



# **Titanium Tigers**

Team 5114

# **Safety Plan**

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# ***Titanium Tigers Safety Plan***

## **Team Overview and Goals**

Team 5114 continues to strive to educate ourselves and our community on the basis of the safety culture that we represent.

In pursuing this mission, our goals have led our team through personal, build room, competition, and pit safety. We intend to be a ***paws-itive*** example of *FIRST* Robotics Safety

## **Injury Reporting**

Regardless of severity, report ALL accidents, injuries, and even near misses to a Mentor or other adult, and the Safety Captain.

When at *FIRST* competitions, report ALL injuries to the Pit Administration Supervisor.

**NOTE: if the injury is serious, contact the respective authorities**

## **Personal Protective Equipment (PPE)**

### **Safety Glasses**

If you wear regular prescription glasses, find safety glasses that can fit over them. You can also order prescription safety rated glasses.

Wear eye protection in the following areas (**NO EXPECTATIONS**)

- When doing **ANY** work on the robot
- When working with **ANY** equipment
- At *FIRST* events
  - **ANYWHERE** in the pits, including the walkways and pit stations
  - Playing Field
  - Practice Field
  - **ANY** area posted with signs requiring eye protection use

# Personal Protective Equipment (PPE)

## *Continued*

### **Hand Protection**

Use proper gloves for the situation you are doing.

- Heat, electrical, chemical, or mechanical

**NOTE: DO NOT** use gloves on any machine that involves cutting or spinning

### **Hearing Protection**

Wear earplugs where there are high levels of sound

- Working on your robot
- Working with CNC or cutters

### **Foot Protection**

Cover ENTIRE foot, make sure they are closed toed. JUST WEAR TENNIS SHOES.

- Flip-flops, sandals, and Crocs are not acceptable

## General Safety

- Walk, DONT run
- Wear Safety glasses when needed. They must be clear, not tinted
- Wear gloves and hearing protection
- Assist other teams with Safety issues if applicable
- Be careful when above height (like on a ladder or step stool)
- When/if using a ladder, open it fully (no half-ways)

## Competition Safety

- Travel safely and carefully
- Establish and use proper lifting technique
- Make sure robot is safely secured during transport
- LOUDLY announce when your moving your robot from pits to playing field and vice versa.

## PIT Safety

***Children, 12 and under MUST have a person 18 or older with them at all times***

- Maintain a clear and clean pit at all times
- Keep aisle clear for pedestrians and robots
- Teams may not build any structure to support people or items for storage above work area in their pit station
- NO Team Station structure, signs, banners, or displays can be higher than 10 ft above the floor

### Hand Tools

- Make sure they are in good condition
- Direct cutting away from body
- Store tools and equipment in a safe area
- NEVER store unshielded tools in your pocket

### Stored Energy

When making repairs on your robot, please consider the following:

- Electrical Energy: Disconnect the electric power source
- Pneumatic Energy: Always vent any compressed air to the atmosphere

# Battery Safety

## General:

- IMMEDIATELY flush any contacted skin with water
- Seek medical treatment
- Periodically check ion batteries for damage or leaking
- Treat as a hazardous material

## Necessary Safety Materials:

- Baking Soda to neutralize any exposed acid electrolytes
- Pair of acid-resistant, leak proof, rubber gloves to wear while handling a leaking battery
- Non-metallic leak-proof container to place leaking battery

## Charging and Handling:

- Keep battery charging area clean
- **DO NOT** short out the battery terminals
- **DO NOT** charge the batteries greater than the manufacturer's maximum recommended rate

## Ongoing Battery Inspection:

- After each competition round, make sure the battery is okay
- Check battery prior to competing

# Chemical Safety

- Keep chemical containers in good condition
- Label ALL containers
- Become familiar with ALL chemical you use
- Store chemicals in an orderly way
- If exposed to chemicals, notify the Safety Capitan and ANY team mentor
- DO NOT use highly flammable materials at *FIRST* events

**DO NOT DASIY CHAIN, INSPECT ALL CORDS, DO NOT  
OVERLOAD ELECTRICAL FIXTURES/RECEPTACLES**

# **AT THE EVENT**

Registration: An adult will register your team and may be asked to sign a safety statement

- To gain access to the pits, you **MUST** wear safety glasses

## **Setting up Pit Station:**

- Use work gloves when needed
- Design the pit with safety in mind
- REMEMBER AS TALL AS POSSIBLE
- Use proper tools to hang banners

## **Using the Practice Field/Area:**

- Follow the rule for that area at the event
- Wear Safety Glasses at ALL TIMES
- Make sure the field is clear of any and all debris
- Cooperate with designated volunteers working the practice field

## ***Lifting, Handling, and Transporting:***

### **Pre-lift**

- Wear Safety glasses, gloves (if needed), etc.
- Make sure the robot is completely turned off, secured, and nobody is working on it
- Determine the direction and path you will be lifting in
- Make sure the paths in front of you are clear
- ALWAYS 2-4 people lifting the robot

### **During Lift**

- Appoint someone to coordinate the lift
- Lift at the same time
- Lift with legs, keeping your back straight
- Use proper hand holds
- Coordinate placement of robot on cart

### **Transporting**

- Make sure the cart is stable
- Keep cart under control
- Use patience
- Ensure cart will not roll away

### **Post Match**

- Relieve all stored energy and open the main circuit breaker
- Ensure that the robot is made safe, no dangling parts
- Repeat the “Pre-Lift” and “During Lift” procedures

## **Safety Advisors**

Safety Advisors will observe activities in the Pit, Practice Field, Queue Line, and Playing Field to identify safety habits of the team.

**THEY WILL BE WEARING  
“VIBRANT-YELLOW-GREEN-NEON-BRIGHT-CANT MISS  
THEM” SHIRTS**

**Be safe at all times, not just when the Safety Advisors  
are around**