



ThunderColts' Safety Manual
2017
Team 3624



Team 3624: The ThunderColts

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2017 Safety Manual

Who are the ThunderColts?

We are a diverse group of high school students and parent mentors that come together for countless hours each year to complete a shared set of goals.

Everyone that comes through the team has learned valuable skills that will give them an edge on their competitors for the rest of their lives.

Goals

1. **Ensuring the safety and well being of everyone:** Before we can even consider doing anything else, it is necessary that we provide a safe and welcoming environment for everyone who wants to be involved. Preventing injury and other damages is crucial to the operation of our team.
2. **Building a robot:** With building a robot comes learning, teamwork, and leadership. These three aspects are crucial for the industry and we want our members to be acquainted with them early to give them an edge after high school.
3. **Outreach to the community:** We want to spread the message of FIRST to our community to motivate both kids and adults to look into the field of STEM.



Responsibilities

All organizations require a team of people that work together to achieve a common goal. Your entire team must work together for a safe working environment to be created. If you don't know what to do to keep your team safe, you can find out below.

What should you be doing to fulfill your role?

1. **Coaches and Mentors**

As with anything on a FRC team, the adults are there to teach and guide. They should lead by example. This includes things as simple as following the same rules that they enforce upon the student members. Adults should also use their extensive experience to help students in creating a safe working environment. You will more easily be able to identify a safety risk than a student so make sure you are actively attentive during any activities.

2. **Safety Captain and Team Leaders**

Similar to the mentors, you have more experience than most students on the team. Use this knowledge to keep your colleagues safe with anything they are doing. Since you are representing your team, make sure that your safety program is thorough and complete. In addition, expand your program beyond the reaches of your team and help other teams be safe too. You should also ensure that you create an extensive safety manual that outlines most of the things any team must do to keep safe.

3. **All Members**

Just because you don't have a title, that doesn't mean you don't have a role too. Most of safety is common sense so always think before you do but when in doubt, always ask.



General Safety Items

1. Safety glasses, pants and closed toe shoes must be worn in the pits at all times.
2. Do not partake in any activities that may be considered horseplay or running.
3. Keep loose clothing and long hair tied up and away from any tools and mechanisms.
4. When using tools, always wear the recommended PPE and ensure proper use.
5. Always walk and work in a controlled and thoughtful manner. Keep full control of robot at all times.
6. Be aware of moving parts and tools on or off the robot.
7. Be extra careful when working on any surface other than the floor.
8. Ladders should only be used when opened fully. Do not stand on anything other than an approved step.
9. Exercise caution when handling tools that generate heat such as a soldering iron. The easiest way to avoid injury is to always assume that the tool is hot and dangerous.



Safety Training

Why is safety training important for everyone?

Safety training is the most critical lesson that any member on an FRC team can get. There are at least a few people who have operated similar, if not the same, tools before. The reason that we retrain it is to ensure that all members understand the proper and safe way to use these tools, the way we want them to, so that they may teach it to other members later on.

1. **Lecture**

Your team should be educated in safety protocol and tool usage. Making presentations with props can be used to do this. This is when you should teach the basics of safety that include wearing PPE, proper behavior and where things should go when they aren't being used.

2. **Hands-on Training**

After learning the basics, demonstrate the usage of various tools and also some of the things that can go wrong with them. Every student must be trained and be able to demonstrate the proper and safe use of a tool.



Handling Potential Energy

What is potential energy?

Potential energy is stored in various ways to move or power your robot. Here are the different types of potential energy and how to deal with them:

1. **Electrical**

Most commonly, this type of potential energy is stored in batteries. We use 12V batteries to power our robots. This potential difference can be very dangerous if anything were to go wrong. Some steps to avoid accidents include disconnecting the power source and for the robot, switching the main breaker to the off position.

2. **Pneumatic**

This type of energy is created by pressurized air. It wants to escape due to the pressure differential between its current location and the surrounding environment. Before working on your robot, ensure that you open the pressure release valve and check that the pressure gauges all read zero.

3. **Mechanical and Gravitational**

This type of energy can be stored in a compressed spring or in a part that is raised. It is especially important to make sure that all springs are relieved and that all moving parts are moved to a secure position in which they won't fall and possibly injure someone.



Tools

What do you need to know?

Tools, regardless of whether they are hand tools or machines, can be dangerous. Things such as lack of care, improper use and mishandling can cause serious injury. Here are some things you should know:

1. **Hand Tools**

Before picking up a tool, make sure you know what it is and how to use it safely. Once you know those things, you should then check that the tool is not broken or damaged in any way. A healthy and maintained tool is safer for use. Some basic rules include cutting away from your hands when using knives or saws, using a table and clamps to support and secure materials, and using the proper tool for the job.

When using abrasive tools, check the surface for obstructions and also check that the tool was set up properly. Also be sure to cover items, such as electronics, that are not supposed to get foreign material on them.

2. **Machine Shop Equipment**

The same rules apply for these tools as hand tools but it is even more crucial for you to know how to safely and properly use them. The biggest difference between these tools and the others is that they will not stop as soon as you tell it to. They will continue to move and can cause serious injury. Before use, check the power cord and on/off switch to ensure that they work. Also check the tool for any damage or missing parts that might affect the operation of the tool. In addition, make sure you clear any obstructions to you or the material and that you stay at the machine until it stops moving.



Many of these tools have guards and attachments that help control the material.

3. **Tool Storage**

It is important to always put tools away after they are used. This can help avoid many incidents such as tripping over wires, being cut by loose blades, damage to the tools and other things. Tools that are left out are likely to get damaged and may then be hazardous to the next user.

Electricity

What should you know about this?

Electricity can cause serious injury. It is everywhere you look in your workspace so it is important to know how to prevent accidents. Here is what to do for some different items:

1. **Power Cords**

Routinely check power cords for damage. Lack of insulation can cause electrocution or shortage. Check that plugs are not bent, damaged or missing. Also be sure to keep cords out of the way so that they do not get damaged by tools or become a tripping hazard.

2. **Power Strips and Extension Cords**

Similar to power cords, these should be checked for damage as well. An important note for these is that you should never “daisy chain” them together. This can cause overloading.



Battery Safety

Why is this important?

Every mobile device is powered by some kind of battery. Some are powered by Lithium Ion batteries and others are powered by AA batteries. There are many different types but it is important that you and your team know how to handle them. It is also important that your team knows where your battery acid spill kit is just in case of an accident.

We use 12V batteries to power our robots. They provide a lot of power that allows for all of the electronic components on the robot to be powered. Then we get to the important question; why are batteries so dangerous? There are three big reasons:

1. **Acid**

Inside each battery is an acid known as H_2SO_4 . It is highly corrosive and will cause serious injury and destruction to components upon contact.

2. **Shock**

Connecting the terminals will cause shortage.

3. **Drop**

These batteries are very heavy. If dropped, they may cause injury or damage components. If the battery is damaged in the process it could lead to a battery acid leakage.

CAUTION: Batteries contain acid. This substance, H_2SO_4 , is a corrosive, colorless liquid that will burn



your eyes, skin, and clothing. The team Mentor and Safety Captain should post the Safety Data Sheet

(SDS, see example in Appendix) for the battery in use and train all team members about battery safety.

You can find emergency handling and first aid procedures on the SDS, along with proper protection for

handling cracked or damaged batteries, and information on disposal of the battery.

3.5.1 General Damaged Battery Information and Warnings

Any battery that is visibly damaged in any way is dangerous and unusable. Don't take a chance- don't

use it! Here are reasons you should not use a damaged battery:

1. It contains stored electrical energy that could cause the battery to rapidly heat up due to an

internal electrical short circuit, and possibly explode.

2. The 12V batteries FIRST provided in your Kit of Parts contain sulfuric acid that will burn human

tissue on contact.

Set aside a damaged battery and handle accordingly:

Immediately flush any contacted skin with a large quantity of water.

Seek medical treatment.



Periodically inspect your batteries for any signs of damage or leaking electrolyte. Remember that

a dropped battery may be cracked, but the crack may not be visible and might eventually leak

electrolyte.

Treat it as a hazardous material and process it in accordance with the battery's SDS.

Don't take a chance- don't use it!

3.5.2 Necessary Safety Materials

FIRST recommends that teams keep the following items readily available whenever working with

batteries:

1 A box of sodium bicarbonate (baking soda) to neutralize any exposed acid electrolyte.

2 A pair of acid-resistant rubber or plastic leak-proof gloves to wear when handling a leaking

battery.

3 A suitable non-metallic leak-proof container in which to place the defective battery.

3.5.3 Procedure for Handling a Leaking Battery

When an electrolyte leak occurs:

Neutralize it by pouring the sodium bicarbonate on all wetted surfaces. The bicarbonate of soda



itself is not dangerous, and will react with the acid in the electrolyte leaving a safe residue that

can be disposed of in a conventional manner such as rinsing with water.

Follow emergency handling instructions of the SDS and notify Mentor.

Put on gloves before handling the battery.

Place the battery in a leak-proof container for removal.

Be sure to neutralize any acid on the gloves before removing and storing them.

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Seek medical attention if skin came into contact with any chemicals.

Properly dispose of the battery, which is now a hazardous material.

At a FIRST event:

Immediately send the person in contact with acid to the First Aid Station/EMTs.

Report incident to the Pit Administration Supervisor so that the individual can fill out a Medical

Incident Report Form. Provide team number and available information.

Pit Administration will immediately contact Event Management for further instruction from Event

and Venue Authorities.

3.5.4 Battery Disposal



Be sure to dispose of all batteries properly and safely. Most retailers of automotive batteries will accept

and properly dispose of them at no cost.

3.5.5 Charging and Handling

Keep the battery-charging area clean and orderly.

Place your battery charger in an area where cooling air can freely circulate around the charger.

Battery chargers can fail without proper ventilation.

Do not short out the battery terminals. If metal tools/parts contact the terminals simultaneously, it

will create a direct short circuit. This may cause high heat to develop in the battery terminal/part/tool area and the battery could explode.

Do not charge battery at greater than the manufacturer's maximum recommended rate.

3.5.6 Ongoing Battery Inspection

Periodically inspect your battery for any evidence of damage, such as a cracked case or leaking

electrolyte.

Bent terminals can also be a potential leak source.

Inspect the battery before and after each round of competition.

Chemical Safety



Keep chemical containers in good condition.

Make sure all chemical containers have labels placed by the manufacturer.

Ensure all labels are legible.

Become familiar with the chemicals you may use as part of the FIRST Robotics Competition.

Read safety precautions and instructions for use located on the chemical's label.

Store all chemicals in an orderly way. Obtain Safety Data Sheets (SDS) for the chemicals your

team uses. These sheets provide information on the correct handling of a spill or injury.

If you are exposed to a chemical, notify your Safety Captain and Mentor immediately and consult

the SDS if necessary.

Don't use any highly flammable materials, such as cleaning solutions, at FIRST events.

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Soldering

Soldering can be dangerous because of the heat from the iron and the chemical fumes and vapors

released from the solder and flux. When soldering, observe the following points:

Use lead-free solder only and solder with electrically heated soldering iron/gun only.

No torches or open flames of any kind are allowed in event venues, except by authorized



personnel in specified areas (such as the event Machine Shop).

Wear eye and face protection.

Solder in well-ventilated areas.

Never touch the iron/gun. It heats to extreme temperatures that will cause severe burns.

Prevent burns by wearing cotton clothing that covers your arms and legs.

Always wash your hands with soap and water after handling solder.

Work on a fire resistant surface.

Keep your soldering iron in its protective holder when not actually being used.

Do not leave any hot tools where someone can accidentally contact the hot element.

4 Personal Protective Equipment (PPE)

The proper use of personal protective equipment (PPE) is an important element to help ensure FIRST

Robotics Competition participants are protected from hazards in the work area. The following describes

the common PPE that you are required to wear as part of constructing, use, maintenance and transport of

a robot. All PPE must be ANSI-approved, UL-Listed, CE EN166 rated, AS/NZS certified or CSA rated, as

applicable.

Eye and Face Protection



There are several forms of eye/face protection available to provide protection from related hazards,

including safety glasses with side shields, goggles, and face shields. Inspect equipment for damage each

time it is worn.

4.1.1 Use and Application

Wear eye protection in the following situations:

When performing any work on the robot including grinding, drilling, soldering, cutting, welding,

etc.

When there is a risk of exposure to flying particles or chemical exposure (such as splashes,

splatters, and sprays).

At FIRST events, wear eye protection:

Anywhere in the Pit Station including walkways and Team Pits.

In the vicinity of the Arena, including the Playing Field.

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On the Practice Field.

Any area posted with signs requiring the use of eye protection (such as the Machine Shop).



4.1.2 Safety Glasses

Wear ANSI-approved, UL-Listed, CE EN166 rated, AS/NZS certified or CSA rated non-shaded safety

glasses. Only lightly tinted Yellow, Rose, Blue, and Amber tints are FIRST approved. Reflective lenses

are prohibited; your eyes must be clearly visible to others.

The use of anything other than ANSI-approved, UL-Listed, CE EN166 rated, AS/NZS certified or CSA

rated eye protection is prohibited.

4.1.3 Prescription Glasses

If you wear non-safety rated prescription glasses, you must wear approved safety goggles over them to

achieve adequate protection. If you wear safety rated glasses, you may use ANSI-approved, UL-Listed,

CE EN166 rated, AS/NZS certified or CSA rated side shields.

Hand Protection

Hand protection is designed to protect against heat, electrical, chemical and mechanical hazards. Use

proper gloves and mechanical tool guards for the application.

FIRST Robotics Competition participants should work with their Mentor to ensure the selected glove is the



correct one to use for each activity. For example, wear chemical-resistant gloves when handling

chemicals. Check your gloves for proper size, absence of cracks and holes, and good flexibility and grip

before you wear them.

Hearing Protection

Make hearing protection devices available, such as earplugs, where there are objectionable/questionable

sound levels. At events, hearing protection is available at Pit Administration. A Mentor can provide

assistance in evaluating high-noise tasks and determining appropriate hearing protection devices.

Foot Protection

4.4.1 Participants

When engaged in FIRST activities, FIRST Robotics Competition participants must wear shoes that

completely cover the entire foot. Shoes must be substantial and have closed-toes and heels to protect

against foot injuries, regardless of work location. Flip-flops, sandals, mules, lightweight slippers, etc. are

not acceptable when working on or near the robot.



In some cases, safety shoes or toe guards are appropriate for areas where heavy objects can fall on your

foot. Notify your team Mentor if you encounter such situations, and determine the safest way to perform

the task.

4.4.2 Spectators

Spectators attending FIRST competitions should follow the same footwear rules as participants. If

substantial close-toed shoes are not available, they may enter the pit area as long as they remain in the

pit aisles. Spectators that do not meet the footwear requirement for participants, as described above, are

not allowed inside individual team pits or in any locations where robots are being worked on.

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Please note that loose sandals (like flip-flops) or bare feet are not permitted in the pit area under any

circumstances.

Other Preventatives

Ensure that team members or Mentors are not wearing ties, loose clothing, jewelry, hanging key chains or



similar when near or working on moving or rotating machinery so as to avoid the potential risk of draw in

to rotating parts. In the case of individuals with long hair, this risk should be mitigated by tying back or

covering long hair.

5 Safe Robot Lifting, Handling and Transportation

Take a few moments to ensure your team knows how to lift your robot properly and safely. Practice the

procedures prior to beginning the season so everyone has the same method and goals at the events.

Robot Carts

To protect team members from muscle strains and other injuries as they transport the robot between the

Pits and the competition area, we strongly recommend team members use a cart. Please keep the

following in mind:

Carts must remain in the team Pit area when not in use for robot transportation;

All carts should fit through a standard 30-inch door;

Wheels on the cart must not damage site flooring;

Do not add music or other sound-generating devices to the cart, with the exception of devices of



reasonable volume intended to be activated occasionally to make others in the direct vicinity

aware that a robot is on the move for safety purposes; and

Put your team number on your cart so it can be identified by field personnel.

NOTE: Carts must be safe. They must be easy to control and maneuver, and pose no risk to bystanders.

Carts identified as unsafe by Safety Advisors must be made safe before they will be allowed to be used.

Always follow recommended practices for lifting, handling and transportation of robots. By practicing

these safety techniques, your team members will also develop a quick, fluid routine.

Pre-Lift Procedures

Ensure all transporters are wearing appropriate PPE (safety glasses at a minimum are required.)

Make sure the robot is safe to move:

- o Are all parts of the robot secured?
- o Is the robot powered off?
- o Is anyone still working on the robot?
- o Are there enough people to perform the lift safely? Two to four people are preferred.

Before lifting, hold a short discussion to determine the direction and path you will be lifting.



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Ensure that the areas and paths are clear of debris and hazards.

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During the Lift

Appoint someone to coordinate the lift to make sure you are all ready to begin.

Each lifter should place his/her feet close to the robot and adopt a balanced position.

All persons should lift at the same time using proper body mechanics, these include:

- o Lift with your legs, keeping your back straight.
- o Do not twist your body- use your feet to turn your entire frame if you need to turn.
- o Use proper hand holds to grasp the robot and make sure you have a safe, secure lift point before starting the lift.
- o Bend your knees to a comfortable degree and get a good handhold. Maintain normal spinal curves.
- o Tighten your stomach muscles and commence lifting the robot, using your leg muscles if you are lifting the robot up from the floor.
- o Keep the robot close to your body, and coordinate lift speed with the others.

Make sure the cart is stable and will not roll, coordinate correct placement of robot on the cart.



Use the gate opening to enter the playing field. Climbing over the railing is prohibited.

Transporting Procedures

Make sure the robot is stable on the cart before transporting.

Keep the cart under control at all times, especially when removing or placing the robot.

Lead the cart with a team member who can ensure the safety of those in the path of the travel

area.

Use patience and control when moving the robot, especially in crowded areas (do not run).

Ensure that the cart will not roll away or pose a hazard, especially upon robot removal (use a

chock block if necessary).

Use the gate opening when entering/exiting the playing field. Climbing over the railing is prohibited.

Post-Match Procedures

Relieve all stored energy and open the main circuit breaker on the robot.

Ensure that the robot is made safe prior to lifting it off the playing field, no dangling parts, etc.

Remove debris from the playing field.

Use the above "Pre-lift" and "During the lift" procedures.



Use the gate opening to exit the playing field. Climbing over the railing is prohibited.

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6 Safety In Your Work Spaces

We recommend that teams implement a Safety Program to deliver on ensuring a culture of safety for the

team throughout the season covering all aspects of the program. You will find an Inspection Sheet in the

Appendix, which will serve as a minimum guideline at your events. Safety Advisors will be on site to

Mentor and Coach teams on proper safety practices.

We recommend that teams implement a checklist of their own to monitor their unique work facility safety

considerations. Check for items such as:

Are stacked items at least 18" below sprinkler heads?

Are stacks stable and secure against sliding and collapse?

Are heavy or bulky items stored below shoulder level?

Are floors free of slipping and tripping hazards?

Are all light fixtures functional?

Is illumination level sufficient for the detail of work performed?



Review your workspace, take notes, and make any improvements to the safety of the environment and

those working there. The Mentors and Student Safety Captain should constantly monitor team safety and

the conditions at the work facility so the area is secure from injury, danger, risk, or liability.

7 Safety At FIRST Events

Safety Considerations

At events, the pure anticipation and excitement can sometimes overshadow common sense and safety

fundamentals. One safety area teams sometimes overlook is the need to wear appropriate clothing when

working on or being around robots. In addition to the ANSI-approved, UL-Listed, CE EN166 rated,

AS/NZS certified or CSA rated safety glasses required for eye protection, FIRST highly recommends that

team members and Mentors:

Refrain from wearing dangling jewelry or loose, baggy clothing near the robots;

Tie back long hair so that it will not get caught in the robot or other machinery; and

Wear gloves to protect hands and fingers when handling the robot or the robot crate; finger



injuries are one of the most common injuries at events.

The following safety considerations apply at all FIRST Robotics Competition Event(s):

To gain entrance to the Pit, every person will have to wear a pair of safety glasses or safety rated

prescription glasses with side shields.

o Don't leave all safety glasses or side shields in the Pit. Be sure to bring a few pairs with you, so someone from your team can enter the Pit and get the safety glasses for all other members.

Use safe lifting, handling and transportation techniques around the robots at all times.

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Do not use skateboards, 'hoverboards', or drones at events.

Do not bring bottled gas tanks (e.g. Helium) to events.

Do not throw objects (such as paper airplanes) from the stands/bleachers.

Competition Safety

Use the buddy system when traveling and while at the event.

Note that FIRST Staff and Volunteers are distinguished by their name badges.

Travel safely and carefully between the pit and the playing field.

Demonstrate safe behaviors at all times, even in the heat of competition.



Establish a planned, safe lifting procedure of the robot, including cart removal after the lift.

Make sure the robot is properly secured if you must work underneath it. Never work on the robot

on an unstable surface.

Assist and Mentor other teams with safety issues.

Pit Station

7.3.1 Setting Up the Team Pit Station

Bring and use work gloves for uncrating and re-crating, if a crate is in use.

Design and set up your Pit Station safely and use proper tools to construct any components

(displays, shelves, banners, etc.)

Use ladders; don't climb on items not meant for the task, such as tables and chairs.

Observe the ten-foot height limit for all portions of your Pit Station, including banners.

Small, bench-top band saws and drill presses, with appropriate guards, are allowed in team Pit

Station.

7.3.2 Pit Station Safety

Control access to your Pit Station.

Keep the work area neat and orderly.



Properly use power strips. Do not 'daisy chain' (plugging power strips into one another) or

overload the rated capacity of the power strip.

Keep the aisle immediately outside your Pit Station clear for pedestrians and robot transit.

Participants and spectators should be wearing approved personal protective equipment, PPE, in

the Pit at all times.

Teams may not build any structure to support people or items for storage over the top of the work

area in their team pit station.

Team structures, signs, banners, or displays cannot be higher than 10 feet above the floor.

- o Securely mount team Pit Station signs, banners, and displays.

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Be aware of your neighbors. Alert them if there is a hazard in your Pit or near theirs.

Maintain a

clean, neat, and orderly Pit Station at all times. There are inspections after teams leave so be

sure to do the following:

- o Clean floor in and around your Pit Station



- o Proper tool storage
- o Proper care of batteries and battery chargers
- o Tidy storage of personal belongings and equipment

When transporting your robot, politely keep pedestrians alert to your movement.

7.3.3 Pit Age Requirement

Children twelve (12) and under must have a person eighteen (18) or older with them at all times. There

will be child safety glasses available to borrow and return at the Safety Glass Station.

Child strollers and baby carriages are not allowed within the individual Pit Stations.

7.4 Using the Practice Field

Review and enforce the rules for maintaining a safe “exclusion zone”. This zone guarantees the moving parts of robots stay inside the practice area so that there will be no accidents with the robots and people who may be unaware of their surroundings.

Personal Protection Equipment is required inside the practice field and safe lifting practices are encouraged.

8 Safety Awareness and Recognition Programs

8.1 Key Objectives

Key objectives of the Safety Awareness and Recognition Program:

- Volunteers and spectators have injury-free competitions
- Teach participants to follow safe group and individual practices by using positive methods



- Underwriters Laboratory will pick the team to win the Safety award in which they sponsor
- Recognize other team's safety practices and individuals' safety practices.

8.2 Safety Advisor Process

Safety Advisors will observe the safety culture by looking at the safety habitats of the team in their pits, how they move the robot when they queue, and how they practice on the practice field. Safety advisors will take note of these safe practices and rate how the teams have done in the following categories to see if they are eligible to win recognition for their safety program.

- a) Safe Behavior such as Personal Protective Equipment (PPE) Usage
- b) Physical Conditions
- c) Safety Innovation
- d) Safety Program Presentations

Safety Advisors will do a number of things to provide positive reinforcement and positive feedback such as

- a) Provide positive feedback for safe conditions and safe behavior
- b) Indicate unsafe behavior and teach the correct behavior that would be safe in that position.
- c) Choose a number of daily awards with the help of the safety captains
 - i) *"Star of the Day"*: a Mentor, Volunteer or Student
 - ii) *FIRST* in Pit Safety
 - iii) *Hard Hat Pin Award: Safety Award* Finalists iv. *Safety Award*, Sponsored by UL

The Safety Advisors encourage teams to come to them with questions. They will help to improve safety for all teams by giving suggestions and tips.



8.3 Safety Recognition and Awards

The *Safety Awareness and Recognition Program* recognizes individuals and teams that emphasize practicing safe procedures and following the safety guidelines. The program does this by giving out the awards seen below.

8.3.1 Highlighting Safety Cards

- 1) Best Safety Culture
- 2) Best Pit Safety
- 3) Star of the day

These awards are given out daily at the Safety Captain meeting that is held each day in the morning. All safety captains are expected to attend and the day before, they are expected to fill out a card which states which teams and which individual have been nominated for each award. This demonstrates FIRST's idea to encourage acknowledging other teams for their efforts and accomplishments.

Safety Advisors also use the following to choose which candidate is best for a safety award:

- 1) Program Presentations (Team Safety Program)
- 2) Safety Initiatives (at the event)
- 3) Community Outreach
- 4) Safety Innovation

8.3.1 through 12 NEED TO BE DONE pages 19-25







