



NASC2005 Qualifier Track Regulations

Each team must successfully participate in a qualifier before it will be allowed to compete in the North American Solar Challenge 2005 (NASC2005). Teams have two chances to qualify, once on May 16-20, 2005, and once just before the event on July 10-15, 2005.

There are 60 openings for NASC2005. The first 60 teams registered may occupy starting positions in NASC2005. Any team qualifying for NASC2005 at Heartland Park Topeka in Topeka, Kansas must still successfully complete scrutineering at Final Scrutineering at the Austin Expo Center prior to competing in NASC2005.

Each team must report to the qualifier with a fully assembled, drivable solar car or be disqualified from the qualifier.

Schedule for Preliminary Scrutineering & Qualifier (Topeka, KS)

DATE	TIME	ACTIVITY	LOCATION
<u>Monday - May 16</u>	8:00 a.m.	Team Meeting	Heartland Park Topeka
	9:00 a.m. to 6:00 p.m.	Registration	Heartland Park Topeka
	9:00 a.m. to 6:00 p.m.	Scrutineering	Heartland Park Topeka
<u>Tuesday - May 17</u>	7:00 a.m. to 6:00 p.m.	Registration	Heartland Park Topeka
	7:00 a.m. to 6:00 p.m.	Scrutineering	Heartland Park Topeka
	4:45 p.m.	Group Photo	Heartland Park Topeka
	5:00 p.m. to 5:45 p.m.	Sprint	Heartland Park Topeka
	7:00 p.m. to 9:00 p.m.	Team Meeting	Heartland Park Topeka
<u>Wednesday - May 18</u>	7:00 a.m. to 6:00 p.m.	Scrutineering	Heartland Park Topeka
	8:45 a.m.	Start Line Positions	Heartland Park Topeka
	9:00 a.m. to 5:30 p.m.	Qualifying	Heartland Park Topeka
	8:30 p.m.	Impound Batteries	Heartland Park Topeka
<u>Thursday - May 19</u>	6:30 a.m.	Release from Impound	Heartland Park Topeka
	8:45 a.m.	Start Line Positions	Heartland Park Topeka
	9:00 a.m. to 5:30 p.m.	Qualifying	Heartland Park Topeka
	8:30 p.m.	Impound Batteries	Heartland Park Topeka
<u>Friday - May 20</u>	6:30 a.m.	Release from Impound	Heartland Park Topeka
	8:45 a.m.	Start Line Positions	Heartland Park Topeka
	9:00 a.m. to 5:30 p.m.	Qualifying	Heartland Park Topeka
	5:45 p.m.	Pit Crew Competition	Heartland Park Topeka
	6:15 p.m.	Awards	Heartland Park Topeka

Schedule for Final Scrutineering & Qualifier (Texas)

DATE	TIME	ACTIVITY	LOCATION
<u>Sunday - July 10</u>	12:00 p.m. to 7:00 p.m. 7:00 p.m. to 9:00 p.m.	Registration Team Meeting	Austin Expo Center Austin Expo Center
<u>Monday - July 11</u>	7:00 a.m. to 6:00 p.m. 7:00 a.m. to 6:00 p.m.	Registration Scrutineering	Austin Expo Center Austin Expo Center
<u>Tuesday - July 12</u>	7:00 a.m. to 6:00 p.m. 7:00 a.m. to 6:00 p.m. 7:00 p.m.	Registration Scrutineering Team Meeting	Austin Expo Center Austin Expo Center Austin Expo Center
<u>Wednesday - July 13</u>	7:00 a.m. to 6:00 p.m. 7:00 a.m. to 6:00 p.m.	Registration Scrutineering	Austin Expo Center Austin Expo Center
<u>Thursday - July 14</u>	8:00 a.m. 8:45 a.m. 9:00 a.m. to 5:30 p.m. 8:30 p.m.	Driver Tours Start Line Positions Qualifying Impound Batteries	Texas World Speedway Texas World Speedway Texas World Speedway Texas World Speedway
<u>Friday - July 15</u>	6:30 a.m. 8:45 a.m. 9:00 a.m. to 5:30 p.m.	Release from Impound Start Line Positions Qualifying	Texas World Speedway Texas World Speedway Texas World Speedway

1. QUALIFICATIONS

1.1 Qualifier - Each team must successfully participate in a Qualifier before they will be allowed to compete in NASC2005. Teams must complete the required mileage with no structural failures or instability that would indicate a serious design deficiency.

The first qualifier will be held on a closed track at the Heartland Park Topeka. The qualifying track will be open for three consecutive days. Each day will have one qualifying period of 8 ½ hours (9:00 a.m. to 5:30 p.m.). Each team must complete 120 miles at Heartland Park Topeka with a lap average speed of 25 miles per hour or better during any single day to be qualified to race in NASC2005.

Those waiting to qualify at the Final Qualifier must complete 120 miles with a lap average speed of 25 mile per hour or better in a single day of the two days available. It behooves a team with limited experience to attempt to qualify in May 2005 so as to have the Final Qualifier as a back-up if necessary.

1.2 Qualifier Regulations - Solar cars must qualify in the same configuration submitted to scrutineering. Penalties may be assessed for failure to comply with the requirements of NASC2005 Regulations during the qualifier. Before entering the qualifying track for the first time, solar car batteries may be charged from any source. Upon entering the track, however, solar power as permitted in the Regulations is the only additional source of energy allowed. Teams that charge their batteries from any other source will forfeit any prior laps completed.

Teams that are only attempting to qualify may charge their batteries (from a non-solar source) at the end of a day's qualifying period and attempt to qualify on the following day. Teams competing for the Pole Position (see below) or Formula Sun Grand Prix (see FSGP Regulations) may not.

All solar cars must start the Rayce in the same configuration as used during the Qualifier.

1.3 Pole Position - The pole position is only open to those teams that successfully qualify. Pole position will be determined by the most miles (25-mph minimum lap speed, Official Total Laps) completed during any two consecutive 8-1/2-hour periods of a Qualifier. The remaining starting positions will be filled according to the number of miles (25-mph minimum lap speed) completed in a single 8-1/2-hour period of a Qualifier. Miles completed in the Preliminary Qualifier will be increased by 10% for the ranking of the start order (including pole position). Miles completed by overseas teams in the Final Qualifier will also be increased by 10% for the ranking of the start order (including pole position). This 10% weighting has no effect on actual minimum miles required to qualify.

1.4 Minimum Qualifying Requirements - To participate in a Preliminary Qualifier, all solar cars must successfully complete scrutineering. No driver may participate in this qualifier without first registering with the event officials and attending the team meeting in the evening on May 17, 2005 or July 12, 2005.

1.5 Driver Mileage Requirements - In order to drive a solar car during NASC2005, each solar car driver must complete a minimum of 20 miles of driving during a qualifier. The laps must each have an average lap speed of 25 mph or greater in order to count toward the 20 miles. The laps do not have to be part of the vehicle's qualifying total. It is important that the teams notify pit staff before changing drivers.

2. TRACK OPERATING PROCEDURES

2.1 Authority - NASC2005 Headquarters reserves the right to cancel the "track" activity at any time.

2.2 Practice Session - The Heartland Park Topeka track will be open May 16-17, 2005, for driver practice. Final Qualifier driver tours are July 14, 2005 from 8:00 a.m. until 8:20 a.m., MGA Research-WI. Each driver must view the course before participating in the qualification session.

2.3 Qualifying Session - The Heartland Park Topeka track will be open May 18-20, 2005, from 9:00 a.m. until 5:30 p.m. local time for the purpose of team qualifications for NASC2005. The Texas World Speedway track will be open July 14-15, 2005, from 9:00 a.m. to 5:30 p.m. local time for the purpose of team qualifications for NASC2005.

3. "ON TRACK" RULES

3.1 Communications - All teams must have operable two-way radios to communicate with their solar car driver from the pit area and the timing area.

3.2 Starting - The "starting line" for the Qualifier, and any subsequent re-start, will be located at the start line as defined during the drivers meeting on May 18 and July 12. Each solar vehicle intending to enter the track must enter and proceed through the pit area to the starting line to register with officials and be sequenced into traffic. This must be done each time a vehicle returns to the track.

3.3 Timers - Official timers will be assigned to each team. Each team is responsible for ensuring that an official timer has been assigned to its car in order to have laps count. Each team must also provide a team member to work with the official timer and assist with timing. This team member must be in radio contact with the solar car driver.

3.4 Timing - A master clock providing the "Official Time" will be located near the starting line to allow timers to record each lap as it is completed for each team. A solar car must cross over the starting line to begin and end an official lap.

A team may start driving laps at its own choosing. There is no restriction on how many laps are to be completed in succession. No laps with average speeds below 25 mph will be counted toward the minimum qualifying requirement.

3.5 Safety Equipment - Whenever a team's solar car is on the track or in the pits, the team must have proper battery safety equipment in its cold pit space.

4. FLAG SIGNALS

4.1 Master Flag Position - The Master Flag Position will be near the starting line. Track officials will also be located at various Flag Positions around the course to display "local" flag conditions.

4.2 Green Flag - Track clear, proceed at your chosen speed. This flag will be displayed at the starting line only.

4.3 Yellow Flag - Caution, obstruction on or near track. A yellow flag means that cars are to slow down, and no passing is allowed unless waved around by a track official. The flag may be displayed at the starting line, indicating a full track caution condition. It may also be displayed at various locations around the track to indicate that a "local" caution condition exists. When "local" caution flags are displayed, the Flag Position at the starting line will display green and yellow flags simultaneously. During "local" caution conditions, each driver must slow down and obey the no passing rule until they have passed the obstruction, or have passed a Flag Position displaying no flag.

4.4 Black Flag - (To be given to an individual car.) Mandatory return to the pit area for consultation. This flag will be presented only at the starting line and the last corner before Pit In.

4.5 Red Flag - Total stoppage due to major accident or some other reason. All cars must pull to the side and stop where they are on the track without passing. Proceed only when instructed to do so by track officials.

4.6 White Flag - Six minutes remaining in the qualifying session. This flag will be displayed at the starting line only and signify that there are less than six minutes remaining to complete your last official lap in the session.

4.7 Black and White Checkered Flag - Given to the individual solar car, it signifies meeting the minimum qualifying requirement of 120 miles of official laps in one session.

5. DRIVING PROCEDURES

5.1 Driving Procedures - All vehicles will proceed around the racecourse in the prescribed direction at all times. Passing and lane information will be presented at the pre-race team meeting

5.2 Track Regulations - No solar car shall exceed the maximum speed of 65 mph anywhere on a qualifying track.

5.3 Safety Vehicles - If a track safety vehicle is needed on the course it will attempt to stay in the slow lane of the track.

5.4 Breakdowns - Any solar car that stops on the racetrack because of mechanical problems or an accident will be moved to the infield by track officials as soon as possible. No major work may be conducted on any solar car in the infield. All teams must carry a tow strap in their solar car to facilitate a tow to the pit area by the track officials. No team support vehicles will be permitted on the track at any time.

6. PENALTIES

Penalties assessed against a team will be classified as either minor or major. A minor penalty will be applied to a particular lap. It can be erased by simply driving another “clean” lap. A major penalty will result in no credit for the fastest lap completed during qualifying regardless of the lap on which the infraction occurs.

6.1 Minor Penalties - Minor penalties will be assessed for the following:

6.1.1 Failure to give way to a passing vehicle.

6.1.2 Failure to report to the starting line before entering the track.

6.1.3 Failure to communicate with the driver from the start line.

6.2 Major Penalties - Major penalties will be assessed for the following:

6.2.1 Passing another solar car on the inside - no credit for fastest lap completed.

6.2.2 Failure to heed flag signal - no credit for fastest lap completed or disqualification from the qualifier.

6.2.3 Unsportsmanlike driving - no credit for fastest lap completed or disqualification from the qualifier.

6.2.4 Inappropriate driving in the pit lane - no credit for the fastest lap completed.

6.2.5 Driving support vehicle on the racecourse (without permission) - disqualification from the qualifier.

6.2.6 Exceeding 65-mph speed limit - no credit for fastest lap completed and Black Flag for the first offense. Disqualification from the qualifier on the second offense.

6.2.7 Repeated minor penalties – no credit for fastest lap completed or disqualification from the qualifier.

6.3 Disqualification – NASC Headquarters reserves the right to disqualify from a qualifier any car that suffers a major safety related failure during practice or qualification sessions. Major safety related failures may include but are not limited to: wheels, suspensions, steering, electrical shorts/fires, and structural failures.