

## Key lessons from past week

G18 - Endgame contact in the Platform Zone - Two things we have seen going wrong here:

- The Platform Zone is bounded by the Scale, extended edge of the Platform, and the Fence of the Switch. Don't read G18 as completely on the Platform -- it means completely contained in the Platform Zone, which means they might not even be touching the Platform, and are still safe from a hit.
- Some HRs are crediting contact in endgame as a free climb regardless how the contacted Robot ends the Match.
  - If the contacted Robot then proceeds to a successful Climb, there is no additional Climb applied.
  - If the contacted Robot then proceeds to Park, then it is upgraded to a Climb.
  - If the contacted Robot then proceeds to neither Park or Climb, they are still awarded with a Climb post-match.
  - If two Robots were already on top of ramps for Bot3, and Bot3 gets hit (with the Robots on top still in Climb position at T=0) then Bot3, which was Parked, gets upgraded to a Climb
  - If in the previous scenario the hit caused Bot3 to collapse, and the other two Robots to be no longer in Climb position, then all three Robots would be given the Climb.

G22 - Power Cube control in Autonomous - This was called incorrectly at a number of Week 2 events. A Robot during Autonomous may not control more than one Power Cube. This includes moving the stack in the Power Cube Zone, or the line of Power Cubes along the Switch Fence (unless that movement is because they don't have one and are trying to pick one up).

## Procedural updates

G16 Protection - Since the Null Territory is an infinitely tall volume, G16 should be read as bumpers intersecting the Null Territory (this direction is per the Director of FRC, the manual will likely be updated next week).

G16 & G18 Transitive Contact - G16 and G18 are still violated if done so transitively through a Power Cube (this direction is per the Director of FRC, the manual will likely be updated next week).

## Query System Responses

Paraphrased Question/Comment/Issue	Response
<p><i>10.7 Yellow/Red Cards - Fouls that "escalate rapidly" to YC/RC are considered "repeated" after 3 instances of the foul and then result in a YC, per previous HR guidance. Should we be sending refs to talk to teams after every instance of G25/G22 regular foul being called on a team in a match? ...and/or after each tech foul for G09/G20 given?</i></p>	<p>The Head Referee should be giving these warnings, not the Referees. We expect that a Head Referee should be aware that repeated violations of this are occurring, either by direct observation, or by being told by Referees. Until there is a repeat, there is not a need to be notifying teams.</p>

*This document is intended solely for communication to FRC Head Referees and should not be distributed.*

<p>10.7 Yellow/Red Cards - During playoffs, are warnings also cleared (in addition to any YC/RC given in qualification matches)? During playoffs, must we continue to warn each alliance for each time they violate one of the “escalating” fouls? Or can we give “blanket” warnings during the alliance captain meeting and indicate that repeated violations may yield cards?</p>	<p>Safety warnings are not cleared. Team's need to be warned any time they commit one of the escalating violations. Blanket warnings are not consistent with a mentoring approach.</p>
<p>4.2 Scoring - Climbing requires robot to have BUMPERS fully above the BRICKS. If a robot has a bumper segment fall off at the end of the match, but all bumpers remaining on the robot are above the BRICKS at T=0, is the robot considered as CLIMBING? If <u>all</u> bumpers fall off, is it possible for the robot to be considered as CLIMBING? (Regardless, ROBOT would incur G07 foul and be subject to disable.)"</p>	<p>In cases of a bumper (or other part of a robot) falling off, it is no longer considered part of the robot for the remainder of the Match. Therefore, if there are bumpers still attached and other criteria is met, a Climb can be awarded. For the extreme edge case of no bumpers left, the definition of climb requires at least some bumpers to be present and above the bricks, so you cannot credit a climb.</p>
<p>C07 - Would a Redbot driving into its own Null Territory and coming in contact with a Bluebot already there ever be a C07?</p>	<p>The blue box is very specific about the risk of being in an opponent's null territory. Redbot did not force Bluebot into the penalty, blue put themselves at risk.</p> <p>An example of when G16 could lead to a C07: Bluebot gets stuck in their opponent's Null Territory. Every time RedBot comes over to place a Cube on the Scale, they happen to make contact with Bluebot. Every one of those is a Tech Foul. But then you notice that each time Redbot comes back with a cube, they hit them on initial approach (Tech Foul on Blue), then place their cube, then back up and drive forward again to generate a second Tech Foul per Cube placement (and this action is clearly deliberate, as they previously never did this backup and forward again movement when Bluebot wasn't there). Each one of those deliberate extra hits would be a C07 (Foul per) on Redbot, if they did it more than twice, Redbot would also get a Tech Foul and a Yellow Card.</p>
<p>G09 - Is "launching" defined as projected with any velocity in a forward trajectory while losing contact with the robot? I just want to make sure that there is no threshold.</p>	<p>Launching POWER CUBES is shooting into the air, kicking across the floor, or throwing in a forceful way.</p>
<p>G18 - G18 allows that a contacted opponent ROBOT, and all partner ROBOTS it's fully supporting, are considered to have CLIMBED at the end of the MATCH. Are fully-supported partner ROBOTS still considered climbed, event if they were not fully supported at the time when the G18 foul is committed? (In other words: RedBot hits BlueBot1 in Blue Platform Zone to get G18 penalty; BlueBot1 then goes up on Platform, deploys a ramp and BlueBot2 drives onto ramp. No BlueBots are above 12" mark. How many BlueBots are credited with climb by virtue of G18 penalty?)</p>	<p>The rule means at the time of contact, they would have to be already supporting them when they get hit</p>

<p><i>G18 - When an alliance gets a free climb due to G18, what is the preferred method to enter that climb into the scoring system? Should we A) have the head referee direct the scorekeeper to enter the free climb after the match, or B) have the near and far referees put the free climb into their referee panels?</i></p>	<p>The only option is A. Referees are instructed to only enter what they see at T=0 on their panel.</p>
<p><i>G20 - if a bot shots a cube at the plate and misses and it lands on the arm and tips the scale in their favor. What is the call?</i></p>	<p>If they were shooting at the plate, as you indicate, then they clearly did not deliberately place it on the arm, so there is no call.</p>
<p><i>G22 - After the guidance given in Digest 2, it was still somewhat unclear exactly how G22 was being modified, or now, when G22 should still be called, especially when it relates to the pyramid of power cubes or the line of cubes by the switch. If a robot is attempting to pickup one of the cubes in these areas, is there a limit as to how far they can push them while trying to acquire the one cube?</i></p>	<p>We did not apply any distance to the movement of the cubes in the Power Cube Zone or along the fence. It should be made clear that we have not modified G22, only clarified the interpretation regarding of control of cubes starting in the Power Cube Zone and along the Fence.</p>
<p><i>G22 - If a robot pushes the Power Cubes that are initially positioned along the Fence during the execution of their Auto routine, are they in violation?</i></p>	<p>Yes (unless they do so while picking one up).</p>
<p><i>I've heard that head refs are somehow involved in signing "non-compliance forms" if a team bagged their robot incorrectly or something like that. Could you explain exactly what our role is, if any, and what kinds of decisions we may need to make and on what basis we should make them? Or are these all something just handled through the LRI/FTA/HQ and we don't really deal with them? Or something else?</i></p>	<p>This is not something that the Head Referee gets directly involved in, although your LRI or FTA might inform you that a team is in violation because of it; in that case there will be some penalty invoked by the LRI, but not one that affects the Team on the Field.</p>
<p><i>It would be nice if the manual gave the option of having only one question box rather than requiring a red one &amp; a blue one. Especially at some of the more cramped district events, it just seems like it takes up more space near the field, and it means the head ref has to check two places rather than one</i></p>	<p>The two separate question boxes is a requirement.</p> <p>Note that in the event that each alliance has questions after a match, the separation allows the Head Referee to address each alliance separately without the other interfering in that discussion. If a controversial call is at play, it's not appropriate to have them stand next to each other, or in earshot of each other, to discuss the situation.</p> <p>There should always be enough space immediately adjacent to each end of the scoring table.</p>
<p><i>S02 &amp; S03 - Yellow and red cards clear before the Playoffs. How about S02 &amp; S03 warnings?</i></p>	<p>Safety warnings are not cleared.</p>