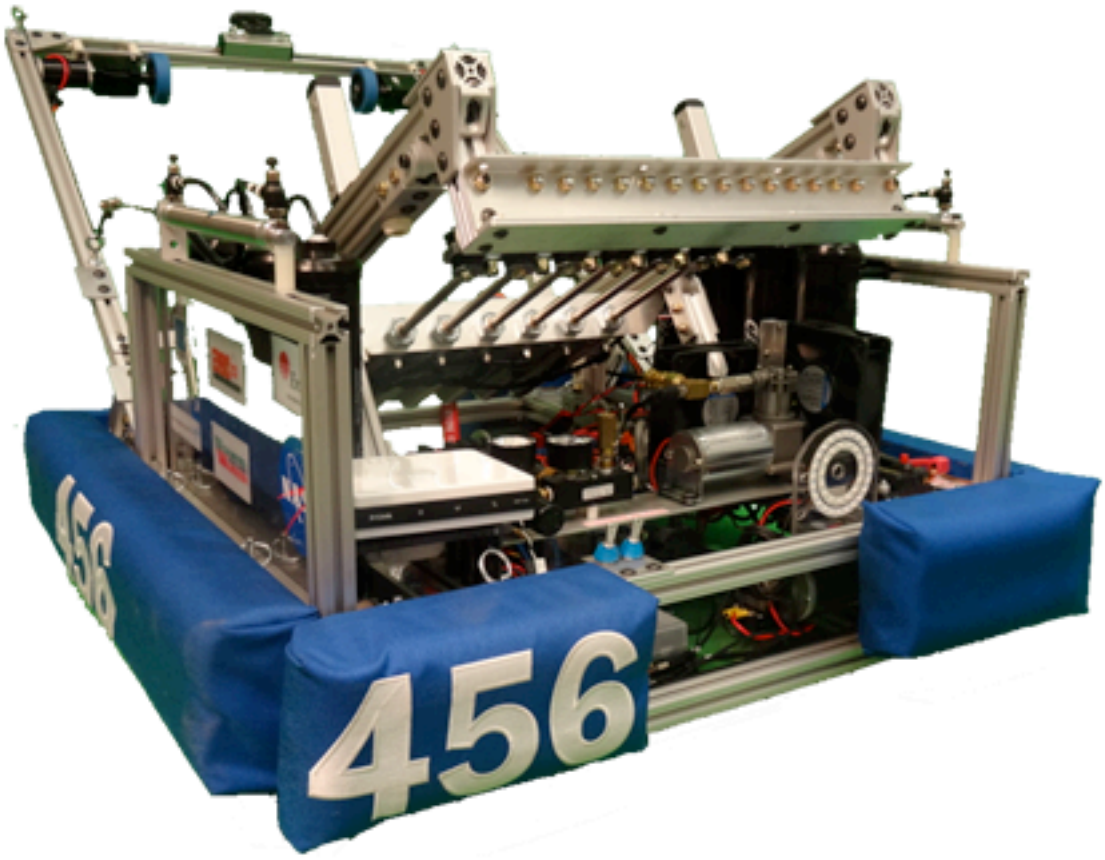
Siege Robotics



2014 SAFETY Manual

Team 456 Safety Nuts







Both of the Safety Nuts want to remind you of a few things to keep others safe in the pits and everywhere else at competition:

- Be sure to pay attention to things happening around you!
- Wear safety equipment and gear like safety glasses, closed toe shoes, and gloves for carrying the robots!
- Don't run or rough house in the pits!
- Listen to volunteers, mentors, adults, or anyone else put in charge.
- Follow not only basic FIRST rules for safety but also follow the rules at the event arena.

From the Safety Nut's of 456 Siege Robotics,

Good Luck Teams, Have Fun, and remember SAFETY FIRST!!

Please Use These Safety Kit Materials Presented to You by Team 456 to Have a Safer FIRST Experience!

Included are:

- ✓ Battery spill kit
- ✓ Small first aid kit (Just in case of minor accidents!)
- ✓ Two pairs of gloves for safely handling your robot
- ✓ Electrical tape for your battery terminals
- ✓ Trash bag to help keep your pit clean
- ✓ Tissues and hand sanitizer to help keep you healthy

Safety *Nut*

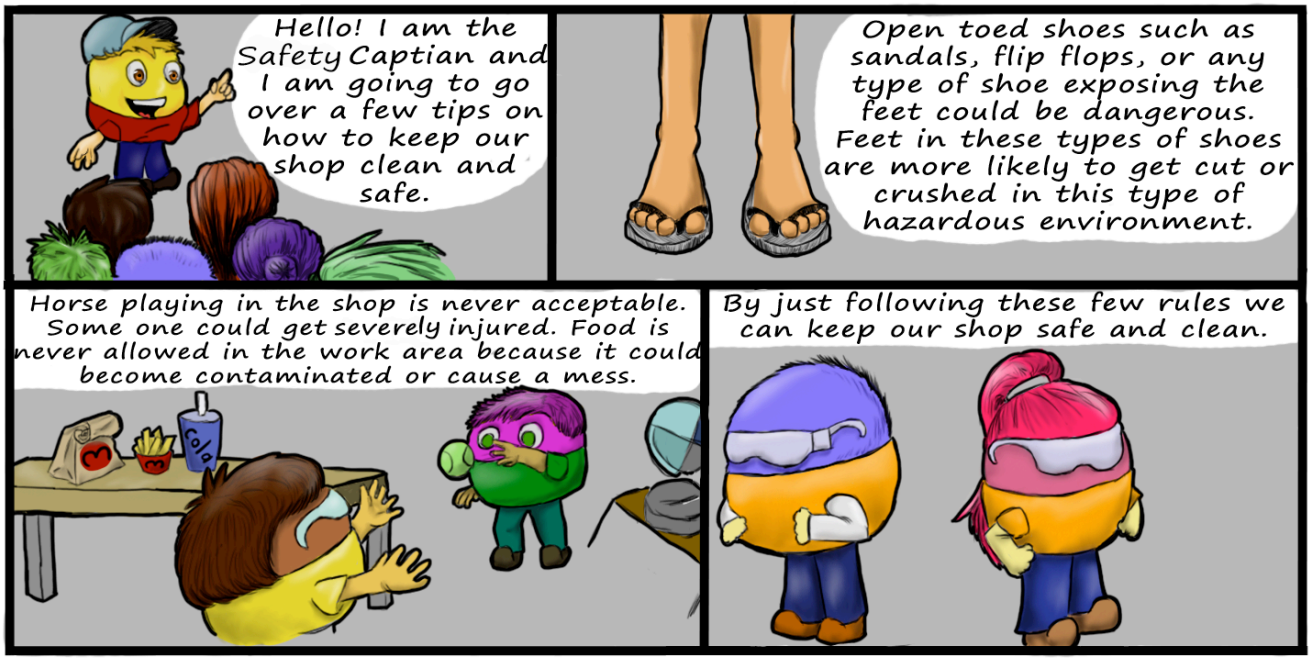
Kelcey McMaster - Siege Robotics





Safety Nut

Kelcey McMaster - Siege Robotics



Safety *Nut's*

Fairy Tale - Claymation



Be careful around ALL machine tools! Wear safety glasses at all times in and around tools. Always protect your eyes!



Be prepared when working around equipment. Have your gloves, hard hat, safety glasses when working with equipment.



Stranger Danger! Never take food or go anywhere with a stranger.



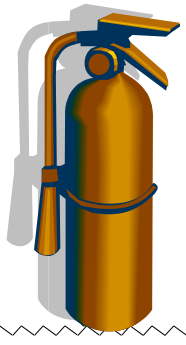
Be safe! Don't put yourself in harms way. Always have the right equipment - safety glasses, harness, ear plugs, closed toe shoes, etc.....

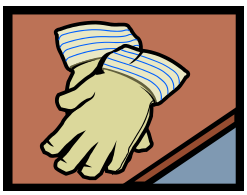
Full Claymation movie is available at www.SiegeRobotics.org

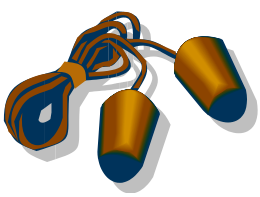
SAFETY CHECKLIST

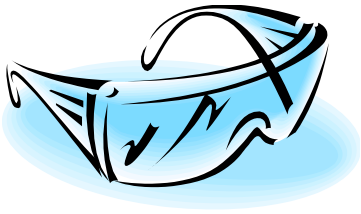
- ☐ First Aid Reference Books
- ☐ First Aid Kit
- ☐ Material Safety Data Sheets (**MSDS**)
- ☐ Safety Glasses
- ☐ Gloves: acid-resistant and leak-proof and work
- ☐ Closed-Toe Shoes
- ☐ Hearing Protection
- ☐ Fire Extinguisher/Fire Blanket
- ☐ Baking Soda (to neutralize acids)
- ☐ Hair Ties/Bobby Pins
- ☐ Broom and Dustpan
- ☐ Disable Switch
- ☐ Injury/Accident Reports
- ☐ Every team member's medical info and emergency contact





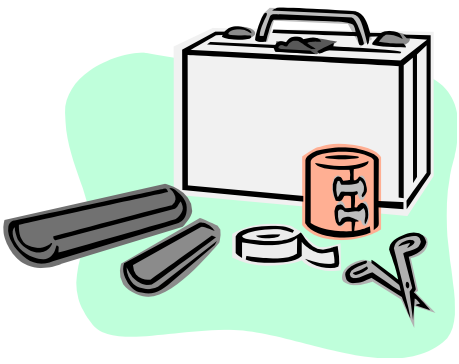






Safe Practices

- ☐ No Loose clothing
- ☐ No jewelry
- ☐ Long hair pulled back
- ☐ Clean and organized pit area
- ☐ Lift with legs, **NOT** with back
- ☐ Be aware of your surroundings
- ☐ Put robot in disable mode when uploading programs
- ☐ Release all potential energy sources
- ☐ Know what to do in an emergency
- ☐ Know where all emergency exits are
- ☐ Exercise common sense!
- ☐ **READ THE FIRST SAFETY MANUAL!**



Basic First Aid

Open wounds that are bleeding:

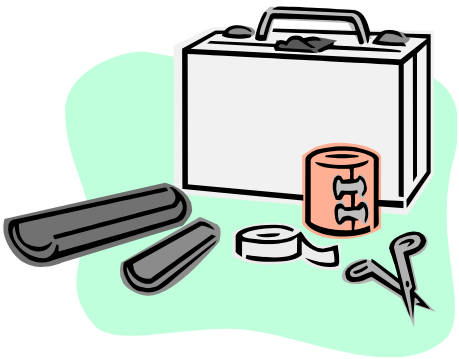
1. Wearing gloves, firmly apply direct pressure.
2. Call for medical assistance.
3. Lift wound above heart level.
4. Fold a firm pressure pad larger than the wound.
5. Place pad on wound, making sure the wound is covered.
6. Secure pad with a roller bandage.

Bruises:

1. Apply ice.

Burns:

1. 1st degree – run under COOL, not cold, water
2. 2nd degree – put clean bandage on, Don't apply any ointments
3. 3rd degree – don't attempt to remove clothing, call 911!



Scrapes:

1. Rinse with water and wash with soap.
2. Apply antibacterial ointment.

Remember SAMPLE

S – Signs and Symptoms

A – Allergies

M – Medication

P – Past medical history

L – Last meal

E – Event history



Basic Safety Rules for Hand Tools

- ALWAYS WEAR EYE PROTECTION.
- Wear the RIGHT SAFETY EQUIPMENT for the job.
- Use tools that are the RIGHT SIZE & RIGHT TYPE for your job.
- Follow the correct procedure for using EVERY tool.
- Keep your cutting tools SHARP and in good condition.
- DON'T work with OILY or GREASY hands.
- Handle SHARP-EDGED and POINTED TOOLS with care.
- Always carry pointed tools by your side with the points and heavy ends DOWN.
- SECURE all small work & short work with a vise or clamp.
- NEVER carry tools in your pockets.
- DON'T use tools which are LOOSE or CRACKED.
- KEEP your punches & chisels in good condition. Mushroomed heads can chip & cause injuries.
- DON'T use a file without a HANDLE.
- DON'T pry or hammer with a FILE. The tool or work piece may shatter.
- DON'T use screwdrivers as chisels or pry bars.
- DON'T try to increase your leverage by using a "cheater" with a wrench.
- Wrenches are designed at the right strength for their size and length.
- AFTER USING A TOOL — clean it and return it to its proper storage place.
- If anything breaks or malfunctions — report it to your instructor AT ONCE.
- Use the RIGHT TYPE of tool for the job.
- NEVER place tools & materials where they hang on the edge of a bench.
- Don't use tools for things they weren't meant for.
- Store tools and materials vertically, with the points and heavy end down.
- Cut away from yourself when you use chisels and other edged tools.
- DON'T FORCE screws; make sure that the correct screw for the job is being used.

Hand Tool Safety



The antics of Tim Allen on his TV handyman show within a show may be amusing in a sitcom, but in real life, improper use of hand tools can be painful and debilitating. Injuries can go way beyond a smashed thumb caused by a misplaced hammer strike. In fact, it is estimated that hand tool mishaps are responsible for about 1 out of 12 compensable workplace injuries—including cuts and bruises, punctures, fractures, and even loss of a finger, hand, or eye.

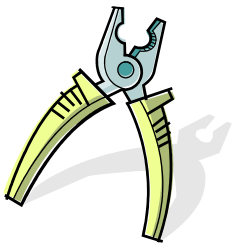
Tool Safety Rules

The Hand Tools Institute, an association of hand tool manufacturers and suppliers, believes that most incidents are preventable if workers just follow basic safety rules.

The five main points to remember are:
1. Always use appropriate eye protection to keep flying pieces and parts from contacting your eyes. The Hand Tools Institute suggests that employees keep their safety goggles in their tool box so that they can easily find them to use for every hand tool job. Other important pieces of protective equipment include work gloves that provide a better grip.
2. Use the right tools for the job. Each tool is designed to perform a specific function. It is dangerous to substitute or use an inappropriate tool.
3. Use tools properly, including proper positioning to avoid repetitive-stress type injuries.
4. Service your tools regularly. Follow the manufacturer's recommendations for performing proper maintenance on the tools.
5. Don't use damaged tools. Discard them immediately, fix them, or replace them.
6. Make sure you always use Eye Protection!

Look at the Details

Just how do these rules apply to your tools? Here are some examples:



Pliers — Too many people use pliers as wrenches for turning nuts or bolts. This is not the proper function of a plier, which should be used for gripping or cutting wire. Discard pliers when they have developed chipped or dulled cutting edges.



Hammers — A hammer blow should be struck squarely and parallel to the surface being struck. Glancing blows can cause injury. Never use a hammer with a loose or damaged head or handle. Look for dents, chips, cracks, or other signs of wear and tear. Use riveting hammers for sheet steel, carpenter or claw hammers for driving and pulling nails, and ball-peen hammers for metal work.

Screwdrivers — Never use a screwdriver as a punch, wedge, pinch bar, pry, or chisel. Choose the proper size tip for the screw. The wrong size driver can cause a chewed up screw head, damaged screwdriver, and a bloody knuckle. Also Do Not alter screw drivers so you can reach.

Wrenches — Don't try to extend the handle of a wrench with a cheater bar to add leverage. Instead, use a wrench with the proper-sized handle. Make sure the wrench fits the nut, or it could slip or break. If possible, pull the wrench instead of pushing it. The safest wrench is a box or socket type.

Drills, augers, and bits — may be incorrectly tempered or dull and otherwise worn.

Knives, chisels, drills — and similar tools may have lost the sharpness of their cutting edges. Sharpness is important to their safe use.

Files — may have missing or broken handles and tangs that are bent, broken, or chipped.

Chisels and punches — need to be checked for mushroomed or chipped heads and bent or broken points.

Safe Handling

Workers should be cautious in handling all of their tools. Correct usage and storage are important factors in preventing injuries. For example, tools should always be returned to their proper places when they aren't in use.

Tools should never be left on the floor where they can be a tripping hazard. Tools left on ledges or scaffolds may fall on someone.

Sharp tools should be stored so that their cutting edges aren't exposed.

Avoid carrying chisels, screwdrivers, and other pointy tools in your pocket. Use a carrying belt designed for this purpose with tools pointed end down or carry tools in a tool box or cart.

Tools should be handed from one worker to another, never thrown. Pass pointed tools with handles first.

If tools have to go from one level to another, a bucket or bag that will safely handle the tools should be secured to a rope for lifting or lowering.

Personal Protective Equipment



Another part of safe tool usage is using appropriate personal protective gear. This could mean safety glasses with hammers, files, and cold chisels; gloves with tin snips and other cutting instruments; safety hats and shoes when tools are used overhead or pieces of the work are likely to fall.

Avoid Repetitive Stress Injuries

Try to purchase ergonomically designed hand tools for your workers. Improve the ergonomics of the tools by training your employees to keep their wrists straight and their elbows close to their bodies. Comfort grips or properly fitted gloves can help reduce the stress on hands and wrists.

Summary



- **Choose the right tool**
- **Make sure it is in safe condition**
- **Use it properly and for the purpose it was intended**
- **Store it safety**
- **Use common sense**

It's Easy to be "Green"

- Carpool
  - Have team members carpool to meetings
  - Save gas by having one person pickup food
- Recycle
  - Cans, plastic bottles
  - Use recyclable water bottles
- Batteries
  - Turn in old drill batteries
- Turn off all lights & computers when leaving
- Purchase recycled products



Emergency Contact Information Sheet

Member Name	Emergency Contact Phone #	Current Medication or Alerts

Accident Report Form

1. General Information

Name of Injured_____Birthdate_____Sex_____

Address_____ Telephone_____

School_____ Date of Injury_____ Time of Injury_____

2. Description of Accident

_____

_____

_____

_____

_____

_____

3. Immediate Action Taken

A. First Aid Treatment: □ Ice □ Pressure □ Wash □ Bandage □ Other_____

B. Notification: Parent or other individual □ Yes □ No

Time_____ Method of Notification_____

Telephone Number Called_____ By Whom_____

Name of Individual Notified_____

4. Witness(es):

Name_____ Address_____

Name_____ Address_____

Date:_____

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