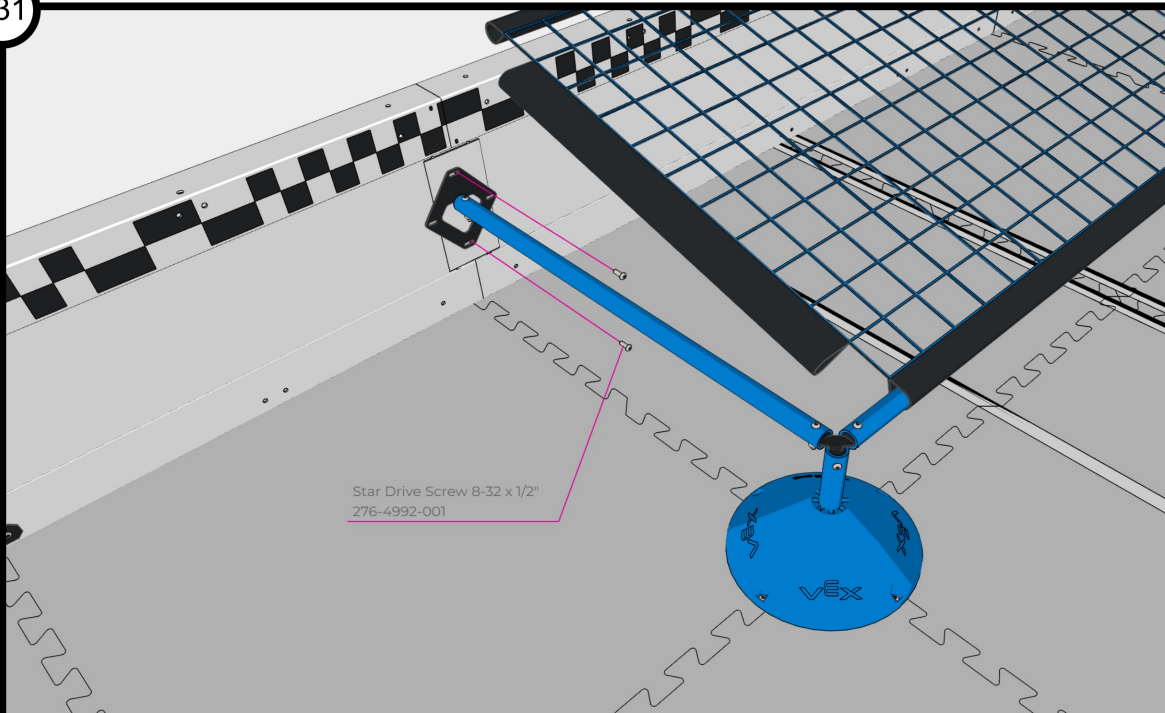
1535: Over Under Field Assembly

7-Jun-2023

G1 T10

<G1>

Step 231 uses 1/2" screws to connect the net to the field perimeter wall. However, there is no way for the screws to stay put. I have looked throughout the assembly manual to make sure I didn't miss anything. I have looked through the holes in the perimeter walls to confirm my thinking that there is nothing inside to attach to. Even poked a screwdriver all the way through. I'm wondering what the fix was? I can't find anything online yet. I want to maintain legality of the field for competition purposes.



Answered by committee

Please review the [Q&A Usage Guidelines](#). This question does not fall under the scope of the Q&A, and would be better suited for an alternative source of discussion such as the [VEX Forum](#) or a call to [VEX Support](#).