# Team Update 03

## General

### FUEL Compression Variances

Teams have reported seeing a variance in the compression of FUEL from the Kit of Parts and from AndyMark sales to teams. The manufacturing process used for this year's scoring element will produce FUEL that will have variation in compression. FUEL from every manufactured batch has been tested to be within engineering specifications and this compression variance is within these specifications. FUEL within this range of variation has been tested to have similar performance in robots intaking, indexing, and launching.

Teams should expect to encounter FUEL at events that fall within these same engineering specifications that result in varying compression rates and design accordingly.

## Game Manual

### 5.12 The FIELD Management System

*Table 5-4: Audio Cues*

| Event | Timer Value(s) | Audio Cue |
|---|---|---|
| **MATCH start** | 0:20 (for AUTO) | "Cavalry Charge" |
| **AUTO ends** | 0:00 (for AUTO) | "Buzzer" |
| **TELEOP & TRANSITION begins** | 2:20 | "3 Bells" |
| **ALLIANCE SHIFT starts** | 2:10<br>1:45<br>1:20<br>0:55 | ~~None~~<br>"POWER UP - Linear Popping" |
| **END GAME begins** | 0:30 | "~~TBD~~"<br>"Steam Whistle" |
| **MATCH end** | 0:00 | "Buzzer" |
| **MATCH stopped** | n/a | "Foghorn" |

### 6.5 Scoring

#### 6.5.2 ROBOT Scoring Criteria

To qualify for TOWER points for a given LEVEL, a ROBOT must meet the following conditions:

- For LEVEL 1 – a ROBOT must no longer be touching the CARPET or the TOWER BASE, or
- For LEVEL 2 – a ROBOT must be positioned such that its BUMPER~~S~~ covers are completely above the LOW RUNG, or
- For LEVEL 3 – a ROBOT must be positioned such that its BUMPER~~S~~ covers are completely above the MID RUNG.

## 7.4 In-MATCH

### 7.4.4 Opponent Interaction

**G415** ***Stay out of other ROBOTS.** A ROBOT may not use a COMPONENT outside its ROBOT PERIMETER (except its BUMPERS) to initiate contact with an opponent ROBOT inside the vertical projection of the opponent's ROBOT PERIMETER. Contact with an opponent in an opening of their BUMPERS or in the space above the BUMPER opening are exceptions to this rule.

**G416** ***This isn't combat robotics**. A ROBOT may not damage or functionally impair an opponent ROBOT in either of the following ways:

A. deliberately.
B. regardless of intent, by initiating contact, either directly or transitively via a SCORING ELEMENT CONTROLLED by the ROBOT, inside the vertical projection of an opponent's ROBOT PERIMETER. Contact between the ROBOT'S BUMPERS or COMPONENTS inside the ROBOT PERIMETER and COMPONENTS inside an opening of an opponent's BUMPERS or in the space above the BUMPER opening are exceptions to this rule.

> The exception in G416-B effectively means that ROBOTS with BUMPER gaps are at their own risk regarding damaging contact in these areas.

## 8.1 General ROBOT Design

**R106** **Horizontal extension – one direction at a time.** ROBOTS may not extend beyond their ROBOT PERIMETER in more than one direction (i.e. over more than 1 side of the ROBOT) at a time. The extension may not reach outside the projection of that side of the ROBOT PERIMETER.
For the purposes of this rule, a round or circular section of ROBOT PERIMETER is considered to have an infinite number of sides. ~~MOMENTARY and inconsequential extensions in multiple directions are an exception to this rule.~~ Exceptions include:

A. BUMPERS
B. Minor protrusions excluded from the ROBOT PERIMETER per R101
C. MOMENTARY and inconsequential extensions in multiple directions