

Q&A

VRC 2021-2022: Tipping Point

?????: G12

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.

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922: <G12> Robot swings on low bar at the end of the game

9-Nov-2021

G12

<G12> states *When it's over, it's over. Scores will be calculated for all Matches immediately after the Match is complete, and once all Robots and Balls on the Field come to rest. *We have a case that the robot was hanging on the low bar, but due to fast motion, the robot will continue swinging after the buzzer, however, it may touch the field while swinging, but it will eventually settle to a stop with a legal low hang. The entire process was not pre-programmed routine.

The question is whether the robot will be considered low hang in such case?

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Yes, this would be considered a Low Hang.

807: Level of Contact Allowed When Grasping a Goal

10-Jun-2021

G12

Given the importance of neutral goals, teams will doubtless compete to possess them. And once one alliance possesses a goal, the other alliance may naturally want to take it away. What level of contact is allowed when attempting a takeaway, assuming the bot attempting the takeaway is touching only the goal? For example, assume bot A possesses a goal by grasping it in some way. Attempting a takeaway, bot B grasps the goal and pulls. A refuses to let go and gets knocked over or lifted off the ground by B in the process. Is this allowable, provided B only grasps the goal? <G12> limits bot-to-bot damage, tipping, and entanglement, but does not appear to address a situation when two bots are grasping a common object.

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The v1.0 Game Manual Update included the following additions to rule <G12>:

Note: Incidental damage that occurs due to interaction with a Robot in Possession of a Neutral Mobile Goal will, in most cases, not be considered a violation of <G12>. Intentional damage, tipping, or dangerous mechanisms may still be considered a violation of <R3>, <S1>, or <G1> at the Head Referee's discretion.

VRC Tipping Point is intended to be an offensive, interactive game. Robots interacting with Neutral Mobile Goals should expect vigorous interactions from opponent Robots, especially if attempting to interact with multiple Mobile Goals at once.

If this does not answer your question, please feel free to rephrase and re-submit.

806: Using tallest Neutral Mobile Goal to impede opponents gameplay

10-Jun-2021

SG6 G12 SG10

The tall Neutral Mobile Goal tips over in more than 3/4 of the matches played. it is unstable, even without Ringles on the branches. Given that once there are Ringles on the branches, a robot will be disqualified if they tip that goal over and the

impact of the descoring was match effecting, many teams will choose to avoid the risk of disqualification by tipping the Neutral Mobile Goal over early in the game. Some creative teams might even accidentally tip it over onto an opponents robot. With the branches hanging out the way they do, we have seen that it is likely that a robot on the receiving end of the tipped Mobile Goal will then drag that Mobile Goal around with it for the rest of the match. Is there any penalty for knocking over the tall Neutral Mobile Goal before there are any Ringles on it?

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Given that once there are Ringles on the branches, a robot will be disqualified if they tip that goal over and the impact of the descoring was match effecting

Before getting to the root questions being asked, we wanted to note that this assumption is incorrect. Rule SG6 partially reads as follows, with a portion bolded for emphasis:

<SG6> Rings on the Alliance Mobile Goal are “safe”. Strategies intended to remove **Rings which are Scored on or in an opposing Alliance Mobile Goal** are prohibited.

Neutral Mobile Goals are not covered by SG6, as noted in [this Q&A](#) post

Is there any penalty for knocking over the tall Neutral Mobile Goal before there are any Ringles on it?

There are no rules preventing this, thus it is legal.

Some creative teams might even accidentally tip it over onto an opponents robot. With the branches hanging out the way they do, we have seen that it is likely that a robot on the receiving end of the tipped Mobile Goal will then drag that Mobile Goal around with it for the rest of the match

Although you use the word "accidentally", this hypothetical scenario is getting very close to invoking SG10, which reads as follows:

<SG10> Use Scoring Objects to play the game. Scoring Objects may not be used to accomplish actions that would be otherwise illegal if they were attempted by Robot mechanisms (e.g., Interfering with an opponent's Autonomous routine per <SG4>.)

The intent of this rule is to prohibit teams from using game objects as “gloves” to loophole any rule that states “a Robot may not [do some action]”. This rule is not intended to be taken in its most extreme literal interpretation, where any interaction between a Scoring Object and a Robot needs to be scrutinized with the same intensity as if it were a Robot.

Using a Mobile Goal to damage an opposing Robot could be considered a violation of G12, just as if the action were done with a Robot mechanism.

76: Center Platform Defensive Strategy

13-Sep-2018

G12

Hello I am wondering if the following is legal, If one of our teams designs a lever system to tip another robot off of the center platform while the other team is located on the center platform?

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It is impossible to issue a blanket ruling on a hypothetical robot design. Please see <R3>, quoted here for reference:

<R3> The following types of mechanisms and components are NOT allowed:

- a. Those that could potentially damage playing field components.
- b. Those that could potentially damage other competing robots.
- c. Those that pose an unnecessary risk of entanglement.

A device that was solely designed to tip over opponent robots would likely be considered a violation of R3b and/or R3c.

It sounds like you're attempting to extend <G12>, which states that incidental tipping on the Center Platform is permitted, to Robot design. It's important to remember that <R3> and <G12> exist independently of each other. Please see the following similar Q&A's for more detail:

<https://events.vex.com/VRC/2018-2019/QA/15>

<https://events.vex.com/VRC/2018-2019/QA/21>

As well as the relevant Referee Training video: <https://www.youtube.com/watch?v=YI22vJILF5w>

713: Tetherbot Tipping

11-Dec-2020

G12

See the previous question regarding the definition of a "tetherbot".

If a robot on the opposing alliance tips over part of a tetherbot, but other parts are still upright, should the opposing robot be penalized for tipping?

Note that the game manual does not contain a definition for tipping. However, rule G12 says:

Don't destroy other Robots. But, be prepared to encounter defense. Strategies aimed solely at the destruction, damage, tipping over, or Entanglement of opposing Robots are not part of the ethos of the VEX Robotics Competition and are not allowed. If the tipping, Entanglement, or damage is ruled to be intentional or egregious, the offending Team may be Disqualified from that Match. Repeated offenses could result in Disqualification from the entirety of the competition.

...

Note: A Robot which has expanded horizontally in an effort to obstruct the field, or is legally covering the top of a Goal in a solely defensive manner, should expect vigorous interactions from opponent Robots. Damage that is caused by opponent Robots pushing, tipping, or Entangling with them would not be considered a violation of G12. Gratuitous damage or dangerous mechanisms may still be considered a violation of R4, S1, G1 or at the Head Referee's discretion.

As long as the tetherbot is not using itself to obstruct parts of the field, then opposing robots that tip any part of a tetherbot would be in violation of G12. Correct?

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It is impossible to provide a blanket ruling that would cover all hypothetical Robot designs and Match contexts. However, a Robot with multiple moving mechanisms should always still be considered one Robot, regardless of how independently moving the separate mechanisms are. This overarching mentality should be kept in mind throughout the following answers.

Note that the game manual does not contain a definition for tipping.

When a VRC-specific definition is not available, a dictionary definition should be used. Merriam Webster defines "[tip over](#)" as the following:

: to fall over or to cause (something) to fall over

// He accidentally tipped the lamp over and broke it.

"Tipped over" generally implies that a Robot (or lamp) has been moved from an upright and functional position, to a fallen and non-functional position.

Thus, if a Robot with multiple moving mechanisms has had one mechanism disabled due to falling over, but still has other mechanisms which are upright and able to play the game, then the whole Robot has not been "tipped over".

With that being said, it is still likely that the sub-mechanism was disabled due to an intentional and/or egregious strategic maneuver, and should be treated the same as if an intake or drivetrain was damaged or disabled, i.e. under G12.

As long as the tetherbot is not using itself to obstruct parts of the field, then opposing robots that tip any part of a tetherbot would be in violation of G12. Correct?

The intent of the quoted Note in G12 is to provide a specific application of G13, which states that "Offensive Robots get the 'benefit of the doubt'." A "wall-bot" is a defensive Robot, and is not protected by G12. A Robot which has expanded horizontally in an offensive manner would be protected by G12, whether that expansion contains independently moving sub-parts, or just very large Robot arms.

As always, bear in mind that "tipping over" is not an immediate violation of G12, regardless of the Robot's expansion. Points (b) and (c) of G12 must always be taken into consideration by the Head Referee, which is why it is impossible to provide a blanket answer that would cover all hypothetical scenarios.

b. VEX Robotics Competition Change Up is an interactive game. Some incidental tipping, Entanglement, and damage may occur as a part of normal gameplay without violation. It will be up to the Head Referee's discretion whether the interaction was incidental or intentional.

c. A Team is responsible for the actions of its Robot at all times, including the Autonomous Period. This applies both to Teams that are driving recklessly or potentially causing damage, and to Teams that drive around with a small wheel base. A Team should design its Robot such that it is not easily tipped over or damaged by minor contact.

616: Referee Certification and G12

29-May-2020

G12

Hi, as I took the test to certify myself as a Head Ref, I noticed some discrepancies between questions on the test and rules in the game manual. Mainly, this question in Unit 5:

Consider this situation: A red Robot is trying to score a Ball in the center Goal and a blue Robot is trying to block that Ball from being scored. In that interaction, the Robots push on each other and both end up tipping over, entangled in each other and therefore are disabled in the middle of the field. If the referee determines that this was Match affecting, which robot(s) should be disqualified from the Match?

- The red Robot
- The blue Robot
- Both Robots
- Neither of the Robots

The test marks the correct answer as "The blue Robot", however I am confused as to how this is the case. G12 states:

Strategies aimed solely at the destruction, damage, tipping over, or Entanglement of opposing Robots are not part of the ethos of the VEX Robotics Competition and are not allowed. If the tipping, Entanglement, or damage **is ruled to be intentional or egregious**, the offending Team may be Disqualification from that Match. Repeated offenses could result in Disqualification from the entirety of the competition.

VEX Robotics Competition Change Up is an interactive game. Some **incidental** tipping, Entanglement, and damage may occur as a part of normal gameplay **without violation**.

Emphasis mine. By my interpretation of G12, and with the information that we have been given, neither robot should be DQed. This is because G12 makes no reference to whether the tipping was match affecting or not (indeed, at worlds match affecting or not has not had an effect on G12 rulings); it only prescribes a DQ if the tipping is ruled to be "intentional or egregious". Since we are not told whether or not the tipping was intentional or egregious (and common sense says it was not intentional due to the fact that the blue robot also tipped over), I do not see a reason that the blue robot should be DQed.

Is the interpretation of G12 correct in this question on the certification test? If yes, would the GDC please elaborate as to why that is the case?

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Thank you for your question. After further review, we agree that the original wording of this question may not give enough contextual information to answer it correctly. This question has been re-written for the certification exam to give the necessary context clues.

As a reminder, general suggestions or feedback can always be directed to GDC@vex.com. Feedback or questions regarding the Head Referee Certification exam can be shared by clicking on the Feedback button within the certification course.

50: <G12> Incorrect description of figure 22

17-Aug-2018

G12

In the description in Note 3 it refers to BLUE2 in Figure 22. There is no BLUE2 robot. Caption in figure 22 is correct.

This applies to August 15 version of the Game Manual.

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Thank you for pointing this out. We have updated the web and VRC Hub accordingly.

468: G12d Clarification

20-Dec-2019

G12

I'm posting this question in reference to G12d for a head referee. The interpretation of this rule and the amount of defense tolerated is different everywhere we go! In the non protected floor goal, if a robot is stacking cubes and is contacted by the other alliance and causes either cubes from the stack to fall out of the field or out of the robot that is trying to score, is that a potential match effecting disqualification scenario? The cubes are not scored yet but are being descored with this action. Please clarify if this a violation of G12d?

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Although the scenario being described is in a different location on the field, this question appears to be the similar to this related Q&A:

<https://events.vex.com/VRC/2019-2020/QA/441>

Since Entanglement is not occurring, G12d should only be used as the general guideline that Cubes are an extension of their Robot. So, picture this interaction as if the Cubes were just square metal mechanisms resting on a Robot.

- Bumping into opponents is not illegal in itself. However, there is a threshold where bumping becomes reckless ramming, and could be considered a violation of G12, S1, or G1.
- Dislodging parts of your opponent's robot (without Entangling them) is not illegal in itself, because part (c) puts some responsibility on the opponent to design their robot such that it is not easily damaged by minor contact. However, there is a threshold where incidental damage becomes intentional/egregious destruction, and could be considered a violation of G12, S1, or G1.

With regard to the following portion of your question:

The cubes are not scored yet but are being descored with this action.

Match Affecting verbiage should only come into effect when a Head Referee has called a rules violation, and the rule in question requires them to determine whether the Robot should receive a warning or a Disqualification via Match Affecting verbiage.

The scenario described in this question is not, in itself, a violation, provided no other rules are being violated. If the Head Referee does determine that G12 has been violated in an egregious manner, then Match Affecting verbiage wouldn't apply anyway, since G12 is one of the only rules which does not hinge upon "Match Affecting".

The interpretation of this rule and the amount of defense tolerated is different everywhere we go!

Ultimately, we must again refer to the previously linked Q&A:

A volunteer Head Referees' primary responsibility should be to interpret the rules as written and as the context of their event necessitates. If a game is played more defensively at a different event, then it would stand to reason that the judgment calls would be handled accordingly in the context of that event.

We would add that the dynamic sport of competitive robotics inherently includes "gray area" situations that cannot rely on black-and-white rules, as do many other sports, and must therefore rely upon the in-context and on-the-spot judgment of human referees in these cases. Any time an on-the-spot judgment is needed by a volunteer Head Referee, there is a possibility that two different volunteers may interpret the situation differently.

Our best advice to Teams who are struggling with this variance would be to compete in a manner which minimizes the risk of relying on a judgment call (especially a G12 one).

452: <G12> How to determine if incidental entanglement is egregious

10-Dec-2019

G12 R3 G13

<G12> Don't destroy other Robots. But, be prepared to encounter defense. Strategies aimed solely at the destruction, damage, tipping over, or Entanglement of opposing Robots are not part of the ethos of the VEX Robotics Competition and are not allowed. If the tipping, Entanglement, or damage is ruled to be intentional or **egregious**, the offending Team may be Disqualified from that Match. Repeated offenses could result in

Disqualification from the entirety of the competition. b. VEX Robotics Competition Tower Takeover is an interactive game. Some incidental tipping, Entanglement, and damage may occur as a part of normal gameplay without violation. It will be up to the Head Referee's discretion whether the interaction was incidental or intentional.

<R3> Robots must be safe. The following types of mechanisms and components are NOT allowed: c. Those that pose an unnecessary risk of Entanglement.

<G13> Offensive Robots get the "benefit of the doubt". In the case where referees are forced to make a judgment call regarding a destructive interaction between a defensive and offensive Robot, or an interaction which results in a questionable rules violation, the referees will err on the side of the offensive Robot.

Egregious is not defined in the game manual, by Oxford Dictionary
<https://www.oxfordlearnersdictionaries.com/us/definition/english/egregious>

extremely bad

the definition of extremely

to a very high degree

extremely is a very subjective adjective, how should one determine if the incidental tipping is egregious? Does the duration of the entanglement(usually starts from the time of entanglement to the end of the game) matter? Does the scoring capability of the robots that are entangled matter(how much points would they score if they are not entangled)? Does the context when the entanglement happened(whether the robot was playing defense or offense) matter? Does R3 come into play as well, and we need to determine whether there was unnecessary risk of entanglement?

Two reference videos:

<https://youtu.be/AGJUpDCF0nQ?t=25953>

at 7:12:33 the blue robot was playing defense and has entangled with the red robot. Red won the match so the entanglement is not match affecting.

<https://youtu.be/EXhWerDR03w?t=187>

at 3:07 the red robot was playing defense and has entangled with the blue robot. Red was DQed for that match, I couldn't find any other violations in this game other than the entanglement, so I believe red is DQed for "egregious entanglement" since it was not intentional.

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extremely is a very subjective adjective, how should one determine if the incidental tipping is egregious?

As you noted, this is a very subjective question. If it was possible to provide a black-and-white definition, then human Head Referees would not be necessary. It is the judgment and discretion of these Head Referees which determines if a given interaction is egregious or not.

We are not going to be able to provide a point-by-point checklist to determine where to draw this line. The answer to all of your specific questions is, "it could". In general, we would provide the following overarching guidelines:

- Context matters. As noted in [this similar Q&A](#), if a game is played more defensively at a different event, then it would stand to reason that the judgment calls would be handled differently in the context of that event.
- Offense vs defense matters. Per G13, offensive Robots usually get the "benefit of the doubt".

- On-field performance of the tipped/Entangled/damaged Robot generally does not matter. This is why G12 is one of the only rules in the Game Manual that does not hinge upon Match Affecting verbiage, and instead uses "egregious".

441: Inconsistent interpretation of G12d

5-Dec-2019

G12 G13 Cubes

I am an Event Partner and have a question about rule G12d, after a discussion and concern with an area Head Ref.

<G12> Don't destroy other Robots. But, be prepared to encounter defense. d. Game elements in possession of a Robot are an extension of that Robot. Therefore, Entanglement (e.g., grasping, hooking, attaching) with Cubes that are in the possession of an opposing Robot is a violation of this rule.

Our head ref has seen a lot of game play from around the USA on YouTube that is alarming. It seems there is a strategy where teams will ram, or spin into other tray-bots in an attempt to knock cubes out of the trays of the other robot. This seems to be a direct violation of G12d, and G13 would also be in effect since offensive robots get benefit of doubt. So, if a red robot is near the unprotected goal zone and is trying to score a stack and a blue robot rams them and knocks cubes out of the tray, we believe this would be violating G12d and G13 since red is clearly trying to score.

Our biggest issue is the inconsistencies of Head Refs calling this type of game play. We are trying to prepare teams for Worlds but we seem to play different versions of these games state by state, depending on interpretation of the rules by Head Refs and EP's. As a Head Ref, he wants to be able to have teams ready for the game when they get to Worlds, but based on past experiences, the game is played much more defensively at Worlds than what we played in our region throughout the season. When this happens, as a volunteer he feels as though he let the kids down and did not properly prepare them for the Worlds in which they qualify for.

Could you please clarify G12d, especially as it pertains to robots in possession of cubes and trying to score while encountering these defensive actions?

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We are not going to be able to provide a blanket answer that encompasses all hypothetical Robot-to-Robot interactions of this type. The best way to approach this question is going to be to look at the broader context of G12 beyond the portion that was quoted.

<G12>Don't destroy other Robots. But, be prepared to encounter defense. Strategies aimed solely at the destruction, damage, tipping over, or Entanglement of opposing Robots are not part of the ethos of the VEX Robotics Competition and are not allowed. If the tipping, Entanglement, or damage is ruled to be intentional or egregious, the offending Team may be Disqualified from that Match. Repeated offenses could result in Disqualification from the entirety of the competition.

c. A Team is responsible for the actions of its Robot at all times, including the Autonomous Period. This applies both to Teams that are driving recklessly or potentially causing damage, and to Teams that drive around with a small wheel base. A Team should design its Robot such that it is not easily tipped over or damaged by minor contact.

d. Game elements in possession of a Robot are an extension of that Robot. Therefore, Entanglement (e.g., grasping, hooking, attaching) with Cubes that are in the possession of an opposing Robot is a violation of this rule.

G12 is not intended to be a "don't play defense" rule; it is a "don't destroy other Robots" rule. This core principle should be obvious - VRC is not Battlebots. However, VRC games are designed to encourage Robot-to-Robot interactions, so there is always a possibility of an interaction which results in a Robot being destroyed, damaged,

tipped, or Entangled. G12 then exists to provide guidance for a Head Referee to walk through when determining whether that damage should result in a violation.

It seems there is a strategy where teams will ram, or spin into other tray-bots in an attempt to knock cubes out of the trays of the other robot. This seems to be a direct violation of G12d, and G13 would also be in effect since offensive robots get benefit of doubt.

Since Entanglement is not occurring, G12d should only be used as the general guideline that Cubes are an extension of their Robot. So, picture this interaction as if the Cubes were just square metal mechanisms resting on a Robot.

- Bumping into opponents is not illegal in itself. However, there is a threshold where bumping becomes reckless ramming, and could be considered a violation of G12, S1, or G1.
- Dislodging parts of your opponent's robot (without Entangling them) is not illegal in itself, because part (c) puts some responsibility on the opponent to design their robot such that it is not easily damaged by minor contact. However, there is a threshold where incidental damage becomes intentional/egregious destruction, and could be considered a violation of G12, S1, or G1.

The only pure grounds provided in the Game Manual for a G12 violation are "destruction, damage, tipping over, or Entanglement [...] ruled to be intentional or egregious". Ultimately, whether something is "intentional or egregious" is a line that cannot be drawn rigidly in black-and-white; the need for contextualized interpretation of this threshold is why VRC relies upon the in-Match judgment of human Head Referees. We cannot make rulings from afar or provide answers for every possible hypothetical scenario; we can only implore Head Referees to make their best personal judgments based on the rules as written, and provide as many guidelines as possible via the Q&A.

As a Head Ref, he wants to be able to have teams ready for the game when they get to Worlds, but based on past experiences, the game is played much more defensively at Worlds than what we played in our region throughout the season. When this happens, as a volunteer he feels as though he let the kids down and did not properly prepare them for the Worlds in which they qualify for.

A volunteer Head Referees' primary responsibility should be to interpret the rules as written and as the context of their event necessitates. If a game is played more defensively at a different event, then it would stand to reason that the judgment calls would be handled accordingly in the context of that event.

431: <SG3> Defense Strategy in Protection Zone

22-Nov-2019

G12 G14 SG3

Hi, First, I want to reference some previous rulings back in Nothing But Net Protection Zone. The climbing/loading zone in Nothing But Net received similar protection to Inner/Outer protection Zone this year. I know Q&A from previous rulings do not carry over but they may affect any rulings that will be made for this season. I am also referencing previous rulings in case any other teams want to check on any of the decisions made in the past.

<https://www.vexforum.com/t/answered-question-regarding-sg11/30136> It was ruled here that it is allowed to block opponents from entering the protection zone, and the opponent's robot is allowed to push the robots in an attempt to enter the zone.

<https://www.vexforum.com/t/answered-legal-defense-of-elevation/31912> It was ruled here that being pushed into the protection zone does not result in a violation if the robot being pushed in leave the zone immediately.

<https://www.vexforum.com/t/answered-forced-into-climbing-zone/33118> However, the decision was overturned here, robot being pushed into the zone DOES cause a violation here, even if the robot being pushed leaves the zone immediately.

Now comes to this year's game.

<SG3> Stay away from your opponent's protected areas. Robots may not intentionally or **accidentally**, directly or indirectly, perform the following actions:

A> Contact an opponent Robot which is fully contained within their Protected Zone.

B> Contact any Scored Cubes in either of opposing Alliance's Goal Zones.

Will robots be in violation of Case D, E if the robots playing defense are being pushed into the inner protection zone/ by the opponents if they leave immediately upon being pushed into the inner zone?

Will robots be in violation of Case D if the robots playing defense are being pushed to contact the barrier/goal zone in the unprotected zone if they leave immediately upon being pushed into the barrier/goal zone?

Will robots be in violation of Case B,F if there are scored cubes in the goal zone, and robots playing defense are being pushed into the inner protection zone and touched/ knocked over a stack if they leave immediately upon being pushed into the inner zone?

SG3 does not supersede G14. Therefore, it will be at the Head Referee's discretion whether this contact was solely the result of being pushed by their opponents. If this is the case, then it would not be considered a violation, provided that the defensive Robot makes immediate and visible attempts to leave the Inner Protected Zone.

That being said, it is impossible to provide a blanket answer that would cover all possible hypothetical interactions. G13, which states that offensive Robots receive the "benefit of the doubt", may be used liberally in these judgment calls. Therefore, in contrast with the above, a Head Referee may make the judgment call that G14 is not applicable, and an SG3 violation would result. Some scenarios that could drive this judgment call are as follows (although this is not a comprehensive list):

- A defensive Robot "baiting" an offensive Robot into causing contact
- A defensive Robot driving in a manner that causes accidental contact ("A Team is responsible for the actions of its Robot at all times" per G12)
- A defensive Robot not making an immediate and visible attempt to exit the Inner Protected Zone upon entry

Teams attempting a defensive strategy such as the one included in your attached image should be very cognizant of this possibility, and the risk they are taking in doing so.

Will the two robots playing defense in this scenario receive protection from G12? My interpretation is that since they are partaking in defensive strategy, they will not receive protection for trapping, is this interpretation correct?

We are not entirely sure what you mean by "protection for trapping". To be clear - if you are asking about an offensive Robot attempting to utilize their Goal Zone, if they will receive a Trapping count for confining the defensive Robots, then your interpretation is correct. Per G13, the offensive Robot should receive the "benefit of the doubt" and not receive a Trapping violation.

423: G12d Game elements in possession of a Robot are an extension of that Robot.

14-Nov-2019

G12

G12d states:

Game elements in possession of a Robot are an extension of that Robot. Therefore, Entanglement (e.g., grasping, hooking, attaching) with Cubes that are in the possession of an opposing Robot is a violation of this rule.

From the context of subrule d (talking about grabbing onto cubes that another robot are possessing), as well as the general nature of G12 (limiting defense and destructive behavior), it would make sense that this concept was meant to apply to such situations only.

However, [in a recent Q&A answer](#), the scope of this rule was demonstrated to be significantly larger:

Their robot was in possession (not just touching) of a cube and that cube was touching the base cube of that stack. He felt that the way the rule is written, the stack should not be considered scored since the robot (through that cube in its possession) was touching the base of the stack. If the possession of a cube is an extension of the robot, referee felt the robot was touching the base cube of the stack since it possessed the cube that was touching it.

This is a correct interpretation (assuming that the Robot possessing the Cube was a Red robot). The Cube being contacted would not be considered a Base Cube, and the Scored status of all other Cubes in the Goal Zone would be affected accordingly.

...[these rules] are intended to be applications of an overall principle that Robots and any Cubes they are possessing should be considered as one entity.

With this expansion of the rule, it seems that the cube would be considered a part of the robot in many more situations than appears at first glance. This brings up several questions:

For clarity, a cube which is possessed by a robot will be referred to as a *possessed cube*

1. SG3: Would it be illegal for a *possessed cube* to perform any of the actions under SG3?
 - a. In particular, if a *possessed cube* contacts an opponent's *Inner Protected Zone*, would the offending robot be disqualified?
2. G4: Is it illegal to have a *preload* which counts as a *possessed cube* extend outside of the starting volume?
3. G5: Is it illegal to intentionally detach a *possessed cube* from a robot?
4. SG3a: Is a *possessed cube* considered part of the robot for the purpose of determining whether a *Robot* is considered to be "fully contained" within its *Protected Zone*?

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First - please see [this similar Q&A](#), and remember to always bear in mind rule G3 when looking for edge-case interpretations of rules and Q&A responses:

<G3> Use common sense. When reading and applying the various rules in this document, please remember that common sense always applies in the VEX Robotics Competition.

The primary rule in question is SG7:

<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>.

SG7 intentionally does not include the word "possess", it includes the word "use". The following are all examples of "using" a Cube:

- A Robot satisfying the [dictionary definition of possessing](#) a Cube ("the state of having, owning, or controlling something")
- A Robot launching a Cube across the field
- A human Drive Team Member holding a Match Load Cube

The intent of G12-d is to provide a specific interpretation of SG7 as it applies to G12-esque interactions such as damage, tipping, or Entanglement. The intent of G12-d is not to hinge upon the word "possession"; it was simply used because in a G12 interaction involving a Cube, it is most likely that the Robot is holding a Cube, and the word "possession" is more concise than "having, owning, or controlling". While we would hope this is unlikely, G12 would still be violated if a Team launched a Cube at an opposing Robot such that it damaged and/or tipped the opponent, even though it was not "possessing" the Cube at the time of the damage.

With that all said - because your questions do not involved destruction, damage, tipping, or Entanglement, G12 is irrelevant. SG7 and G3 are the only rules that should be considered.

1. SG3: Would it be illegal for a *possessed cube* to perform any of the actions under SG3?

a. In particular, if a *possessed cube* contacts an opponent's *Inner Protected Zone*, would the offending robot be disqualified?

Yes, this is correct.

2. G4: Is it illegal to have a *preload* which counts as a *possessed cube* extend outside of the starting volume?

3. G5: Is it illegal to intentionally detach a *possessed cube* from a robot?

No, neither of these are illegal. These would both ultimately be G3 edge-case interpretations of SG7.

411: Possession versus contact, regarding cube being an extension of the robot (G12)

8-Nov-2019

G12

In an earlier Q&A (cube in possession of a robot is an extension of the robot), it was specified that a cube in possession of the robot was an extension of that robot, and therefor that cube would invalidate another stack where it was contacting the base cube.

For the specific example in the original Q&A (<https://events.vex.com/VRC/2019-2020/QA/366>): what defines "possession?"

Is a cube that is being touched on two opposing sides considered possessed? Does the quantity of touching matter (for example, only the flaps on an intake are touching opposing faces of the cube)?

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what defines "possession?"

When a VRC-specific definition of a word is not presented in the Game Manual, a dictionary definition should be used. The [Oxford dictionary definition](#) of "possession" is "the state of having, owning, or controlling something".

It is important to remember that the only mention of the word "possession" in the VRC Tower Takeover is in rule G12d:

G12> Don't destroy other Robots. But, be prepared to encounter defense. Strategies aimed solely at the destruction, damage, tipping over, or Entanglement of opposing Robots are not part of the ethos of the VEX Robotics Competition and are not allowed. If the tipping, Entanglement, or damage is ruled to be intentional or egregious, the offending Team may be Disqualified from that Match. Repeated offenses could result in Disqualification from the entirety of the competition.

d. Game elements in possession of a Robot are an extension of that Robot. Therefore, Entanglement (e.g., grasping, hooking, attaching) with Cubes that are in the possession of an opposing Robot is a violation of this rule.

As noted in the Q&A that you linked, the primary intent of this rule is to provide a specific interpretation of SG7 as it should be applied to 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>.

When a Head Referee is making a G12 judgment call, their primary concern should be determining whether the destruction, damage, tipping over, or Entanglement was intentional, incidental, egregious, etc. The nuances of the definition of the word "possession" should ultimately be irrelevant in this evaluation. If a scenario does present itself where the Head Referee's decision hinges solely upon determining whether the Robot in question was "having, owning, or controlling" the Cube, then we would direct them to rule G3, "Use common sense".

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.

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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.

367: Playing offense while a part of your robot is playing defense

30-Sep-2019

G12 G13 G14

Hello my team was wandering what rules could and could not be used on a possible design, a design that has a big defensive strategy (a part of the robot) and an offensive strategy(a cube stacker). So if a robot got in tangled, flipped over, or stuck on the defensive part of our robot while we were playing offense and not moving or forcing the defensive part of our robot to do such things would that count as our fault or would the team that got suck on us be there fault. I was wandering this because some of the defense rules use words like solely, only, and purely defensive strategies will pretty much always be at fault but this design is not a purely, solely or only a defensive robot it is both. Sent from my iPhone

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It is impossible to issue a blanket ruling that would cover all hypothetical interactions or Robot designs. This is the type of question that is why VRC utilizes human Head Referees who can observe the context of a specific Robot and/or Match to provide a judgment call when needed.

G13 states the following:

< G13 > Offensive Robots get the "benefit of the doubt". In the case where referees are forced to make a judgment call regarding a destructive interaction between a defensive and offensive Robot, or an

interaction which results in a questionable rules violation, the referees will err on the side of the offensive Robot.

The Note in G12 states the following:

Note: A Robot which has expanded horizontally in an effort to obstruct the field, or is legally covering the top of a Tower in a solely defensive manner, should expect vigorous interactions from opponent Robots. Damage that is caused by opponent Robots pushing, tipping, or Entangling with them would not be considered a violation of <G12>. Gratuitous damage or dangerous mechanisms may still be considered a violation of <R3>, <S1>, or <G1> at the Head Referee's discretion.

The first portion of this Note does not require a "solely defensive manner", it simply requires the Robot to have expanded horizontally in an effort to obstruct the field.

In the context of these rules, specific mechanisms or Robots are not assigned "defensive" or "offensive" roles. It is interactions and strategies that are assigned "defensive" and "offensive" roles.

There are scenarios where a primarily offensive mechanism is used defensively (e.g. an intake being used to entangle an opponent). There are scenarios where a primarily defensive mechanism is found on a Robot playing offense at any given moment (e.g. [this video](#) which has now been referenced on the Q&A three times).

When making a G12 or G13 judgment call, Head Referees will need to look at the specific interaction at the moment it occurred, alongside any relevant context (such as previous interactions or strategies of those two Robots).

366: cube in possession of a robot is an extension of the robot (G12)

30-Sep-2019

G12 SG7

Could the update, G12 which states "game elements in possession of a robot are an extension of the robot" be clarified? It has been defined in defensive moves such as holding a cube to knock down stacks, etc. What about in an offensive situation like scoring of stacks at the end of a match? A referee questioned this at a tournament this weekend. Red had 1 stack of 6 scored. Their robot was in possession (not just touching) of a cube and that cube was touching the base cube of that stack. He felt that the way the rule is written, the stack should not be considered scored since the robot (through that cube in its possession) was touching the base of the stack. If the possession of a cube is an extension of the robot, referee felt the robot was touching the base cube of the stack since it possessed the cube that was touching it. We were referred to Figure 13 in the game manual where a robot is "touching" (not possessing a cube) and said cube was touching a stacked cube. All of the cubes of that second stack that that cube was touching were still considered scored. There is no other reference to a cube being an extension of the robot in the rules for offensive situations so either G12 only applies in defensive situations if the cubes are considered scored or it applies at all times, which mean some of the stacked cubes would not be considered scored. Hope I made his point clear. Please clarify. Thank you.

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G12d states the following:

Game elements in possession of a Robot are an extension of that Robot. Therefore, Entanglement (e.g., grasping, hooking, attaching) with Cubes that are in the possession of an opposing Robot is a violation of this rule.

SG7, a similar rule that utilizes the same principle, states the following:

<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>.

Although both of these rules reference defensive interactions as their examples, they are intended to be applications of an overall principle that Robots and any Cubes they are possessing should be considered as one entity.

Their robot was in possession (not just touching) of a cube and that cube was touching the base cube of that stack. He felt that the way the rule is written, the stack should not be considered scored since the robot (through that cube in its possession) was touching the base of the stack. If the possession of a cube is an extension of the robot, referee felt the robot was touching the base cube of the stack since it possessed the cube that was touching it.

This is a correct interpretation (assuming that the Robot possessing the Cube was a Red robot). The Cube being contacted would not be considered a Base Cube, and the Scored status of all other Cubes in the Goal Zone would be affected accordingly.

305: Clarification on Intent of Rule G12 d

18-Jun-2019

G12

Is the intent of G12d to (1) avoid entanglement that includes cubes in possession of a robot and/or (2) rule illegal the removable of cubes from a robot's possession? To expand on (2): if a robot has cubes in its possession and an opposing robot removes one or more cubes without becoming entangled (grasping, hooking, attaching), is that legal? As an extension, is it OK to grasp, hook or attach to a cube in possession of a robot if it is for the sole purpose of removing the cube from the robot's possession?

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G12d states the following:

d. Game elements in possession of a Robot are an extension of that Robot. Therefore, Entanglement (e.g., grasping, hooking, attaching) with Cubes that are in the possession of an opposing Robot is a violation of this rule.

(in the future, please remember to quote the applicable rule in your question)

if a robot has cubes in its possession and an opposing robot removes one or more cubes without becoming entangled (grasping, hooking, attaching), is that legal?

It is always difficult to issue a blanket ruling based on a snapshot description of a hypothetical scenario and/or robot design. With that said, G12d only explicitly prohibits grasping, hooking, or attaching to Cubes that are possessed by an opposing Robot. Therefore, there is nothing prohibiting indirect removal of Cubes from an opponent Robot (such as by bumping into them).

As a note, "grasping", "hooking", "attaching", and "possession" are not defined terms in the VRC Tower Takeover Game Manual, so standard English definitions/interpretations would apply. Therefore, in this hypothetical scenario, it will be at the Head Referee's discretion to determine whether the opposing robot has Entangled with the Cube or not.

As an extension, is it OK to grasp, hook or attach to a cube in possession of a robot if it is for the sole purpose of removing the cube from the robot's possession?

No. G12d prohibits Entangling (i.e. grasping, hooking, or attaching to) Cubes that are in possession of an opposing Robot.

3: Alliance tile defense

14-May-2018

Alliance Platform G12

As per <G12> note 2 states, The Alliance Platform is not included in Note 1. Robots which are Alliance Parked are still protected by <G12> against destructive or defensive strategies.

I'm asking for clarification on if the alliance tile would have the same <G12> rule as any regular field tile, such as legal pinning/trapping and pushing.

In short, would it be legal to push an opposing robot off their alliance tile in an non-destructive manner?

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Please note that G12 refers specifically to the Alliance Platform, not the Alliance Starting Tile. Figure 3 in the Game Manual depicts the Alliance Starting Tiles, while Figure 5 depicts the Alliance Platforms.

I'm asking for clarification on if the alliance tile would have the same G12 rule as any regular field tile, such as legal pinning/trapping and pushing.

The Alliance Starting Tile is not treated any differently than any other field tiles with regard to Trapping. The Alliance Platform is not treated any differently than any other field element with regard to Trapping.

In short, would it be legal to push an opposing robot off their alliance tile in an non-destructive manner?

There are no rules prohibiting this, for either the Alliance Platform or an Alliance Starting Tile. The note in G12 is included because pushing a Robot off of the Alliance Platform carries with it a significant amount of risk that the Robot will tip over or become otherwise damaged.

246: Pushing Opposing Bot Across the Field into the wall causing disconnect

20-Feb-2019

G12

I have seen this so often this year it is becoming an issue for many teams. One alliance bot will push an opposing bot across the field and slam them into the outside wall. After the incident the opposing bot becomes disabled due to disconnect, white screen (on V5), or parts break (chains, rubber bands, etc). Is this move legal because many referees and event partners say it is, and we need clarification. If it is legal, please explain how because it seems to go against the G12 rule part A: VEX Robotics Competition Turning Point is intended to be an offensive game. Teams that partake in solely defensive or destructive strategies will not have the protections implied by <G12> (see <G13>). However, defensive play which does not involve destructive or illegal strategies is still within the spirit of this rule.

Slamming a robot into the side wall is not incidental and while the intent may not be to damage the bot, the risk of doing so is very high and teams know that.

Here is an example video of what I am talking about, although the robot does not become disabled in this case. It takes place at the 1:55 mark.

<https://youtu.be/kEEMzIdeHzA?t=112>

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Being pushed is not, in itself, a violation of <G12>. You already quoted part A, which is the primary rule that would apply in this case. We would also like to note part C, quoted here for reference:

A Team is responsible for the actions of its Robot at all times, including the Autonomous Period. This applies both to Teams that are driving recklessly or potentially causing damage, and to Teams that drive around with a small wheel base. A Team should design its Robot such that it is not easily tipped over or damaged by minor contact.

It is impossible to provide a blanket ruling that would apply to all scenarios, so it is at the Head Referee's discretion whether a given interaction is considered a "destructive strategy" (in the context of part A) or a "minor contact" (in the context of part C).

The specific video example you have linked would generally not be considered a violation of <G12>, and would generally be considered normal head-to-head gameplay. We would advise Teams to consider these types of interactions as a possibility when designing their Robots.

241: Referee Definition of Egregious

11-Feb-2019

G12

Hello,

It has recently come to my team's attention that "egregious" is no longer defined by VEX in the Game Manual. In the Toss Up Game Manual, "egregious" was followed by the parenthetical "(Match Affecting)", drawing clear correlation between the two definitions. For example: "<G7 (2013-2014)> During a Match, Robots may be operated only by the Drivers and/or by software running in the onboard control system. A Coach may not touch his/her team's controls anytime during a Match. Violations of this rule will result in a warning for minor offenses which do not affect the match. Egregious (match affecting) offenses will result in a Disqualification. Teams who receive multiple warnings may also receive a Disqualification at the head referee's discretion."

However, when looking through the Turning Point Game Manual, no such clarification exists. "Egregious" is left as a stand alone word with no clarification on how the word can be defined. For example: "<G12 (2018-2019)> Don't destroy other Robots. But, be prepared to encounter defense. Strategies aimed solely at the destruction, damage, tipping over, or Entanglement of opposing Robots are not part of the ethos of the VEX Robotics Competition and are not allowed. If the tipping, Entanglement, or damage is ruled to be intentional or egregious, the offending Team may be Disqualified from that Match. Repeated offenses could result in Disqualification from the entirety of the competition."

Because of this, should it be assumed that Vex no longer associates the word "egregious" with "Match Affecting," or can it be assumed that the word and phrase can still be paired? The cause for this question stems from a tip in one of our matches. The referee argued that the tip was unintentional, and therefore disqualification was not applicable. In addition, we were not able to argue that it was an "egregious offense" due the vagueness of the word's dictionary definition "outstandingly bad; shocking," as this definition is difficult to interpret in the context of robot interactions. If there is damage/tipping caused to a robot that is match affecting, would the action be "egregious", or does "egregious" depend solely on the severity of the action in question?

Thank you for your time and attention in this matter.

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should it be assumed that Vex no longer associates the word "egregious" with "Match Affecting," or can it be assumed that the word and phrase can still be paired?

Your first assumption is correct. The breaking apart of "egregious" and "Match Affecting" in recent Game Manuals is a conscious and intentional verbiage change.

It is worth noting that just like Q&A's, the only rules which apply to a given game is that game's official Game Manual. Previous rules, interpretations, or precedents can not always be assumed to apply.

The referee argued that the tip was unintentional, and therefore disqualification was not applicable. In addition, we were not able to argue that it was an "egregious offense" due the vagueness of the word's

dictionary definition "outstandingly bad; shocking," as this definition is difficult to interpret in the context of robot interactions. If there is damage/tipping caused to a robot that is match affecting, would the action be "egregious", or does "egregious" depend solely on the severity of the action in question?

There is no VRC-specific definition of the term "egregious". The dictionary definition that you quote is the intended one when applying it to <G12>. Note that <G12> does not include "Match Affecting" verbiage, and only includes "intentional or egregious" verbiage.