

# TRI Rules 2019

Version 1 - Updated 5/28/2019

**Texas Robotics Invitational 2019 will be using the FRC 2019 Destination: Deep Space Presented by the Boeing Company rules except where noted below. Please send any questions to [Allen@Spectrum3847.org](mailto:Allen@Spectrum3847.org)**

## 1. Game Rule Updates

1. All Yellow and Red Cards are now at the discretion of the Head Referee. Minor non-match affecting incidents will be given warnings before cards are given. Teams will not be punished for field staff giving them directions such as entering the field.

## 5.3 Scoring (paragraph modifications below)

For the purposes of assessing SANDSTORM and HAB Climb Bonuses described in Table 5-1, a ROBOT is considered to have started from, or climbed to, a HAB Level if:

1. the ROBOT'S BUMPERS are fully above the Level's platform and
2. the ROBOT is only supported by:
  - a. **surfaces of the HAB PLATFORM at or above that Level (including transitively through GAME PIECES or ROBOTS)**
  - b. **ALLIANCE WALL (including transitively through GAME PIECES or ROBOTS)**

This change allows for robots who's bumpers are below a HAB level but supported by HAB platform of that level to be supporting robots who climbed to a level above their scored level. If this was the official rule throughout the season Final 3 at Detroit Championship would be scored as a HAB 3 and HAB 2 instead of two HAB 2 robots.

## C3. Asking other teams to throw a MATCH – not cool.

A team may not encourage an ALLIANCE, of which it is not a member, to play beneath its ability. NOTE: This rule is not intended to prevent an ALLIANCE from planning and/or executing its own strategy in a specific MATCH in which all the teams are members of the ALLIANCE.

Violation: Behavior will be discussed with team or individual. Violations of this rule are likely to escalate rapidly to YELLOW or RED CARDS and may lead to dismissal from the event (i.e. the threshold for egregious or repeated violations is relatively low.)

**Asking/Encouraging a team to not play defense or allow your alliance to gain a Rocket RP is a clear and undeniable violation of this rule. There are almost no**

circumstances when a team should be talking to their opposing alliance about match strategy and any such conversations will be investigated if reported. Any TEAM found to in any way be manipulating an alliance's match strategy for their own gain will be given a RED CARD.

#### **C9. Be reasonable with the Head Referee**

Most situations will likely only require one or two people to talk with the Head Referee but we are aren't going to institute a rule that doesn't allow other members of the drive team (including adult drive coaches) to provide information or listen to the conversations. Please be mindful that the Head Referee makes the final decision on calls but may be advised by other referees and the Event Director (replaces HQ at off-season events). Also please remember that C1 is a rule and the referee may give YELLOW or RED CARDS for any interactions that deem to be egregious. We are all working for the inspiration of our students. Be polite, reasonable, and respectful and we will all have a great event.

The original C9 causes more issues than it solves and is often not enforced to the letter of the rule. We trust our volunteers and our teams to be reasonable and act in good faith to get to the best outcome for everyone involved.

#### **G3. No defense.**

During the SANDSTORM PERIOD, a ROBOT may not cross the FIELD such that its BUMPERS are completely beyond their alliance's CARGO SHIP LINE.

Violation: FOUL (Limit one per ROBOT per MATCH). If contact is made with an opponent ROBOT: TECH FOUL (Limit one per ROBOT per MATCH).

Contacting an opponent robot when your bumpers are not completely across your cargo ship line results in no penalty. Note that this is enforced differently from G9 and G10 and is enforced based on your own cargo ship line and not that of your opponents.

The original G3 was far too harsh of a penalty for things that rarely affected the match.

#### **G4. One GAME PIECE at a time.**

ROBOTS may not have greater-than-momentary or repeated control, i.e. exercise greater-than-momentary or repeated influence, of more than one (1) GAME PIECE at a time, either directly or transitively through other objects. A GAME PIECE that is at least partially supported by a ROCKET or CARGO SHIP is not considered controlled by the ROBOT.

Violation: FOUL per additional GAME PIECE.

A yellow card for this doesn't make sense, it's not a violation that can swing a match therefore it shouldn't be a DQ.

**G6.** No throwing HATCH PANELS.

ROBOTS may not shoot HATCH PANELS into the air in a way that's prohibited in R6, kick them across the floor using an active MECHANISM, or eject them across the floor in a forceful way (i.e. HATCH PANEL is caused to move a significant distance). **Violation: If Intentional, FOUL**

Most of the RED CARDS given for this rule were due to unintended situations that are nearly impossible for teams to control. We clearly don't want teams throwing hatches across the field but a RED CARD was an excessive punishment. Most violations of this rule did not affect the matches and giving a FOUL per hatch removes anyone from gaining points by abusing this strategy. C1, G7 and G8 cover other abuses of using the hatches in dangerous or unintended ways. Violations are only for instances where teams are strategically using hatch throwing to gain a competitive advantage.

**G9.** One (1) defender at a time.

No more than one ROBOT may be positioned such that its **BUMPERS are completely beyond the opponent's CARGO SHIP LINE**. The exception to this rule is if an additional ROBOT

- A. is forced to cross the opponent's CARGO SHIP LINE by an opponent ROBOT (e.g. it is pushed over the opponent's CARGO SHIP LINE by an opponent in a defensive effort to prevent them from scoring a CARGO in a ROCKET), and
- B. makes a dedicated effort to cross back over the CARGO SHIP LINE until no more than one ROBOT is positioned such that its **BUMPERS are completely beyond the opponent's CARGO SHIP LINE**.

Violation: FOUL, plus an additional FOUL for every five (5) seconds in which the situation is not corrected. If G10 is also being violated, additional FOUL escalates to TECH FOUL. Only one (1) 'five-count' will be maintained at a time for G9, G10, and G18. For violations of G9/G10, the first count started will be maintained and a FOUL or TECH FOUL will be assessed at each five-second interval depending on whether one or both rules are being violated. If G18 is also violated, REFEREES are instructed to disregard G9/G10 counts to focus on the pin. Attempts to intentionally manipulate this in order to avoid G9/G10 penalties may be subject to YELLOW/RED CARDS for egregious behavior.

This change makes it so that only robots that are fully beyond the CARGO SHIP LINE cause a violation.

**G10.** On defense, rein it in.

No part of a ROBOT, except its BUMPERS, may be outside its FRAME PERIMETER if its BUMPERS are completely beyond its opponent's CARGO SHIP LINE. The exception to this rule is if the ROBOT

- A. is forced to cross the opponent's CARGO SHIP LINE by an opponent ROBOT (e.g. it is pushed over the opponent's CARGO SHIP LINE by an opponent in a defensive effort to prevent them from scoring a CARGO in a ROCKET), and
- B. makes a dedicated effort to reposition itself such that
  - i. its BUMPERS are not completely beyond its opponent's CARGO SHIP LINE or
  - ii. the ROBOT is contained to its FRAME PERIMETER.

Violation: **FOUL, plus an additional FOUL for every five (5) seconds in which the situation is not corrected. No more than one foul will be awarded to a robot in a 5 second period, no matter how many instances of a violation occur.**

**Momentary (approximately less than 1 second), extensions that do not contact any opponent robots are not considered infractions. Unintentional extensions due to momentum or inertia of robots moving about the field are not considered infractions unless they contact an opponent robot.**

This change should dramatically reduce G10 violations. G10 is a great rule for reducing G20 violations and protecting robots, but its enforcement swung many matches that were not affected by the actual G10 violations. This was again a place where the penalties did not match the effects of the violations.

**G11.** No throwing CARGO on defense.

A ROBOT with its **BUMPERS completely beyond the opponent's CARGO SHIP LINE** may not shoot CARGO into the air, kick it across the floor using an active MECHANISM, or eject it across the floor in a forceful way (i.e. CARGO is propelled a significant distance).

Violation: FOUL per CARGO.

**This change makes it so that only robots that are fully beyond the CARGO SHIP LINE cause a violation.**

**G12. DON'T TOUCH THE SANDSTORM**

No ROBOT may contact any portion of the SANDSTORM. Exception for contact with the SANDSTORM curtain prior to the match or during the SANDSTORM PERIOD.

Violation: Incidental contact: Verbal Warning, Repeated or deliberate contact: TECH FOUL, If damage to the Sandstorm occurs: RED CARD

**This change makes it so HAB height limit is removed. These violations were a large cause of grief for teams that seemed to have almost no impact on actual game play. We don't want any teams to touch or damage the sandstorm mechanism but we also don't need a rule that doesn't effect match play to hurt teams.**

**G20.** Stay out of other ROBOTS.

Initiating deliberate or damaging contact with an opponent ROBOT on or inside the vertical extension of its FRAME PERIMETER from above the bumper zone (7.5" from the floor), including transitively through a GAME PIECE, is not allowed.

Violation: TECH FOUL and YELLOW CARD.

**Teams making contact with their bumpers on another robot in the bumper zone height (7.5" from the floor) is not a violation. Teams that choose to not have a complete full wrap bumper are putting those portions of their robot at risk to be contacted by other team's bumpers and they do so at their own risk.**

**H1. H.** Clothes/shoes are okay and backpacks, and items in your pockets or backpacks are okay if they don't violate the other rules stated in H1.

**Almost everyone has a phone in their pocket or bag, etc and everyone is wearing clothing so it should be in the rules. You still can't use your phone or a radio, etc to communicate with anyone during the match or any of the other violations but it's just weird that it's not clearly in the rules that it's allowed.**

**H4. COACHES** and other teams: hands off the controls. A ROBOT shall be operated solely by the DRIVERS and/or HUMAN PLAYERS of that team. **Violation: TECH FOUL and Warning.**

**Repeated/Extended: TECH FOUL and RED CARD.**

**Coaches may touch the driver station laptop to diagnose a problem with the robot but may not directly contact any controllers or operate the robot in anyway.**

## **2. +5 pounds weight allowance and no formal inspections.**

This allows for repairs and minor modifications without major work to maintain 125 Robots may weigh up to 130 lbs. We also won't have inspections at this event; event staff may ask you to make modifications if your robot doesn't meet the FRC robot rules.

## **3. Alliance Selection**

- A. TRI will be adopting the standard championship subdivision level alliance selection process, including the 4 robots per alliance rules as outlined in game manual. 1-8, 8-1, 1-8

**Please note that we will only be advancing 32 teams to the elimination rounds. It is likely we will have more than 32 teams at the event. We want to give every team the most playing time possible, but it isn't feasible to include more than 32 teams in the tournament rounds.**

- B. At the beginning of Alliance Selection the Emcee will ask if any teams would like to withdraw from Alliance Selection. Any teams wishing to not play can withdraw at this time. After alliance #8 has made their first pick, teams are no longer allowed to decline invitations and all further picks will be assumed to be accepted.

#### **4. Video Review**

Given that the technology allows (video system doesn't go down, etc), TRI will be instituting a video review process for the elimination rounds of the bracket.

- Each Alliance is allowed one challenge/review in the playoffs. The alliance captain will be provided a video review coupon in addition to their timeout coupon.
- Video review coupons must be given to the head ref during the same time periods in which timeout coupons are allowed following the match to be reviewed.
- Only match-affecting calls and yellow/red cards can be reviewed.
- The score or lack-of-score being reviewed must be significant enough to affect the outcome of the match. The Head Referee can choose to not review any call that they do not believe will change the outcome of the match.
- Video evidence must be indisputable to change a call. The point is to receive credit for an obviously missed score, not debate further a close call that a referee already used their best judgment on. The Head Referee's decision is final after a review.
- Only the event provided video will be used by the Head Referee during a video review. Referees will not review any other video footage, including camcorders, phones, or tablets not provided by the event.
- The Head Referee, at their discretion, may choose to review any ruling throughout the event. Please do not ask for a video review at any time other than giving the referee your alliance's video review coupon during the playoffs. All other requests will not be granted.

[We don't plan on ever having this happen, but we want to provide the best event possible to teams; video review of other situations may allow us to do this.](#)

#### **5. Soft Time Cap**

To allow teams to get out of the event in a reasonable amount of time if we have match delays, we will be instituting a soft time cap during event. At the discretion of the event organizers, if any playoff round (quarter-finals, semifinals, finals) starts after 6 P.M. Central Time, we will be moving to a "Best of 1" elimination format instead of the usual "Best 2 of 3" format.