

February 2, 2010

TEAM UPDATE #7

GENERAL NOTICES

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No changes.

Section 0 – Introduction through Section 6 – The Arena

No changes.

Section 7 – The Game

Section 7 – The Game, Rev F has been updated to include the following edits:

<G41> Detaching MECHANISMS - ROBOTS may not intentionally detach parts or leave MECHANISMS on the FIELD. *Violation: PENALTY for each incident and potential RED CARD if an intentionally detached COMPONENT or MECHANISM impedes MATCH play.*

- a. Bumper covers must not detach, even unintentionally, from the ROBOT.
Violation: PENALTY.

Bumper covers are expected to be just as robust as BUMPERS. It is in your team's best interest to insure that the covers remain securely in place despite exposure to rough play, field elements, etc. A loose bumper cover is likely to have several negative effects on an alliance. Examples of ways in which a loose bumper cover hurt an alliance are listed below, but note that it is illustrative and by no means an exhaustive list.

- if part of a cover is touching any part of the TOWER at the end of the MATCH, the ROBOT will not be considered SUSPENDED and thus will not receive the associated SUSPENDED bonus points.
- if part of a cover is hanging below the plane of the PLATFORM, the alliance will not receive bonus points for that ROBOT
- if part of a cover falls below the ROBOT'S BUMPER ZONE, the ROBOT will have violated <R07-A>
- if a cover gets caught in a dynamic part of its ROBOT, the ROBOT may be rendered useless
- if a cover is completely dislodged and left on field, the ROBOT will have violated Rule <G41>.
- if a cover is not secured, it may be considered an entanglement hazard and thus a violation of Rule <G25>.

That being said, there are a *whole bunch* of reasons why you want your bumper covers to stay securely on your ROBOT!

Section 8 – The Robot

CAUTION: STORED ENERGY

We believe it's important to highlight the hazards inherent in stored energy, and remind teams to be thoughtful in ways to mitigate risk to people and to the machine. As you finish your robot design (and maybe even finish your robot), we want to remind you to be cognizant of ways in which your robot will store and release energy, intentionally and accidentally. Preventive measures that your team may employ to limit the risk of dangerous accidents include

- training of all members on your team regarding hazards on the ROBOT,
- addition of physical locks on the robot to secure dangerous mechanisms, or
- including benign ways in which team members can safely release stored energy (particularly important for removing the robot from the tower, demonstration for inspection, etc)

We thank you for taking this thought seriously and addressing it in both your robot design and in your team behavioral habits.

Section 8 – The Robot, Rev G has been updated to include the edits highlighted below. Please note that the exceptions added to the FRAME PERIMETER definition in Team Update 6 and the exception to Rule <R16> added here neither changes nor adds exception to the volume requirements defined by Rule <R10>.

<R16> During normal operation no part of the ROBOT shall extend outside the vertical projection of the FRAME PERIMETER, except as permitted by Rule <G30>.

- a) Exception: To facilitate a tight, robust connection between the BUMPERS and the FRAME PERIMETER, minor protrusions such as bolt heads, fastener ends, rivets, etc that are excluded from the determination of the FRAME PERIMETER and are within the BUMPER ZONE are permitted.

Note: This means no “mushroom-bots.” If a ROBOT is designed as intended, in normal operation you should be able to push the ROBOT (with BUMPERS removed) up against a vertical wall, and the FRAME PERIMETER will be the only point of contact with the wall.

<R97> For the safety of all those involved, inspections must take place with the ROBOT powered off, pneumatics unpressurized, and springs or other stored energy devices in their lowest potential energy states (i.e. battery removed). Power should only be enabled on the ROBOT during those portions of the inspection process where it is absolutely required to validate certain system functionality and compliance with specific rules (firmware check, etc). Inspectors may allow the ROBOT to be powered up beyond the parameters above if both criteria below are met.

- The ROBOT design requires power or a charged stored energy device in order to confirm that the ROBOT meets volume requirements **AND**
- the team has included safety interlocks that prevent unexpected release of such stored energy.

Section 9 – The Tournament through Section 10 – The Kit of Parts

No changes.