NASC2005
Scrutineering Instructions

Scrutineering is the process by which all potential entries into North American Solar Challenge (NASC) 2005 are inspected, tested and verified to be in compliance with the latest version of the North American Solar Challenge 2005 Regulations (November, 2003). Teams must completely pass scrutineering before they will be allowed to qualify or compete in North American Solar Challenge 2005. Teams that complete scrutineering are guaranteed an opportunity to qualify for North American Solar Challenge 2005, but are not guaranteed a position in the Rayce.

Sessions

North American Solar Challenge 2005 will hold two scrutineering sessions. Each scrutineering session will be held in conjunction with a Formula Sun Grand Prix (FSGP) and NASC Qualifier. The dates and locations of the scrutineering sessions are:

PRELIMINARY SCRUTINEERING: May 16-18, 2005. Topeka, KS

FINAL SCRUTINEERING: July 10-13, 2005. Austin, TX

Preliminary Scrutineering is a mandatory session for all teams. Teams are strongly encouraged to bring as much of their vehicle as possible. The minimum attendance is two team members with documentation for Mechanical/Electrical/Body stations. The penalty for not meeting the minimum attendance requirement will be 110 minutes of rayce time.

The Preliminary Qualifier held immediately after Preliminary Scrutineering is optional and features three days of qualifying.

Final Scrutineering is mandatory for all teams, including teams that passed all stations during the Preliminary Scrutineering.

The Final Qualifier will be held immediately after Final Scrutineering. Teams that qualified during the Preliminary Qualifier will not have to requalify unless instructed to by the Inspectors. The Final Qualifier will feature two days of qualifying.

Officials

Each scrutineering station will have an inspector and various assistants. The inspector is responsible for grading the vehicle on each inspection item and issuing an overall station grade for the vehicle. The inspector will openly explain any deficiencies the vehicle may have with regards to the Regulations and may suggest possible alternatives to fix them. Inspectors will conduct re-inspections as time allows.

The Head Inspector will be responsible for overseeing all aspects of scrutineering and will work with a team of experienced North American Solar Challenge 2005 personnel to inspect and test all entries in a fair and reasonable manner.

Registration

Teams are required to complete registration before they will be permitted to begin the scrutineering process.

Teams will be required to bring the following materials in order to complete registration:

- Signed and completed liability release forms for each team member
- Signed and completed emergency medical forms for each team member
- Clear proof that the team is covered by insurance in the ways and amounts detailed in the Participation Agreement

Upon completion of registration, each team will receive a packet containing an inspection sheet for each scrutineering station and a station summary sheet. Teams are responsible for bringing these items to the scrutineering stations.

All vehicles traveling with the team during the Rayce must also be registered during Final Scurtineering.

Scheduling

For the Preliminary Scrutineering, all teams will select their scrutineering time slots during registration. For Final Scrutineering, any team that did not qualify at the Preliminary Qualifier will be given priority for scheduling inspections.

Trading inspection times with other teams is permissible and must be reported to NASC Headquarters at least one hour prior to the earliest inspection time.

New vehicle inspections will be given priority over re-inspections until the set deadline. All inspection stations (with the exception of the Support Station) will stop performing new vehicle inspections at 3:00 p.m. on the last day of scrutineering.

After that time, the scrutineering stations and their inspectors will only conduct re-inspections unless the Head Inspector and the Station Inspector give special permission. Any team that is queued to start its final inspection station before the deadline will be inspected.

Grading

All vehicles and their components will be judged on the following four-color grading system:

> **GREEN –** (Rayce Pass) The vehicle/component meets or exceeds the minimum requirement set forth in the Regulations and is cleared to qualify and rayce.
> **BLUE –** (Qualifier Pass) The vehicle/component partially satisfies the minimum requirement set forth in the Regulations or suffers from a non-safety related deficiency. Improvements must be made in order to conform to the Regulations. The vehicle is cleared toe enter the dynamic station and the qualifier. The vehicle is prohibited from entering the rayce until fixed and re-inspected.
> **YELLOW** – (Dynamic Pass) The vehicle/component partially satisfies the minimum requirement set forth in the Regulations or suffers from a non-safety-related deficiency. Improvements must be made in order to conform to Regulations. The vehicle is cleared to enter the dynamic station. The vehicle is not cleared to enter the qualifier or the rayce until fixed and re-inspected.
> **RED** – (Fail) The vehicle/component does not meet the minimum requirement set forth in the Regulations and presents a potential safety hazard. Major improvements or possibly a design change may be required to fix the problem. The vehicle is prohibited from entering the dynamic station, the qualifier, or the rayce until fixed and re-inspected.

Each scrutineering station will have an itemized checklist and each item will be inspected and assigned one of the above color grades. The overall station grade will be based on the lowest color grade. Once deficiencies have been corrected and re-inspected, the overall station grade will be changed.

For example, in a particular scrutineering station a vehicle receives green grades on eight checklist items, yellow grades on two checklist items, and a red grade on one checklist item. The overall station grade for that vehicle is red. Once the red item has been fixed and re-inspected, the overall station grade will be upgraded to yellow.

Vehicles must receive a yellow overall station grade in Driver, Body, Mechanical, Array, Electrical Stations, and Battery Protection System before they will be cleared to enter the Dynamic Station. Vehicles must receive a blue overall station grade in every station (including Dynamic) before they are allowed to enter the qualifier. Vehicles must receive a green overall station grade in every station (including Support) and pass the qualifier before they will be cleared to start the North American Solar Challenge 2005.

Team Personnel

All team members are welcome to watch Scrutineering, but due to safety concerns and limited space, only a small number of people will be permitted near the vehicle. All others will have to remain outside the inspection area. Team members must not hinder the inspectors or their assistants in any way. Filming or photographing Scrutineering is permitted, but must be done from outside the inspection area.

Teams should appoint one person (usually the Team Captain) to interact with the NASC2005 Inspectors at each station. Teams should also have someone on hand at each inspection station to answer any additional technical questions or discuss their designs, typically the Head Engineer for the particular system. The more prepared your team is to answer questions and defend your design decisions, the easier it will be to complete the inspection process.

Regulation Interpretation

The NASC2005 Regulations were designed to foster creativity and unique design concepts. This does, however, open the Regulations up to interpretation. Interpretations are made objectively on the basis of promoting safety and fairness. All NASC2005 Inspectors will be briefed on all regulation interpretations made up until the time of scrutineering. The Inspectors may have to further interpret the Regulations during scrutineering

The Head Inspector and Rayce Manager will take the place of the Jury during the scrutineering process, and will hear any conflicts that arise due to a regulation interpretation. They are responsible for making a determination and the decision will be final. All interpretations made during scrutineering will be considered official and will be posted in NASC2005 Headquarters.

Re-inspection

Any items that received a blue, yellow, or red grade will require re-inspection. Once an item has been corrected, the team can sign up for re-inspection at NASC2005 Headquarters. Only the Station Inspector that assigned the grade or the Head Inspector can sign-off on a re-inspected item. Inspectors will conduct re-inspections as their schedule permits. The final hour of Scrutineering for each day will be set aside for completing any re-inspections remaining on the list.

Re-qualification

Teams participating and completing the qualification requirements for NASC2005 at the Preliminary Qualifier will not be required to re-qualify at the Final Qualifier unless significant changes that could effect the safety of the vehicle have been made between the two Qualifiers. Examples of a significant change would be a new chassis or changing the battery system. Basic enhancements or changes that improve the performance of a vehicle will not require a team to re-qualify. Teams that are required to re-qualify will have their starting positions determined based on their performance at the Final Qualifier.

Teams that want to voluntarily re-qualify at the Final Qualifier to improve their starting position will only be permitted to do so if there is ample room on the Qualifying Track. If a team is permitted to re-qualify, they will

forfeit their Preliminary Qualifier results and their new starting position will be determined by their performance at the Final Qualifier.

Stations

There will be a total of seven scrutineering stations at the Preliminary Qualifier. Teams will have to complete all the inspections and tests in all stations before they will be permitted to qualify. The stations are Driver, Body, Array, Electrical, Battery Protection System, Mechanical, and Dynamic. The Final Scrutineering will include one additional station that will be known as Support.

Array Station

Inspection of the solar array and its components. Teams will bring their solar cars to a designated area for inspection.

Itemized Checks:

- **5.1 Power –** The solar array output will be tested using a Daystar Inc. I-V curve tracer model # DS-10/125. The curve tracer connects to the array through a pair of clips (Mueller Electric model 25-C, 75 amp rating) similar to those on small car battery chargers at the end of a 10 ft. cable. The cable is in a "Y" configuration with 2 ft of cable going to each clip for a total separation of 4 ft possible between terminals. The spacing between terminals must be wide enough so the clips will not touch while testing. The test will measure your total array output, individual panels or both depending on the time available.
- **5.7 Solar Cell Technology Limitation –** Solar cells will be inspected to verify that they are the same cells reported on the team's solar cell approval form(s).

Bring to Inspection:

- Solar array
- Array Inspection Sheet
- Station Summary Sheet
- Copy of solar cell approval form
- Copy of solar cell purchase order
- Wiring diagram that shows power trackers and blocking diodes if applicable

Schedule:

The Array Station will operate on a first come, first served basis. All teams that are in the queue at closing time will be permitted to complete the station tests or will be given first priority for the next day. The Array Station schedule is TBA.

Driver Station

Inspection of drivers, weight, and safety features. Teams will bring their solar cars and all of their drivers/passengers to a designated area for inspection.

A minimum of two solar car drivers (and minimum of two passengers for ISF6000 vehicles) must be weighed in and registered for the event. A maximum of four drivers will be registered per team (and a maximum of four passengers for ISF600 vehicles). People registered as drivers may also be passengers. People registered as passengers are not drivers.

The inspector will chose which driver/passenger will be used for each inspection and may test multiple driver/passengers.

Itemized Checks:

- **3.7 Driver/Passenger Registered** - Verify that the driver/passenger is registered with NASC2005 HQ.
- **3.8, 7.4 Driver/Passenger Requirements -** Verify driver/passenger age, valid driver's license (for drivers), clothing, ballast, helmet.
- **Vehicle Weight -** The vehicle with driver/passenger will be weighed.
- **6.3 Tire Ratings** – Verify that the individual wheel weights do not exceed the maximum tire load rating. Verify that tires are inflated within the manufacturer's rating at all times during vehicle operation.
- **6.5.1 Seating Position** – Verify that the driver/passenger's head is higher than legs and feet. Verify that driver is not seated headfirst. Verify that any headfirst seated passenger is located such that her/his head is located rearward of the driver's.
- **6.5.3 Roll Cage** – Verify that sufficient space exists between the driver/passenger's helmet and the roll cage. Verify that driver/passenger is fully encompassed by roll cage.
- **6.5.4 Padding** – Verify that the roll cage is padded with energy absorbing material and that a 2-cm thick headrest is placed behind the driver/passenger's head.
- **6.5.5 Crush Space** – Verify that the driver/passenger has a minimum of 15 cm of horizontal distance between his/her shoulders, hips, and feet and the outer body edge.
- **6.5.8 Egress** – Test the driver/passenger's ability to exit the vehicle unassisted in less than 10 seconds.
- **6.6.1 Visibility** – Measure the driver's eye height. Verify that it meets or exceeds the minimum height.
- **6.6.2 Windshield –** Verify that the windshield is made of shatter-resistant material and free of excessive distortion. Test the method used to clear water from a minimum of 0.1 m^2 of the windshield.
- **6.6.3 Forward Vision** – Verify that the driver has appropriate forward and side vision by having her/him identify various objects.
- **6.6.4 Rear Vision** – Verify that the solar car contains appropriate rear vision by having the driver identify various objects.
- **6.12 Ballast** – Verify that driver/passenger ballast can be safely secured and visually accessible from outside the vehicle.

Bring to Inspection:

- Completely assembled and functioning solar car
- All drivers/passengers
- Valid driver's license (not needed by passengers)
- Driving clothes including shoes
- Ballast (metal shot, sand, or coins only)
- Helmet (see regulation 7.4.1)
- Chemical window treatment (if used)
- Tire specification sheet
- Driver Inspection Sheet
- Station Summary Sheet
- Radio to communicate with driver/passenger

Schedule:

The Driver Station will be scheduled in 30-minute blocks and is usually scheduled immediately before or after the Body Station. Any team that misses its time slot will be moved to a stand-by list and will be put into the schedule as time permits. The Driver Station schedule is TBA.

Body Station

Inspection of lighting, vehicle size, graphics, and horn. Teams will bring their solar cars to a designated area for inspection.

Itemized Checks:

- **5.2.1 Solar Array Dimensions** - Measure the length, width and height of the array. Verify that the array does not exceed the maximum width, length, and height or projected area dimensions.
- **5.3 Raycing Configuration** – Verify that the array remains fixed with respect to the solar car chassis.
- **5.4 Charging Orientation** – Verify that the charging configuration of the array does not exceed the maximum width, length, and height.
- **5.14 Lighting** – Verify that the solar car is equipped with lights that meet the minimum visibility requirements.
- **5.15 Horn –** The horn decibel level will be tested using an Extech Instruments 407703 Sound Level Meter from 15 meters in an open environment.
- **6.1 Solar Car Dimensions** – Measure the length, width, and height of the entire solar car. Verify that the car does not exceed the maximum length, width, and height dimensions.
- **6.2 Tire and Wheel Requirements** – Verify that the solar car has a minimum of 3 wheels in contact with the ground at all times.
- **6.5.7 Fresh Air Circulation** – Verify that driver/passenger can receive fresh air from vents or wheel openings.
- **6.16 Data Logger -** Verify that the solar car has suitable location for the data logger and antenna.
- **6.17 – 6.20 Graphics** – Verify that all required graphics are prominently displayed and any additional graphics are not of an offensive or disruptive nature. A temporary car number graphic will be needed for the Preliminary Qualifiers. Final graphics will be needed for the Final Scrutineering & Last Chance Qualifier.
- **Vehicle Photograph**

Bring to Inspection:

- Completely assembled solar car
- Sizing Inspection Sheet
- Station Summary Sheet
- Radio to communicate with driver

Schedule:

The Sizing Station will be scheduled in 30-minute blocks. This station is typically scheduled immediately before or after the Driver Station. Teams should report to the station start point at least 10 minutes prior to their start time. Any team that misses its time slot will be moved to a stand-by list and will be put into the schedule as time permits. The Sizing Station schedule is TBA.

Electrical Station

Inspection of the electrical system and its components. Inspection will be at a designated location.

Itemized Checks:

- ❑ **5.5 Electrical Connection** – Verify that all connections between the solar array and car are contained inside the solar car.
- ❑ **5.8 Storage Batteries** – Verify that the battery system is comprised of modules that meet the specifications submitted on the battery approval form.
- ❑ **5.8.5 Supplemental Batteries** – Verify that any supplemental batteries contained within the solar car are only used for radios, electronic panel meters, driver ventilation fans (if solely for driver ventilation), main disconnect relay, horn, and data telemetry.
- ❑ **5.8.6 Other Storage Techniques –** Verify that other electrical storage techniques are implemented safely and can shown to be storing no energy before the start of each day of the Rayce.
- ❑ **5.9 Battery Enclosures** – Verify that batteries are contained in electrically isolated containers with a measured resistance greater than 1 MΩ between the battery terminals and any portion of the solar car chassis. Enclosures and covers must be made from non-conductive, corrosive resistant material with proper caution markings.
- ❑ **5.9.2 Battery Stacking** – Verify that stacked batteries meet North American Solar Challenge 2005 requirements.
- ❑ **5.9.3 Battery Ventilation** – Verify that battery enclosures are equipped with forced ventilation in excess of 280 liters/minute that is in operation whenever the battery is electrically connected to the solar car or solar array.
- ❑ **5.10 Main Fuse** – Verify that the main fuse does not exceed the 200% maximum draw requirement and that all low voltage taps are fused separately. Verify that all fuses are placed first in series with the battery starting at the positive connection.
- ❑ **5.11 Power Switch** – Verify that the solar car is equipped with a single properly marked manual power switch capable of interrupting full load current. Verify that the power switch meets the minimum requirements of the Regulation.
- ❑ **5.12 Cable Sizing** – Verify that all electrical cables are sized to expected system currents**.**
- ❑ **5.13 Electrical Shock Hazards** – Verify that all potential shock hazards above 36 volts are protected and clearly marked.
- ❑ **5.16 Accelerator** – Verify that accelerator mechanisms return to zero when released and that cruise control devices are equipped with automatic shut-off when the brake is activated.
- ❑ **5.17 Control** – Verify that systems are under the sole control of the driver.

Bring to Inspection:

- ❑ Solar car with completed and functioning electrical system
- ❑ Copy of Battery Approval Form and supporting documents
- ❑ Battery specifications from the manufacturer
- ❑ Fuse specifications
- ❑ Wiring diagrams
- ❑ Power Switch Rating Sheet
- ❑ Electrical Inspection Sheet
- ❑ Station Summary Sheet

Schedule:

The Electrical Station will be scheduled in 30-minute blocks. Any team not prepared for inspection will be moved to a stand-by list and will be put into the schedule as time permits. The Electrical Station schedule is TBA.

Battery Protection System Station

Inspection of the battery protection system. Inspection will be at a designated location.

Itemized Checks:

- **5.8.3 Protection Circuitry** - Verify that the batteries have the protection circuitry appropriate for the battery technology. and that the primary purpose is for protection.
- **5.8.3.2 Li-Ion** - Verify that lithium based battery packs have proper protection for over voltage, over temperature, over current, and under voltage.
- **5.8.3.3 NiMH/NiCd** - Verify that nickel based battery packs have proper protection for over temperature and over voltage.
- **5.8.3.4 Pb-Acid** - Verify that lead based battery packs have proper protection from over voltage.

Bring to Inspection:

- Solar car with completed and functioning electrical system
- Copy of Battery Approval Form and supporting documents
- Battery specifications from the manufacturer
- Fuse specifications
- Wiring diagrams, if applicable
- Items listed on page 6 of "NASC2005 Battery Protection System Test Procedure"
- Battery Protection System Inspection Sheet
- Station Summary Sheet

Schedule:

The Battery Protection Station will be scheduled in 30-minute blocks. Any team not prepared for inspection will be moved to a stand-by list and will be put into the schedule as time permits. The Battery Protection System Station schedule is TBA.

Mechanical Station

Inspection of the mechanical systems and their components. Inspection will be at a designated location.

Itemized Checks:

- **3.5.2 Structural Report** – Review structural report to verify that it matches the vehicle being inspected.
- **5.9 Battery Enclosures** – Verify that the battery enclosures are properly secured to the solar car chassis.
- **6.2 – 6.3 Tires & Wheels –** Verify that the wheels meet the minimum requirements of the Regulations.
- **6.5 Driver/passenger Cockpit** – Verify that the cockpit is designed to protect the driver/passenger and will not subject the driver/passenger to excessive strain.
- **6.5.2 Belly Pan** – Verify that the cockpit is equipped with a full belly pan that is capable of supporting an 80-kg driver/passenger. Demonstration may be required.
- **6.5.3 Roll Cage** – Verify that the solar car is equipped with a roll cage that encompasses the entire driver/passenger and is properly designed to protect the driver/passenger from collision, roll over, and body panels.
- **6.5.6 Safety Belts** – Verify that regulation 5-point harness is properly attached to the vehicle.
- **6.7 Fasteners** – Verify all fasteners meet the minimum requirements.
- **6.7.1 Bolts** – Verify that all bolts used in the steering, braking, suspension, seat mounts, safety harness, drive train, and battery box meet the minimum requirements and are properly sized.
- **6.7.2 Securing of Bolts** – Verify that all bolts are properly secured.
- **6.7.3 Hose Clamps** – Verify that no hose clamps are used to secure structural members.
- **6.8 Covers and Shields** – Verify that all moving parts are properly shielded to protect against accidental human contact.
- **6.9 Steering Stops** – Verify that steering stops are in place and functioning.
- **6.10 Clearance** – Verify that all moving parts are free of interference.
- **6.11 Drag Reduction Devices** - Verify that devices are not able to move the car by themselves and will not compromise the on-road stability of the vehicle.
- **6.13 Brakes** – Verify that the solar car is equipped with a balanced, dual braking system, not including regenerative brakes.
- **Safety Overview** - Mechanical systems and structural members do not exhibit obvious signs of potential structural failure due to fatigue or overloading.

Bring to Inspection:

- Solar car with complete mechanical systems
- Copy of the team's NASC2005 Structural Report
- Battery tie-down ratings, if applicable
- Mechanical Inspection Sheet
- Station Summary Sheet

Schedule:

The Mechanical Station will be scheduled in 30-minute blocks. Teams should have their vehicles ready for inspection at least 10 minutes before their scheduled times. Any team not prepared for inspection will be moved to a stand-by list and will be put into the schedule as time permits. The Mechanical Station schedule is TBA.

Dynamic Station

Inspection of dynamic performance and structural stability. Teams will bring their solar cars to a designated area for inspection. Vehicles must have yellow grade in all other stations (except Support) before entering the Dynamic Station. Vehicles with potential performance concerns will not be issued a Dynamic Station clearance.

The team may select which driver will be tested, but the inspector may require testing of additional drivers.

Itemized Checks:

- **6.2 Tire and Wheel Requirements –** The solar car must have all of its tires in contact with the ground at all times.
- **6.4 Dynamic Stability** – Vehicles must exhibit sufficient stability during the dynamic tests.
- **6.13.1 Braking Performance** – The solar vehicle must be able to come to a controlled stop from a speed of 50 kph (31 mph) or greater at a deceleration rate greater than 17 kph per second on WETTED pavement. The test will be conducted by having the solar car accelerate to the required speed. Once the vehicle has reached the required speed and entered the test zone a flagman will signal the driver to brake. A minimum of 3 timers will start their watches when the flag drops and stop their watches when the car is completely stopped. The measured speed of the vehicle at the time of the flag drop and the measured time needed to stop will determine if the vehicle passes the test. The table shown below shows the braking time that corresponds to a given speed. The time allows for a 0.1-sec error. Vehicles may be required to repeat the test for verification. A vehicle will be given a maximum of three tries before being sent back to the pits for performance improvements.
- **6.14.1 Figure-8** – The solar vehicle must be able to negotiate the figure-8 course in less than 9 seconds per side without knocking over any cones. The course will have a 5-meter-wide lane and the center circle of each half will have a radius of 6 meters. The test will be conducted by having the solar vehicle go around each loop of the figure-8 two times. The first lap will be a warm-up and the second lap will be timed by a minimum of three timers. After the first timed lap, the driver will be directed to steer around the second loop for a warm-up lap followed by a timed lap. Timing will begin and end at the centerline between the two loops and a green flag will signify the beginning of a timed lap. After the second timed lap, the driver will be directed to exit the figure-8. Vehicles may be required to repeat the test with and without wheel fairings. A vehicle will be given a maximum of three tries before being sent back to the pits for performance improvements.
- **6.14.3 Slalom Test -** Solar cars must be able to negotiate the slalom course. The course will have (?) cones placed in a straight line with (?) meters between each cone. The course will have an entrance (?) meters from the first cone and an exit (?) meters from the last cone. There will be a zone of at least (?) meters before the entrance that can be used for acceleration. The solar car must be able to negotiate the course in (?) seconds or less without touching any cones or missing any turns. **NOTE: This test may only be available during the Final Qualifier and in that case, teams will be able to enter the qualifying track prior to completing the Slalom Test. [The slalom cone spacing and time is being tested and will be available shortly. It will be something close to 6 cones spaced 13.5 meters and a course time roughly equivalent to 30 mph.]**
- **6.15 Turning Radius** – Vehicle turning radius will be tested as a component of the Figure-8 test.

Bring to Inspection:

- Completely assembled solar car
- Registered and officially ballasted solar car driver (and passenger if applicable) with helmet and proper clothes
- Radio to communicate with driver
- Battery tie-down ratings, if applicable
- Dynamic Inspection Sheet
- Station Summary Sheet

Schedule:

The Dynamic Station will operate on a first come, first served basis. All teams that are in the queue at closing time will be permitted to complete the station tests or will be given first priority for the next day. The Dynamic Station schedule is TBA.

Support Station (Final Scrutineering only)

Inspection of support vehicles, safety equipment, and safety planning. Teams will bring their support vehicles to a designated area for inspection. Additional information will be sent to teams regarding preparation for this station.

Itemized Checks:

- **4.4 Safety** – Verify that the support vehicles are equipped with the proper safety equipment, including: 2 first aid kits (1 in each support vehicle), 2 fire extinguishers (1 in each support vehicle), 5 safety vests, 4 orange safety cones, 2 orange flags, radios, 1 battery spill kit and battery MSDS. Teams will be required to demonstrate emergency roadside procedures based on a given scenario. Team must show proof that they have at least one team member certified in First Aid and CPR.
- **5.9.1 Battery Removal –** Verify that impound box meets requirements of Regulation.
- **7.11 Support Vehicles** – Verify that all support vehicles have been registered with NASC2005 Headquarters.
- **7.11.1 Support Vehicle Graphics** – Verify that support vehicles are properly marked and do not contain any offensive or disruptive graphics.
- **7.11.2 Scout Vehicle** – Verify that the scout vehicle is properly marked with team identification. Verify that the vehicle is no larger than a standard 15-passenger van. Bumper mounted generators and storage racks must be securely mounted as not to cause any potential safety hazards.
- **7.11.3 Lead Vehicle** – Verify that the lead vehicle is properly equipped with roof-mounted, flashing amber lights and marked with team identification. Verify that the vehicle is no larger than a standard 15-passenger van. Bumper mounted generators and storage racks must be securely mounted as not to cause any potential safety hazards.
- **7.11.4 Chase Vehicle** – Verify that the chase vehicle is properly equipped with roof-mounted, flashing amber lights and marked with team identification and solar vehicle warning sign. Verify that the vehicle is no larger than a standard 15-passenger van. Bumper mounted generators and storage racks must be securely mounted as not to cause any potential safety hazards.
- **7.13 Radios** – Verify that the chase vehicle has proper radio communication with the solar car (solar car not actually needed at this station) and that the radio frequencies are registered with American Solar Challenge 2003 Headquarters. Additionally, verify that all support vehicles that will be on the Route are equipped with a separate CB radio for official NASC2005 communication.

Bring to Inspection:

- Registered and marked support vehicles
- Support Inspection Sheet
- Station Summary Sheet
- Safety equipment
- Communication equipment
- Impound supplies

Schedule:

The Support Station will be operated only during the second Qualifier and will be run on a first come, first served basis. All teams that are in the queue at closing time will be permitted to complete the station tests or will be given first priority for the next day. The Support Station schedule is TBA.