

On-site Activities Review

Formula SAE Competitions

Putting it as simply as possible, your Formula SAE team's goal is to: "have your car onsite and ready-to-run, with all the documents submitted, when the competition opens."

The following review will help you prepare for the onsite activities at a Formula SAE competition.

Before the Competition

Vehicle Shipping – You must ship your vehicle early. Many teams have experienced unexpected delays in shipping or clearing US customs. This could happen to you - so make sure you allow time for delays. Discuss shipping times and regulations with your shipper. Your shipment must comply with US Customs regulations and satisfy the requirements of your shipper. Air freight shipments to, from or within the US must meet FAA regulations.

Detailed shipping instructions are posted on the individual competition websites.

Visas – If any of your team members requires a visa to enter the United States they need to apply early. Although most visa applications seem to be granted fairly quickly, occasionally some have been delayed. Start the visa process early.

Insurance – All participating students are required to have medical insurance that covers them if they are injured. You need to bring your insurance card or other proof of insurance to on-site registration. You should also have added this information online under your teams' registration page where information is required for every individual. If you are a team with another approved student membership (ie IMeche, VDI, ATA) then you should have completed the International Student Registration form and emailed to collegiatecompetitions@sae.org. Medical insurance is entirely the student's responsibility.

Lodging – The organizers do not provide housing and your team is responsible for making your own lodging arrangements. Camping may be available at some competitions. For information on lodging and camping - check the individual websites.

Required Submissions – Various reports and documentation must be submitted before the competition including: (1) Cost Report, Rule C-3.8; (2) Design Report, Rule C-5.2; (3) Design Spec Sheet, Rule C-5.3; (4) Structural Equivalency Form, Rule B-3.8 and the (5) Impact Attenuator Data, Rule B-3.21. These submissions are **not optional** and penalties will be applied if the reports and documentation are not received by the deadlines. Deadlines are posted on the individual competition websites.

Additionally teams **must submit** registration information on-line as required by Rule A-4.8.

Rules – We can't stress it enough: "Read the rules." And then keep re-reading the Rules.

Team Transportation – Competition sites may be in remote locations that **cannot** be reached by public transportation. The competition organizers do not provide transportation. Your team will need to have its own transportation.

Translators – The organizers do not provide translators. All judging is done in English. If your team members are not able to converse fluently in English you will be at a disadvantage during judging and you should consider having a translator. Translators will be issued special “Dynamic Event Passes” so that they can accompany the team during the dynamic events.

Website – We strongly recommend that teams read all the material on the competition websites and especially the items posted under Rules and Important Documents. Updates will also be posted under the news page.

Equipment and Supplies

Food and Drinks – Organizers do not provide food and drinks at the competition. Sponsors may occasionally provide lunch, so check the event schedule. There may be a food vendor on site; however onsite food may be expensive. At most competitions you will need to bring your own food and drinks. Check the websites for details.

Machine Shop Facilities – Machine shop facilities are **not** available at FSAE California. Limited machine shop access may be available at FSAE Michigan – check the individual competition websites. When machine shop access is available it is each team’s responsibility to provide the material to be machined.

Paddock Covering – Your team will be allocated an outdoor space of approximately 20’ x 40’ to serve as your paddock during the competition. The paddocks are not covered so your team should consider bringing awnings or tents for rain protection and shade. Stakes **cannot** be used to anchor tents or canopies so you will need to attach the ropes to weights or tool boxes.

Reminder – Be prepared for adverse weather. It frequently rains in Michigan and it will likely be hot in California. Prepare for temperatures as low as 0° C in Michigan and as hot as 40° C in California.

Parts – Be sure to bring enough spare parts and materials to repair and maintain your car. There may not be any parts or equipment stores near the competition site and if they exist they may not have what you need. Although other teams might be able to loan you some basic parts and material, don’t depend on them having the specific parts or material you need. Be prepared.

Tools – Bring all the tools you might need to repair and maintain your vehicle. Don’t depend on trying to borrow tools from other teams – they need their tools too.

Reminder - Mains voltage in the United States is 110/120 volts at 60 Hz **not** 220/240 volts.

Welding – Traditionally Lincoln Electric provides comprehensive welding services at FSAE competitions; however the material to be welded is entirely the responsibility of the team.

At the Competition

Award Ceremony – The award ceremonies are held on site within a few hours after the end of the Endurance event. No tickets are required. In 2010, we will be holding an award ceremony Friday and Saturday evenings.

Cost Event – A formal presentation is not necessary at the cost event – but you must be prepared to answer questions about manufacturing and cost build-up of your vehicle. The source of the discussion will be your team’s Cost Report and eBOM submitted by the action deadline mentioned in the rules for that competition. This documentation will have already been reviewed by the cost judges prior to the event.

In addition, you must be prepared to discuss a cost related business case with the judges (C-3.3.3). The case to be discussed will be sent to the teams a few weeks before the competition.

Your vehicle must be presented at the scheduled time for evaluation by the Cost Judges.

Credentials – All members of your team will be issued credentials upon completion of onsite registration. Team members **must wear** these credentials at all times when on the competition site. Team members entering the dynamic events area must have one of the team’s dynamic event passes in addition to their credential.

Daily Schedule – The daily schedules that are posted on-line are preliminary and may change slightly before the competition. Follow the daily schedule that’s posted and distributed on-site.

Design Event – Although the car is obviously a very important part of the design event, the judges will be concentrating on the students’ understanding of the car, their understanding of the relevant theory, and the reasons behind the decisions that they made. During the first round of design judging the judges will concentrate on the fundamentals that apply to *all* vehicles. Fundamentals are things that make that design area absolutely required to make the car accelerate, decelerate, corner, and adhere to the rules. Features found on a minority of cars, such as traction control, wings, and other more advanced items, will be analyzed very briefly in the first round but will be looked at in depth in the following rounds. The team must have the aforementioned fundamentals mastered, as demonstrated by their presentation and responses to the judges, before they are considered for advancement to the next round. The students should still bring all of their documentation, on all aspects of their design, to the first round just in case judges find time to ask more detailed questions.

Dynamic Events – Due to the distances between the paddock and dynamic areas, it is recommended that teams be prepared to carry or push required tools and equipment. Many teams bring wheeled carts to help transport equipment between locations, however powered carts are not allowed. .

While there are areas provided within the dynamic areas for very minor vehicle work, expect to bring the vehicle to the dynamics areas in a 'ready to run' condition.

Dynamic Event Pass – Each team will be issued four (4) “Dynamic Event Passes” during registration which can be transferred between team members as required. Team members must have a Dynamic Events Pass to enter the dynamic events areas where cars are running under power. Translators will be issued additional passes.

Meetings – Attendance at the meetings for Team Captains and Drivers is **mandatory**. Your team members who will be driving in an event **must attend** the driver’s meeting for that event. There are no exceptions to this requirement.

Photographers – Teams are allowed to have only 1 photographer and 1 spotter in the dynamic events area – and only when the team’s car is running. Refer to the FSAE website for detailed rules for team photographers.

Presentation Event - If you are going to use data projection equipment – bring it with you. Organizers do not provide data projection equipment. Before you arrive at the event you should check both your projector and PowerPoint to make sure everything works. If you have problems getting your PowerPoint to run the delay will reduce your presentation time.

If you enter multiple competitions, be aware that the presentation rooms will not be the same; some will be only large enough for only your presentation team and the judges, others large enough for the rest of your team to watch. Make sure you bring adequate equipment (i.e., extension (long electrical) cords) to accommodate different room layouts.

Registration On-site – On-site registration must be completed immediately after you arrive ... and **before** you do anything else. Your team must have registered and been issued credentials and wrist bands **before** unloading the car or opening the shipping crate.

Safe Practices – Safety is paramount at all FSAE competitions. Teams are responsible for following the FSAE Rules and using safe work procedures at all times. Refer to the “Paddock Patrol” document in the FSAE Team Handbook.

Security – Although we consider the event sites to be reasonably secure, the sites are large and the security staff can’t be everywhere. We recommend that you to keep your equipment locked up when you leave the paddock.

Technical Inspection – It is your team’s responsibility to inspect your car and make sure it complies with the rules before bringing it to technical inspection. Technical inspection takes at least 45 minutes per car so we advise you to be ready and in line as early as possible. At North American FSAE competitions the inspection order is determined by a “take-a-number” procedure. (First in-first inspected). Inspection sequence numbers are given out by at the inspection location starting approximately one (1) hour before inspection opens.