

January 14, 2010

TEAM UPDATE #2

GENERAL NOTICES

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Note to teams:

We want to remind you that *FIRST* Choice closes on Sunday at 8pm ET. Please make sure you make your selection before the deadline in order to collect your three additional kit items. For more information and details, visit

<http://www.usfirst.org/roboticsprograms/frc/content.aspx?id=18619>.

Section 1 – Introduction & Section 2 – The Game

No change.

Section 3 – The Game

Section 3 – The Game, Rev B has been updated to include the following edits:

<G21> HOSTBOTS may only DEPLOY MINIBOTS onto their ALLIANCE'S TOWERS and entirely below the DEPLOYMENT LINE.

Violation: RED CARD

<G22> HOSTBOTS may not contact their ALLIANCE'S MINIBOT once any part of it has climbed above the DEPLOYMENT LINE. *Violation: TOWER is disabled*

Section 4 – The Robot

Section 4 – The Robot, Rev B has been updated to include the following edits (including fixing the bullet letters in Rule <R66>):

<R66> In addition to the items included in the KOP, pneumatic system items specifically permitted on 2011 FRC ROBOTS include the following items. All included items must be "off the shelf" COTS pneumatic devices rated by their manufacturers for working pressure of at least 125psi and burst pressure of 250psi, and used in their original, unaltered condition (except as required for assembly with other components).

- A. Pneumatic pressure vent plug valves functionally equivalent to those provided in the KOP,
- B. Solenoid valves with a maximum 1/8" NPT port diameter, and a maximum Cv of 0.32 (if non-KOP valves are used, the team will be required to provide part documentation validating that the valves meet these constraints).
- C. than 125psi rating mandated above are permitted, however if employed, an additional pressure relief valve must be added to the low pressure side of the main regulator. The additional relief valve must be set to a lower pressure than the maximum pressure rating for the solenoid valve.

- D. Additional 0.160" inside diameter pneumatic tubing functionally equivalent to that provided in the KOP, with the pressure rating clearly factory-printed on the exterior of the tubing,
- E. Pressure transducers, pressure gauges, and connecting fittings,
- F. Pressure regulators with a maximum bypass pressure of no more than 60psi,
- G. For the purposes of the FRC, a device that creates a vacuum is not considered to be a pneumatic device and are not subject to the pneumatic rules (although they must still satisfy all other appropriate rules). These include, but are not limited to; venturi-type vacuum generators and off-the-shelf vacuum devices (as long as they are powered by provided or permitted motors).
- H. For the purposes of the FRC, closed-loop COTS pneumatic (gas) shocks are not considered pneumatic devices, and are not subject to the pneumatic rules (although they must still satisfy all other appropriate rules).
- I. For the purposes of the FRC, air-filled (pneumatic) wheels are not considered pneumatic devices, and are not subject to the pneumatic rules (although they must still satisfy all other appropriate rules).
- J. **Pneumatic cylinders.**
- K. **Pneumatic storage tanks.**

<R91> The MINIBOT may not exceed a 12" x 12" x 12" volume and weigh no more than 15 lbs.

MINIBOTS will be inspected for the volume constraint by being placed in a five-sided box with internal dimensions of 12" x 12" x 12". If the lid (the sixth side of the cube) does not seat properly, the MINIBOT does not pass this part of the MINIBOT inspection.

<R92-O> **electrical hookup** wire of appropriate gauge (~~see Rule <R40>~~),

Section 5 – The Tournament

No change.

Kit of Parts

The **2011 Kit of Parts Checklist, Rev B** has been updated to include the following edits:

- The spelling of "Separate" has been corrected.