



Team Update 14

03/01/2016

GENERAL

- **Week 1/2 Observations:** The 2016 *FIRST* Robotics Competition officially kicked off with the Week 1/2 Palmetto Regional last weekend. The competitors were great to watch, but there were some observations from the event we'd like to share with the rest of the community.
 - The most common Inspection Issue was noncompliant BUMPERS, which seemed to result from misunderstandings about what the FRAME PERIMETER is and how it's different from the ROBOT'S frame pieces. Please take a few minutes to watch [this video](#).
 - The Head REFEREE had to issue several YELLOW CARDS to DRIVE TEAMS for entering the FIELD after a MATCH, but before the TOWER LEDs are green. Please review G2, and wait for the signal to enter the FIELD.
 - There was a relatively high frequency of ROBOTS in AUTO driving into the CASTLE WALLS, resulting in OPERATOR CONSOLES getting knocked off the shelf. Remember that there's loop side of hook-and-loop tape on the shelf, and this year there's much incentive to take advantage of it and put hook tape on the bottom to help secure your OPERATOR CONSOLE.
 - Remember that the white, plastic Clippard tanks aren't legal for use on the ROBOT, and should be discarded.
 - We strongly recommend you use the [Robot Preemptive Troubleshooting](#) article to check your machine during your Robot Access Period or Practice Day (whichever is applicable) to mitigate any risk of it not working once it's connected to the the FIELD Management System. *FIRST STRONGHOLD* will push your ROBOT to its limits, so it's important to thoroughly check your electrical connections.

■ Drawing Package Update:

The [Field Components](#) drawing package has been revised to include the updates below.

- Drawing GE-16019, pg 3, NOTE: A number decal, between 1 and 4, black in color, will be added to the top corner, such that it's visible when viewed from the Low Bar side of the Outer Works. (to help REFEREES track CROSSINGS)
- Drawing GE-16023, pg 3, NOTE: A number "5" decal, black in color, will be added to the top corner, such that it's visible when viewed from the Low Bar side of the Outer Works. (to help REFEREES track CROSSINGS)
- Drawing GE-16028: ~~countersunk .798 [diameter] X .82~~ [counterbored] .704 [depth] .200
- Drawing GE-16038, replaced BOM Part Number HW-00089 with HW-00118 (effective change: ~~2.5" Long, 1/4" 20 Pan Head~~ 1/4"-20 Machine Screw, 2.25" Long)
- Drawing GE-16178, replaced BOM Part Number HW-00096 with HW-00119 (effective change: ~~flat head screw, 3/8-16 x 1.25"~~ Button Head Cap Screw, 3/8"-16, 1.25" Long)
- Drawings GE-16181 and 3: Note 1: MATERIAL: 3/4" CLEAR POLYCARBONATE OR BLACK HDPE
- Drawing GE-16184: Note 1: MATERIAL: ~~1/4"~~ 3/4" CLEAR POLYCARBONATE OR BLACK HDPE
- Drawings GE-16185, 6, 7, and 8 are now included.
- Drawing GE-16213 Note 1: MATERIAL: 1/4" THICK, BLACK, HDPE or CLEAR POLYCARBONATE
- Drawing GE-16241 has been added.

The [Field Assembly](#) drawing package has been revised to include the following update:

- Drawing FE-0039 has been updated to include GE-16241 and HW-00120.
- **Eclipse Plugin Update:** Updated WPILib Eclipse Plugins for C++ and Java have been released. These plugins contain 2 fixes for C++ teams, a fix for an issue with the Camera Server class and a fix for a "permission denied" error on deploy after updating to Eclipse Mars 2. If you are experiencing the permission denied error, you will need to re-image your roboRIO after updating your Eclipse plugins to the latest version. The Java plugins are unchanged, but you will see an update as they are published as part of the build process.

To update your plugins manually (or if you installed the plugins offline) see "Updating the plugins manually" near the bottom of the [Installing Eclipse page](#).

ADMIN MANUAL

- No changes.

GAME MANUAL

Section 2.2.3.1 CASTLE WALL

- *(height changed in Team Update 7, but this edit corrects the corresponding text)* Each of the high GOALS is marked with two (2) vertical strips of 2 in. retro-reflective material (3M 8830 Silver Marking Film) and one (1) horizontal strip of 2 in. retro-reflective material (with the unsupported .25 in. folded over the bottom edge of the GOAL opening such that 1.75 in. is visible) to form a u-shaped target. The targets are 1 ft. ~~2 in.~~ tall and 1 ft. 8 in. wide.

Section 3.4.5 ROBOT Rules

- The change to the violation in G19-1 made via *Team Update 13* was accidentally made to G19. *Section 3* now has this edit correctly implemented, and the document revision has been incremented to V9.

Section 4.4 Budget Constraints

- **R10** Blue Box

Teams should be prepared to disclose to Inspectors the cost of any non-KOP item and the total cost of the ROBOT.

~~There is no quantity limit on KOP items in regards to R10. If the item is a KOP item, it does not need to be require an associated cost on the Cost Accounting Worksheet (CAW).~~

Per T11, Teams must be prepared to display a CAW to Inspectors during Inspection. The CAW may be displayed in either printed or electronic form.

Individual COMPONENTS or MECHANISMS, not excluded in **R10**, that are retrieved from previous ROBOTS and used on 2016 ROBOTS must have their undepreciated cost included in the 2016 CAW and applied to the overall cost assessment.

Section 4.11 Pneumatic System

- **R77-I** Pressure regulators with ~~at the maximum~~ outlet pressure ~~adjusted to~~ **of** no more than 60 psi,

Section 5.5.2 Eligibility and Inspection

- Each registered *FIRST* Robotics Competition team may enter only one (1) ROBOT (or ‘Robot’, which to a reasonably astute observer, is a Robot built to play *FIRST STRONGHOLD*) into the 2016 *FIRST* Robotics Competition.

“Entering” a ROBOT (or Robot) in to a *FIRST* Robotics Competition means bringing it to the event such that it’s an aid to your Team (e.g. for spare parts, judging material, or for practice). Spare FABRICATED ITEMS may be brought to the event in a bag or part of a WITHHOLDING ALLOWANCE.

This rule does not prohibit teams from bringing in *FIRST* LEGO® League or *FIRST* Tech Challenge robots for the purposes of awards presentations or pit displays.