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CALENDAR OF EVENTS



# **OVERVIEW**

All vehicles entered for any Formula 24 and Formula 24+ event in the 2022 – 2023 school year organized by the Greenpower USA Foundation will comply with the following Technical and Sporting Regulations.

#### All changes from 2021 – 2022 Technical and Sporting Regulations are highlighted in red text.

Remember that the project is for the benefit of the young people involved. It is important to ensure that they are as involved in as much of the design and build of the vehicle as possible and that technology used is relevant and accessible to the age group of the category in which you are participating.

Please note: Images within this document unless specifically referenced, are for illustrative purposes only and should not be considered as guidance on regulatory compliance.

#### **RULE BOOK DISCLAIMER**

The rules and/or regulations set forth herein are designed to provide for the orderly conduct of racing events and to establish minimum acceptable requirements for such events. These rules shall govern the condition of all events, and by participating in these events, all participants are deemed to have complied with these rules. NO EXPRESSED OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM PUBLICATIONS OF OR COMPLIANCE WITH THESE RULES AND OR REGULATIONS. They are intended as a guide for the conduct of the sport and are in no way a guarantee against injury or death to a participant, spectator, or official.

The race director shall be empowered to permit reasonable and appropriate deviation from any of the specifications herein or impose any further restrictions that in his/her opinion does not alter the minimum acceptable requirements. **NO EXPRESSED OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM SUCH ALTERATION OF SPECIFICATIONS.** Any interpretation or deviation of these rules is left to the discretion of the officials. Their decision is final.

The Management of the Greenpower USA Foundation

# RACE CATEGORIES



F24 Advanced Grades 9 – 12

### **Car Classification**

### Stock Division

A car will compete in the F24 Stock Division when it has been built using the materials given by Greenpower USA when the kit was delivered to your location. The gearing system (6:1) supplied with the kit MUST be used in competition. Allowed modifications to remain in this division include: adding a heat sink to the motor, creating a custom steering wheel, installing a new LED brake light, relocating the horn button and installing tires that do not exceed 65 PSI.

### Modified Division

A car will compete in the F24 Modified Divison if it has made any modifications to the Greenpower USA kit. This includes, but is not limited to, tire improvements, gear/sprocket changes, controllers, etc. If a team has "stitch-drilled" holes in the chassis to reduce weight, Greenpower race officials reserve the right to deem the car unsafe from taking part in an event.

### Custom Division

A car will compete in the F24 Custom Division if the chassis has been made from scratch. Teams in this division must show proof of students being involved in the fabrication via logbook or engineering journal.

# TECHNICAL

#### T1 - <u>MOTOR</u>

- T1.1. The vehicle will only be powered by one 24-volt DC electric motor supplied by Greenpower. No hybrid systems are allowed.
- T1.2. The motor is sealed and must not be opened or modified.
- T1.3. Motor cooling is only permissible using passive or forced air, without any prior energy input or power from batteries other than the main vehicle batteries.
- T1.4. The motor must be easily accessible for inspection. Greenpower reserves the right to remove motors either for inspection by the manufacturer or by race officials (pre/postrace).

#### T2 - <u>BATTERIES</u>

T2.1. Two 12-volt Greenpower USA approved, unmodified batteries (Interstate Battery DCM0035 and YUASA REC36), referred to as the 'main batteries', will be used on each vehicle during each Greenpower USA race. No external energy source may be used. Energy recovery systems are permitted.

> **Note:** Only one set of two main batteries will be used during a 90-minute race session. If a battery change is needed, you must inform the Race Director immediately and your car's lap count will be frozen at the time of the battery exchange.





- T2.2. Auxiliary batteries for powering devices on the car must not exceed one PP3 or six AA cells per car. Coin or button cells are permitted as a power source for brake lights but also to allow control systems to retain settings whilst main batteries are changed. Proprietary unmodified electronics with self-contained batteries, e.g. speedometers, watches, radios are permitted so long as they're not connected to any of the car control systems. All other devices including motor controllers must be powered off the main batteries. If in doubt consult Greenpower.
- T2.3. Out of the car, the main batteries must be kept separate and lifted independently of one another.

**Safety Note** – Due to their weight, appropriate safe manual handling practices should be observed when handling batteries. Batteries that are dropped may cause injury or suffer internal damage.

T.2.4. Outside of the race vehicle, charging of the batteries is only allowed up to a designated time at the event. There will be a designated cutoff time at which all batteries must be removed from their chargers. This information will be provided via Supplemental Regulations provided by the Race Organizer.

A battery quarantine/charging area will be identified at all race sites to ensure safety.

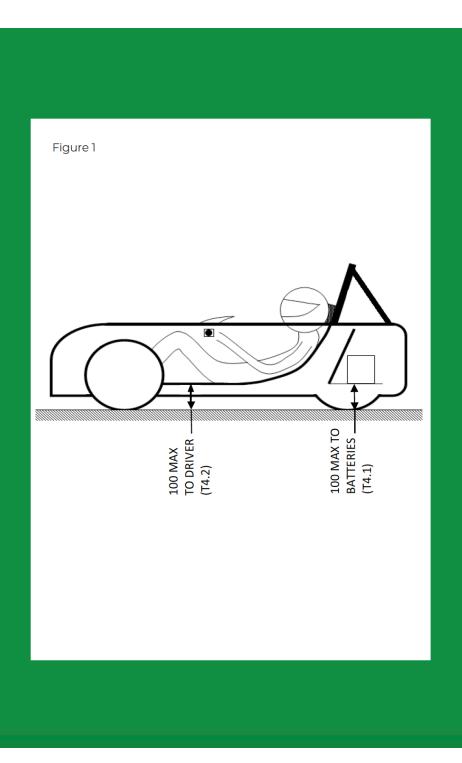
- T2.5. The main batteries must be firmly secured to the chassis of the vehicle using rigid fixings i.e. no webbing or elastic straps, and must not be able to move in any direction in those fixings. Plastic threads on fixings are not permitted. Over center clips must be security pinned.
- T2.6. The main batteries may be mounted upright or on any side but must not be inverted, i.e. terminals must not point towards the ground.

- T2.7. The main batteries must be separated from the driver by a bulkhead, sufficient to restrain the batteries from the driving compartment. This bulkhead must not be able to short circuit the battery terminals. Batteries must be located inside the vehicle's bodywork.
- T2.8. Batteries must have quick release connections to enable rapid disconnection in the event of an emergency. They must not be liable to disconnect or short against metal parts. Quick release connector locations must be clearly labelled, "Battery Disconnect". Connections must be accessible and operable without the need for tools.
- T2.9. The main batteries in vehicles at the start of practice sessions or races will not exceed 77°F or ambient temperature plus 9 Fahrenheit when ambient is above 68°F as measured by Greenpower.

#### T3 - WHEELS AND TRACK

- T3.1. Tires must not be less than 12 in. (300 mm) nor greater than 20 in. (520 mm) in diameter.
- T3.2. There must be four wheels located as a matching front and matching rear pairs, symmetrically about the longitudinal centerline of the vehicle.
- T3.3. The track of the vehicle must not be less than 19.685 inches (500 mm) front or rear. The track is deemed as the measured width between centers of tires where they contact the ground. The track may vary front to rear.
- T3.4. Tires must be pneumatic.
- T3.5. Plastic spoked wheels are not permitted.





#### T4 - CENTER OF GRAVITY

- T4.1. The base of the main batteries must be at or below 3.9 in. (99 mm) from ground level. A 0.25 in (6 mm) diameter hole should be drilled through any solid floors adjacent to the batteries to allow height measurement. See Figure 1
- T4.2. The driver's seat, including any padding, must be at or below 3.9 in (99 mm) from ground level. A 0.25 in. (6 mm) hole should be drilled through the base of the seat to allow height measurement. See Figure 1

#### T5 - <u>DIMENSIONS</u>

- T5.1. The vehicle must not exceed 110 in. (2800 mm) in length, 47 in. (1200 mm) in width, and 47 in. (1200 mm) in height.
- T5.2. Ground clearance must not be less than 1.18 in. (30 mm).
- T5.3. No part of the vehicle may extend more than 31.5 in. (800 mm) behind the center point of the rear wheels.

#### T6 - DRIVER AND SEATING

- T6.1. The vehicle will have one seat for the driver firmly fixed to the vehicle chassis.
- T6.2. The driver must be seated in a feet forward, reclined position. Drivers may not kneel, sit astride a seat, or lie down in any way such that their chests and head are forward of their waist.
- T6.3. The driver must be able to demonstrate a rapid and safe exit from the vehicle unaided.
- T6.4. There must be a solid floor under the whole of the driver, to prevent ingress of debris.
- T6.5. There must be a padded head rest behind the driver's helmet to prevent whiplash.

T6.6. All parts of the vehicle's seat which are in contact with the driver must have some form of protective padding.

#### T7 - DRIVER'S CELL

- T7.1. There will be a solid bulkhead rigidly mounted forward of the driver's feet forming the front-most part of the driver's cell. This bulkhead must be vertical and parallel to the front axle center-line. Securely attached to the front of this bulkhead will be a foam structure at least 7.87 in. (200 mm) long and with a compressive strength of 300 700 kPa. A means of access to this foam must be available at scrutineering.
- T7.2. There will be a rigid driver's cell extending from the bulkhead in T7.1 to the driver's back. Between the harness lap strap mounting points and the driver's back, it will extend to a height of 10 in. (250 mm) above the seat base or above the driver's elbows, whichever is greater. The driver's cell height, forwards of the lap strap mounting points, may be less than 10 in. (250 mm) but must exceed the highest part of the driver in this area.
- T7.3. The skin of the driver's cell in T7.2 must be constructed of rigid sheet material such as aluminum; rigid plastics; carbon fiber; glass reinforced plastic or other composites of at least 0.06 in. (1.5 mm) thickness. Plywood products must be at least 0.12 in. (3 mm) thick. The skin must form a continuous protective layer and be securely attached directly to the driver's cell so as to be unlikely to fail as a result of an impact.

**Note:** Corrugated plastic will also be observed as a suitable body material as long as it is bonded with a 1in. (25 mm) thick closed-cell foam backing.

**ADVANCED NOTICE:** Corrugated plastic will not be a suitable body material starting during the 2023–2024 Race Season.

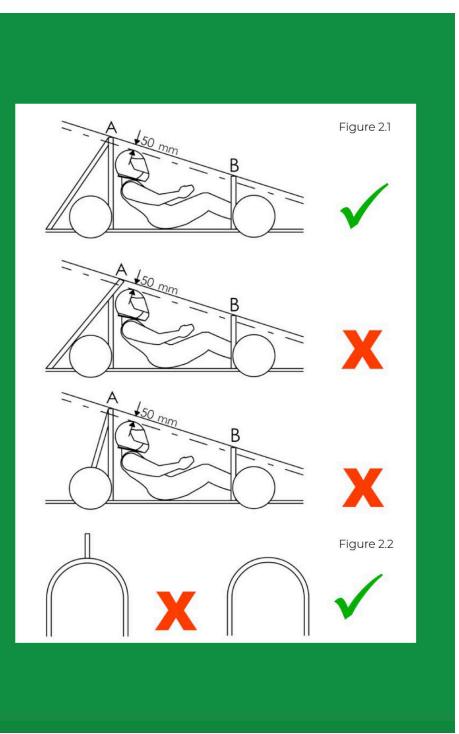
- T7.4 The driver's cell opening will accommodate a rectangle of at least 23.5 in x 14 in (600 x 350 mm) with no intrusions.
- T7.5. The driver's helmet must be positioned at the rearmost point of the opening in T7.4 to create a clear space in front of the helmet.
- T7.6. Inner faces of the driver's cell sides will be lined with a minimum of 1 in. (25 mm) thick closed cell foam from the floor to the driver's cell opening to protect a substantial part of the driver's body.
- T7.7. Any sharp edges or protrusions in the driver's cell must be padded.
- T7.8. There will be a bulkhead separating the driver from any accidental contact with the wheels.

#### T8 - <u>BODYWORK</u>

- T8.1. Anything forward of the bulkhead in T7.1 must be easily deformable.
- T8.2. Bodywork to the front or sides of the driver's helmet will be lower than the bottom of the driver's helmet visor aperture.
- T8.3. No bodywork will be higher than 6 in. (150 mm) below the top of the rear roll hoop.

#### T9 - <u>BRAKES</u>

T9.1. Brakes will be subject to a force test of 300 N applied horizontally forwards from the top of the roll bar with the car situated on a flat tarmac/concrete surface. There must be no movement of the car. All drivers must be capable of producing this braking force. This will be subject to spot checks outside of scrutineering.



- T9.2. A minimum of two independent brake systems must be fitted, such that there is still some braking if one system were to fail. These systems may be operated by a single dual system lever.
- T9.3. Both wheels on either front or rear axles must have the same type of brake such that the car brakes in a straight line. This is in addition to any electrical braking system that might be incorporated.
- T9.4. The driver must be able to operate the brakes without removing either hand from the steering mechanism.
- T9.5 Braking systems must be operated by hand only. Foot operated brakes are prohibited.

#### T10 - <u>ROLL BARS</u>

- T10.1 The vehicle must have front and rear roll bars offering protection in accordance with the diagrams shown here the helmeted head of all drivers must be at least 2 in. (50 mm) below the line A-B as shown. See Figure 2.1
- T10.2. Roll bars must be firmly secured to the chassis of the vehicle using mechanical fixings or welding. Roll bar to chassis mountings and points on the chassis to which roll bars connect must be suitably strong and where necessary reinforced to prevent failure in the event of a roll over incident. Gluing/bonding of roll bars to chassis with no mechanical fixings or welding is not permitted.
- T10.3 One central triangulated brace or two side triangulated braces must connect the rear roll bar to the chassis. These braces must attach, behind the rear roll bar, to the chassis of the vehicle at one end, to not more than 7.87 in. (200 mm) from the top of the roll bar at the other, must be capable of taking loading in all directions and must be rigidly mounted. The angle between the rear roll bar and brace(s) must be at least 25 degrees.

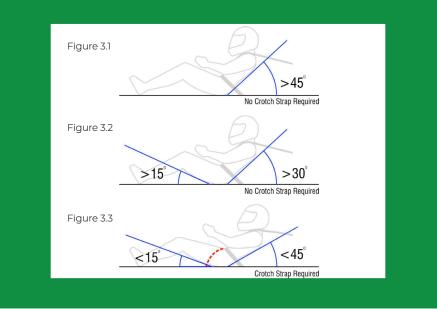
T10.4. All rear roll bars & braces must be produced from circular section steel, with minimum outside diameter of, main hoop – 0.98 in (25 mm), braces – 0.75 in (19 mm) and minimum wall thickness of 0.06 in (1.5 mm).

**Safety Note** – Greenpower reserves the right to drill a 4 mm diameter hole in any roll bar for the purpose of inspection. Teams should avoid drilling roll bars as it weakens the structure.

- T10.5. Non-structural bodywork along with front and rear wheels must not be regarded as part of the roll protection. The top 6 in. (150 mm) of the roll bar must not have any attachments (fairings, aerodynamic aid, or cameras). See Figure 2.2.
- T10.6. The rear roll bar and bracing structure must extend down into the car to at least the level of the driver's shoulder strap mounting points.

#### T11 - <u>SAFETY EQUIPMENT</u>

- **T11.1.** Two rear view mirrors, each with a minimum area of 3.5 sq. in. (2250 sq. mm) will be fitted in clear air outside the bodywork and able to be adjusted by the driver while the driver is buckled in. Camera systems to replace rear view mirrors are not permitted. Larger mirrors are encouraged.
- T11.2. The vehicle must have a clearly audible single-tone horn.
- T11.3. A 24-volt, minimum 100-amp, rated isolation switch must be fitted. It must be clearly visible and be easily accessible to the driver, and from outside the vehicle. Two switches may be fitted if needed. Two switches may be fitted if needed. On/Off positions must be clearly marked. Indirect operation of the isolator is not permitted.
- T11.4. The vehicle must be fitted with a minimum four fixing points, 2 in. (50 mm) width safety harness, with secure



T11.4. fixing points on the roll bar or chassis. Harness
(cont'd) shoulder strap fixing points should be close to shoulder height and neck width (approx. 6 in (150 mm)). Lap straps must be able to be fully tightened before shoulder straps and must fully tighten around the driver's lap without additional padding in front of the driver.

**Safety Note** – Harness ends should protrude at least 100 mm beyond the buckle for all drivers, and be folded and sewn at the ends to act as a stopper.

T11.5.

Where the seat back has an angle of 45 degrees or more a minimum 4-point harness is required. See Figure 3.1

Where the seat back has an angle of 30 degrees or more combined with a front lip of 15 degrees or more a minimum 4-point harness is required. See Figure 3.2

Where the seat back has an angle of less than 45 degrees with a front lip of less than 15 degrees a minimum 5-point harness is required. See Figure 3.3.

If in doubt, use a 5-point harness.



- T11.6. A non-flashing, red brake light will be fitted so it is clearly visible from the rear of the vehicle.
- T11.7. The drive train must be guarded to prevent fingers, hair, and clothing from becoming trapped at any time.
- T11.8. The use of locking nuts on safety critical components is mandatory, including but not limited to: safety harnesses, roll bars, wheels, steering and braking systems.

Safety Note - If in doubt, use locking nuts.

- T12 <u>STEERING</u>
- T12.1. Steering systems must have minimal play.
- T12.2. Steering must be able to operate smoothly from lock to lock, without wheels making contact with bodywork.
- T12.3. Steering must be by mechanical linkages only.
- T12.4. Steering must be by front wheels only.
- T12.5. Steering must be operable by hand only.

#### T13 - <u>ELECTRICS</u>

- T13.1. The accelerator must be spring loaded to the OFF position.
- T13.2. Electronic motor controllers must not be capable of boosting battery voltage, i.e. at any time, the voltage across the motor terminals may not exceed the voltage across the battery terminals.
- T13.3. A fused link/cut-out must be in place in the main power circuit, rated at 70 amps or less.
- T13.4. All wires and terminals on the vehicle must be neatly run, secured and unable to chafe, away from moving parts.
- T13.5. All wiring and electrical components must be correctly rated for their use.

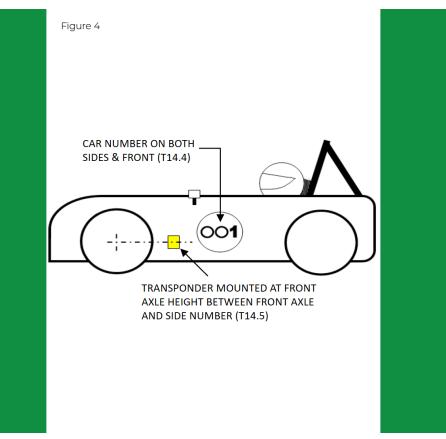
T13.6. Low current ancillary circuits must have their own fuse (normally 5A or less).

#### T14 - <u>OTHER</u>

- T14.1. Transmission of any form of electronic data to the car by whatever means is prohibited. Communication with the car/driver is only allowed via verbal (e.g. radio) or visual (pit board) means.
- T14.2. Telemetry and all communication systems must operate at national legal frequencies and power levels.
- T14.3. Driver to pit audio communication systems must be used without removing either hand from the steering wheel. Any item, other than primary vehicle controls, in the driver's cell must be adequately and securely restrained. No items shall be attached to the safety harness.
- T14.4. Three racing numbers must be clearly visible on the left, right, and front of the vehicle. The side displayed numbers must be spaced equally between the wheels. Teams will register/request their car number prior to the start of every race season. These numbers should contain no more than three numerals.

\*GreenpowerUSA will provide the race numbers at your first sanctioned Greenpower event of the race season. The race number will be a circular 10 in (250 mm) sticker with black numbering over a white background. Replacement stickers will come at a cost.

T14.5. Provision must be made for the positioning of a timekeeping transponder, which will be provided at events complete with a mounting bracket. This must be mounted vertically on either side of the vehicle, on the outside of the bodywork. It must be located between the front axle and the race number, at axle height, and have clear line of sight to the ground. No fairings are permitted. See Figure 4.



- T14.6. Cameras must not be attached to the crash helmet. Cameras must be attached to the car with secure mechanical fixing. Suction mounted cameras are not permitted.
- T14.7. Greenpower will supply national partner stickers which must be applied to the vehicle in a prominent position.
- T14.8. Lift points, for use by recovery marshals, must be clearly marked. Lift points must provide for a balanced lift of the vehicle in race ready condition excluding driver.
- T14.9. Cars may only be propelled by the drive system located on board, and drivers may not use any part of their body to propel the car. Drivers cannot put their arms/hands outside of the driver compartment to assist the car in a forward movement.

# SPORTING REGULATIONS

#### S1 - <u>TEAM CLOTHING</u>

- S1.1. Drivers must wear full face helmets with visor or goggles at all times during practice and competition. It is the responsibility of the driver and team manager to ensure helmets fit properly and are in serviceable condition. In use helmets must be securely fastened. Helmets must have the DOT Approved/Certified sticker visible upon inspection.
- S1.2. Drivers must be outfitted with suitable clothing covering them from head to toe. Full length sleeves and pants are required for all drivers.
- S1.3. Full fingered gloves must be worn by the driver.
- S1.4. All team members must wear stout closed toe footwear, ideally with toe protection.

#### S2 - LOGBOOKS AND SCRUTINEERING

- S2.1. GreenpowerUSA will maintain an electronic Logbook entry for all cars. This will include scrutineering comments that must be actioned before future events, otherwise the vehicle will not be allowed to participate.
- S2.2. Cars must pass scrutineering before being permitted on track.
- S2.3. Cars presented for scrutineering must be in ready to race condition with all covers, bodywork and electrical items in place. Teams should be prepared to remove covers and or bodywork if requested to permit access to all areas of the car.
- S2.4. Tallest and shortest drivers, with helmets, must be present at scrutineering.

- S2.5. Once cars have passed scrutineering team members must exchange their scrutineering paperwork for a timing transponder at Race Admin. Transponders MUST be returned to Race Admin before leaving the event. Failure to do so may result in a \$300 charge.
- S2.6. Any car involved in an on-track incident may be subject to inspection before being permitted to continue. Any corrective measures identified during this inspection must be completed before the car will be permitted to return to the track.
- S2.7. Prior to exiting the pit lane each car/driver will undergo safety checks including, correct clothing, safety harness fitment, helmet & chin strap and brake operation.

#### S3 - TEAM MEMBERS

- S3.1. At the start of the race season, team members must be enrolled in:
  - Grades 6-8 to compete in F24 Intermediate Categories
  - Grades 9-12 to compete in F24 Advanced Categories
  - To compete in F24+, drivers must be between the ages of 18–25.
- S3.2. All drivers must have signed the event registration form that must also be countersigned by a responsible adult. This must be handed to Race Admin before participating.

S3.3. Drivers must be aware of the following flags that will be used on track:

GREEN – The appearance signals a clear course and indicated the immediate start or restart of a race.

YELLOW – Slow down, no passing. Racing may commence after passing an incident and the next manned station is in view with no flag displayed.

RED – Extreme danger. Stop racing. Come to a controlled stop as quickly as possible to the edge of the track and within driver's sight of the marshal post. Await instruction from the corner official.

BLACK – Displayed to a car, with audible car number indication, for an infraction or safety concern. Driver is to report to pit road immediately and safely.

BLUE W/ YELLOW STRIPE – Check your mirrors. Hold your line, another competitor is following closely or is trying to overtake.

CHECKERED – Notifies the race or practice session is finished. Cool your car down and return to the pits at the next opportunity.

Please take note of the Flag Information document on Page 23

- S3.4. Drivers must at all times maintain a steady line. They must not move to block other cars. Tailgating is prohibited drivers must not follow closely in line behind other cars, maintaining at least a 1 second gap.
- S3.5. All drivers must be able to read (with glasses or contact lenses, if necessary) a road car number plate from 65 feet.
- S3.6. All team members must be fully conversant with the Supplementary Regulations for each event, must be knowledgeable about their vehicle, and must attend the Team Briefing at events.

- S3.7. It is the responsibility of the team manager to ensure all drivers are able to drive safely with adequate all-around visibility.
- S3.8. (F24) Adults must not participate in pit stops unless by specific arrangement beforehand with Greenpower.
- S3.9. At pit entry all cars must switch off their isolator switch and remove the key. One team member is required to meet cars at pit entry to push them at walking pace to their pit. Running in the pit lane will be penalized. Drivers must NOT unbuckle their safety harness / helmet or remove gloves until stopped at their pit. Cars must not be pushed away from the pit to rejoin the track until the driver is correctly harnessed and clothed.

#### S4 - <u>RACE FORMAT</u>

- S4.1. Races run to pre-defined durations. These are: F24, 90 minutes; F24+, 60 minutes. During an event, if deemed necessary by the Race Director, race durations may be shortened.
- S4.2. (F24) A minimum of two driver changes must take place in the 90-minute race. Drivers may only operate one car per classification.
- S4.3. (F24) Each driver must drive for a minimum of 15 continuous minutes and no more than 45 continuous minutes in each race.
- S4.4. (F24+) There is no limit to the number of drivers that may be used during a race.
- S4.5. Cars must be able to start under their own power. Push starts for vehicles are notpermitted at the start of the race.
- S4.6. If a driver has arrived on the starting grid without a properly secured helmet, gloves and appropriate clothing, the team will be redirected back into Pit Road and will start the race from Pit Road AFTER all other teams have started.

# **S5 - PENALTIES**

- S5.1. Teams found to be infringing any of these or event specific supplementary regulations may be penalized by the Race Director. See S5.2 for penalty details.
- S5.2. Penalty Details (see table below)

Infringement	Result	
During a race session, a driver on track (incl. pit exit) without a full-face helmet; long hair/hoods not tucked into helmet/ clothing; loose safety harness; improperly secured helmet strap; no gloves; or bare skin exposed.	Hold til Rectified AND 1 pt off Overall Score for each infractio	
Breach of regulation T8.2 - Driver eye line too low.	Hold til Rectified	
Mechanical issue suspected with the car	Hold til Rectified	
Failure to slow down to a walking pace on approach to pit lane marshal	Minor Infraction (1 pt off Race Score)	
Failure to slow down to a walking pace in pit road between pit lane marshals	Minor Infraction (1 pt off Race Score)	
Adjusting/Removing safety harness, helmet chinstrap, or gloves while car is moving in pit road	Minor Infraction (1 pt off Race Score)	
Unauthorized Activities by team members in pit road	Minor Infraction (1 pt off Race Score)	
Blocking Pit Stall in Pit Road	Minor Infraction (1 pt off Race Score)	
Vehicle driven under power other than on track	Major Infraction (5 pts off Race Score)	
Deliberate or negligent blocking or dangerous driving of any description	Major Infraction (5 pts off Race Score)	
Unsportsmanlike Conduct	Major Infraction (5 pts off Race Score)	
Unauthorized changing batteries during a race (Ref: T2.1)	Race Heat Disqualification	
Minimum of 15-minute driver stint not completed (Ref: S4.3)	Race Heat Disqualification	
Performing less than the required minimum of 2 driver changes (Ref: S4.2)	Race Heat Disqualification	
Breech of Technical Regulations for which the team have not been granted exemption by the Chief Scrutineer (Ref: T1 – T15)	Event Disqualification	



#### S6 - <u>CHAMPIONSHIP REGULATIONS</u>

- S6.1. Championship points, qualifications, and event result details are published on our website.
- S6.2. Teams must compete in a sanctioned GreenpowerUSA points race in order to receive national championship points. Competing in a sanctioned event means your car must physically be on-site to race in that event.
- S6.3. National Championship Recognition
  - In the event of a National Championship Race, the winners in each category of that event will be declared the National Champion for their category. Grid placement will be based on each team's best four (4) event scores.
  - In the event there is NOT a National Championship Race, the National Championship will be determined by the total of each team's best four (4) event scores from the Race Season.

#### S7 - <u>SCORING REGULATIONS</u>

- S7.1. Each team's Event Score at a sanctioned Greenpower USA Foundation event cannot exceed 100 points.
- S7.2. An Event Score is calculated by the average of the following areas:
  - Presentation Score (not to exceed 100 points)
  - Lap Completion Percentage (not to exceed 100 points)
    - Each team's lap count will be compared to the lead lap count
  - Tiebreakers will be determined by race placement according to the official timing system.

#### S8 - <u>GENERAL</u>

- S8.1. Animals, with the exception of service animals, are not permitted at Greenpower event venues unless specifically noted in Supplementary Regulations.
- S8.2. Ball games are not permitted at Greenpower events.
- S8.3. Smoking/vaping is not permitted at Greenpower events.

If you have any questions, or need clarification, about any of the rules mentioned in this document, please send an email to <u>rules@greenpowerusa.net</u>

The Rules Committee is also available to vote upon specific needs/requests of teams to verify compliance of rules and regulations.

## Greenpower USA Staff





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#### **Devon Bane**

**Operations Director and Orders** 

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## TERMS OF ENTRY

By entering for any Greenpower USA Foundation organized event, the team(s) is/are agreeing to the following Terms of Entry:

- E1.1. Published regulations may be subject to change. In the event of this happening, notification will be sent to all entered teams and posted on the Greenpower website.
- E1.2. All team members must sign on at Race Administration prior to entering the controlled race area.
- E1.3. All vehicles will be subject to pre-event and possible post-event scrutineering to ensure compliance.
- E1.4. The vehicle and required drivers (tallest and shortest) must be presented at scrutineering (race day safety check) in a race ready configuration.
- E1.5. Entrants will be further bound by event specific Supplementary Regulations published and distributed via email approximately two weeks prior to the event date.
- E1.6. Greenpower's scrutineers and officials accept no responsibility for damage caused to cars while performing safety checks, recovery or rescue during an event.
- E1.7. While these regulations, the scrutineers and other officials endeavor to ensure vehicles are safe to participate, ultimate responsibility lies with the entrant.
- E1.8. While compliance with the Technical and Sporting Regulations should result in a compliant vehicle, race officials reserve the right to prevent a vehicle racing. A vehicle deemed unfit may, following modification and further inspection, be permitted to race.

- E1.9. It is understood that all persons participating in events under these rules are doing so at their own risk and the entrant will ensure that all competitors will have disclaimers (as provided by the Race Organizer) signed by their parents or guardians prior to competing.
- E1.10. Greenpower ensures that Public Liability and Personal Accident Insurance for participants is always in place for events under their control and accept no liability for events organized by third parties or team practice sessions.
- E1.11. As part of the communications activity, GreenpowerUSA regularly uses photography for publicity purposes.Entrants must ensure all participants are aware of this and the necessary permission is obtained. If permission is not granted, GreenpowerUSA must be notified prior to every event in which the participant takes part.

Team leaders with less able students wishing to participate, who may have special requirements with regard to the regulations, should contact Greenpower who will be pleased to assist in any way possible.

### SOCIAL MEDIA

## MORE INFORMATION

For Greenpower USA Social Media updates, please follow the following handles:

Facebook @gpusafoundation

Twitter @Greenpower\_USA

Instagram @greenpower\_usa

LinkedIn GreenpowerUSA

Greenpower USA Foundation PO Box 4087 Huntsville, AL 35815

Telephone: (256) 203-6553 Email: drew.sparks@greenpowerusa.net Website: www.greenpowerusa.net



# PROTEST GUIDELINES

- 1. Protest shall not be received or considered if they are based solely on a decision involving the accuracy of an official's judgment.
- 2. If a team wishes to formally protest the validity of another team's classification, notification of the protest must be made to the Race Director prior to the Awards Ceremony of the event.
- 3. If a team wishes to formally protest a violation of the Sporting Regulations, notification of the protest must be made to the Race Director prior to the Awards Ceremony of the event.
- 4. A formal protest will be handled in the following manner:
  - a. The protesting teacher sponsor will accompany the Race Director, in person, to the team in question.
  - b. The Race Director will notify the team in question of the formal protest and begin the investigation at that time.
  - c. If the Race Director finds the team in question in violation of the formal protest, they will receive a minimum penalty of a Heat Disqualification and a maximum penalty of an Event Disqualification.
  - d. If the Race Director finds the team in question in compliance of the formal protest, the Protesting team will receive a mimum penalty of a Heat Disqualification and a maximum penalty of an Event Disqualification.
- 5. Formal protests made after an event will be handled at the beginning of the next event that the team in question competes.
- 6. All formal protests will be completed in writing by the Race Director and Protesting Team on an official protest form and published to all competing teams in the event the violation occurred.
- 7. The decision of the protest, by the Race Director or Executive Director, is final.





### **Greenpower USA Official Protest Form**

#### **READ CAREFULLY**

- 1. First be sure you have a valid protest in accordance with Greenpower USA Rules and Regulations.
- 2. The protest must be verbally expressed to the Race Director in ALL cases.
- 3. Remember, matters involving only the accuracy of an official's judgement are not protestable.
- 4. Reminder that someone will be receiving a penalty for this formal protest: the Protesting Team or the Team in Question.

Event Name:	Race Director:	Protesting Coach (Team):
Date:	Time:	Team in Question:

**REASON FOR PROTEST:** (Note: if more space is needed, use an additional piece of paper)

#### **Protesting Coach Signature:**

	Race Director Signature:	Result of Protest:	Protest Valid	or	Protest Invalid
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Race Director Notes:

# FLAG INFORMATION

All team members need to be familiar with the following flags and their descriptions. If you have any questions, please ask during the Safety Meeting at your next event.



The green flag when displayed at the Starter's Bridge indicates the course is clear and racing is underway.

A single stationary or "standing" yellow tells drivers to slow down because something hazardous is off of the race surface but in the area, such as a vehicle off course, an emergency vehicle attending to a disabled car, an exposed corner worker in an unsafe area. Passing is not allowed in the zone covered by the single standing yellow.

A waving yellow indicates that drivers must slow down and be prepared to take evasive action or stop to avoid an obstruction in the roadway. Passing is not allowed in the zone covered by the waving yellow.

Double yellow flags displayed at all stations mean that a full-course caution is in effect. Drivers must slow down. Passing is not allowed anywhere on the track.



When a red flag is displayed it is shown at all stations and at start. The session has stopped and drivers must come to a controlled stop on the side of the race course.



A white flag tells a driver a slow-moving vehicle such as a car with mechanical trouble or an emergency vehicle is moving well below race speed on the racing surface.



An open black flag, displayed by Start and Black Flag Station with a number board displaying a driver's car number. This open flag tells a specific driver to come to the pits to meet with officials. When black flags are displayed at all corner stations, the race session has halted and cars must come into the pits.

A closed or furled black displayed with a number board at the Start Bridge is a warning to a driver that improper actions have been observed.



Blue with a yellow or orange slash indicates another car is rapidly overtaking a car and may attempt to pass. Check your mirrors! This is an advisory flag.



Yellow and red stripe surface flag indicates oil, gas, water, gravel, sand, mud, rocks or some other debris is on thetrack surface. Traction may be compromised.



A checkered flag tells drivers that the race or session has ended.