

GREENPOWER USA

FORMULA GOBLIN



2022-2023 Technical and Sporting Regulations





# OVERVIEW

All cars must comply with the following regulations. All cars will be subject to pre-event and possible post-event scrutineering (race day safety check) to ensure compliance.

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

# TECHNICAL

- T1.1. Goblin cars must, with the exception of bodywork, be built using only components as supplied by Greenpower.
- T1.2. The motor is sealed and must not be opened or modified.
- T1.3. Batteries must be clamped to the chassis of the car using the supplied battery clamp only.
- T1.4. The floor of the car must be fitted with no large gaps to the ground.
- T1.5. The top of the driver's helmet must be below the roll bar height at all times.
- T1.6. The driver must be able to reach and operate the steering and brakes comfortably.
- T1.7. Bodywork must be fitted to the front and sides of the car extending at least to the rear of the driver's seat area.
- T1.8. Bodywork must not cover isolator switches, which must be freely accessible at all times.
- T1.9. There must be no sharp edges on the bodywork.
- T1.10. All bodywork that protrudes beyond the front of the chassis must be easily deformable.
- T1.11. The addition of bodywork or other structures for the purpose of push starts is prohibited.
- T1.12. The brakes must be correctly set up, so that when applied they prevent the car from being pushed.



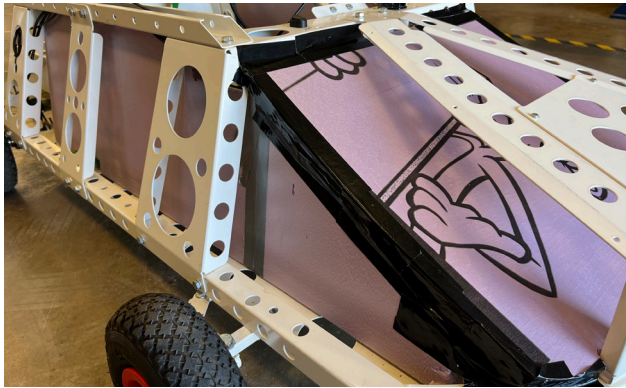


- T1.13. The safety harness must be tightly adjusted for each driver.
- T1.14. Always transport and charge batteries in a safe environment where there is no danger of metal parts coming into contact with the battery terminals. Always charge in accordance with the manufacturers' instructions.
- T1.15. All cars will display three race number stickers. These 9.5" diameter stickers will be placed on the left, right and front of each car. Race number stickers are provided at no charge at each team's first event. Replacement stickers, after the first event, will be at the team's expense.
- T1.16. Bodywork that protects the driver must be constructed of rigid sheet material such as aluminum, rigid plastics, carbon fiber, glass-reinforced plastic or other composites of at least 1.5mm thickness. Plywood products must be at least 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 be observed as suitable body material as long as it is supported with a 1-inch thick closed-cell foam backing.
- T1.17. Inner faces of the bodywork specified in T1.16 will be lined with a minimum of 1-inch thick closed-cell foam from the floor to the driver's cell opening to protect a substantial part of the driver's body. This foam must be bonded to the bodywork.
- T1.18. Outside of the race vehicle, charging of the batteries is only allowed 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.

# INNER FOAM PLACEMENT

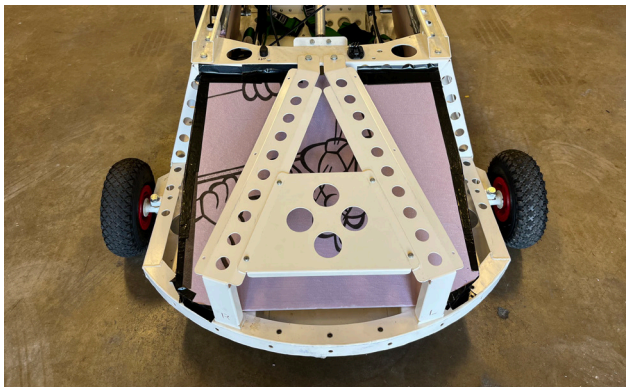
The pictures below show the bare-minimum needed for a Goblin team. The angle of the front panel of foam is dependent on the size of your students. The foam can go all the way up to the triangular frame above it in this picture. The idea is to surround the driver on three sides with a protective layer of foam.



Front Driver Right View



Front Driver Left View



Front View



Inside Driver Cell View

# SPORTING REGULATIONS

## **S1 - SPORTING REGULATIONS**

- S1.1. Drivers must wear 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 be full-face style compliant with a DOT approved sticker.
- S1.2. Full overalls or long sleeved tops and pants and full fingered gloves must be used while driving. Overalls must be of a suitable thickness to provide protection. Paper overalls are not acceptable.
- S1.3. All team members must wear stout closed toe footwear, ideally with toe protection.
- S1.4. Drivers must be enrolled in Grades 4-6 only.
- S1.5. All drivers must know about all aspects of the car, especially how to isolate the power.
- S1.6. It is recommended that all drivers have experience in driving before arriving at an event.

## **S2 - RACE FORMAT**

- S2.1. A sanctioned Greenpower USA Goblin Event will have a presentation component and three defined race events - Drag Race, Slalom Race and Circuit Race.



## **S3 - SCORING**

- S3.1. In a sanctioned Greenpower USA Goblin event, there are four scored categories:
1. Presentation Component (not to exceed 100 points)
  2. Drag Race Score (not to exceed 100 points)
  3. Slalom Race Score (not to exceed 100 points)
  4. Circuit Race Score (not to exceed 100 points)
- S3.2. Teams will complete at least three heats per race event. The number of race heats per event is up to the Race Director.
- S3.3. Each team's best time will be used for final scoring. The breakdown in race scores will start at 100 points and decrease by 5 points per placement.
- 1st Place receives 100 pts.
  - 2nd Place receives 95 pts.
  - 3rd Place receives 90 pts.
  - This continues to a minimum race score of 55 pts.
- S3.4. The team with the highest cumulative total from the four scored categories will be declared the event winner.

## **S4 - CHAMPIONSHIP REGULATIONS**

- S4.1. The Greenpower USA Goblin National Championship will be determined by the total of each team's best three (3) overall event scores from sanctioned events during the Race Season.

## **S5 - PENALTIES**

- S5.1. Starting in January 2023, a line of cones will be placed 35-feet after the finish line. If a car comes into contact with a cone during a race event, that run will not be used in scoring. No retry will be given unless the Race Director deems the contact to be due to mechanical failure.

# 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 vehicles will be subject to pre-event and possible post-event scrutineering to ensure compliance.
- E1.3. The vehicle and required drivers must be presented at scrutineering (race day safety check) in a race ready configuration.
- E1.4. Supplementary Regulations specific to each event will be published approximately two weeks beforehand and sent by email to all entrants for that event.
- E1.5. Greenpower's scrutineers and officials accept no responsibility for damage caused to cars while performing safety checks, recovery or rescue during an event.
- E1.6. While these regulations, the scrutineers and other officials endeavor to ensure vehicles are safe to participate, ultimate responsibility lies with the entrant.
- E1.7. 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.
- E1.8. 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.
- E1.9. 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.
- E1.10. As part of the communications activity, Greenpower 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, Greenpower must be notified prior to every event in which the participant takes part.



## 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

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If you have any questions, or need clarification, about any of the rules mentioned in this document, please send an email to [rules@greenpowerusa.net](mailto:rules@greenpowerusa.net)

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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