

TREC

Trail Racing Endurance Circuit

2010 Vehicle Specifications

Version 2
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Table of Contents

Section

1. DISCLAIMER
2. DEFINITIONS
3. RULES MODIFICATION PROCEDURE
4. VEHICLE SPECIFICATIONS CLASS
5. ACCESSORY/EQUIPMENT SPECIFICATIONS
6. MISCELLANEOUS

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1. DISCLAIMER

TREC's primary interests are to enhance safety for spectators and participants as well as to promote trail racing as a major motor sport. TREC makes no representations or expressed or implied warranties that compliance with the rules as written or any addendums to those rules will guarantee against injury or death to spectators, participants, vendors and others or against damage to personal property. These rules and regulations constitute the minimum acceptable standards for competition and are intended as a guide for the conduct of the sport. The primary responsibility for the safe condition and operation of trail racing rests with the vehicle owner, driver, and navigator. Think safety first.

In consideration of being permitted to participate in any event sponsored, promoted, sanctioned or directed by Trail Race Endurance Circuit (TREC), the competitor for himself/herself, his/her personal representatives, heirs and next of kin, hereby releases TREC, and their respective officers, directors, promoters, sponsors, employees, agents and volunteers ("releases") of all liability to the competitor, whether caused by negligent act or omission of releases or otherwise while the competitor is for any purpose participating in such event. It is fully understood by each of the competitors that there is some inherent risk associated with this event, including damage to vehicles and to the individual.

In addition, the competitor agrees to indemnify and hold harmless the releases from any loss, liability, damage, or cost they incur due to such participation by the competitor, whether caused by releases' negligence or otherwise. The competitor agrees to assume full responsibility and risk for bodily injury, death, or property damage from releases' negligence or otherwise, while the competitor is participating in this event.

Each competitor acknowledges and represents the following while competing:

1. That he or she has read the foregoing release and waiver of liability and indemnity agreement.
2. That he or she will at all times, while riding in a vehicle participating in an event, wear his or her respective seat and shoulder belts, eye protection , helmet, fire suite and protective safety gear correctly.
3. The owner/driver certifies that he or she has inspected this vehicle and that the same certifies it to be in good mechanical condition and adheres to all TREC rules.
4. The owner/driver has informed himself/herself about the event, either by prior participation or by investigation into the event.
5. The driver or any other person(s) in a vehicle participating in any TREC event may choose to cease racing at any time, therefore assuming all risk and liability, as indicated above.
Although safety generally is everyone's concern and certainly the highest priority of TREC, the final responsibility rests on the competitors.

Competitors can, at any time, choose to not race or cease racing at any time or area they feel uncomfortable or unsafe driving.

TREC approved Helmets must be worn at all times while driving in a competition vehicle on the course.

All safety requirements and rules must be followed at all times.

2.1 Classes

2.1.1 TREC categorizes vehicles into the following classes:

2.1.1.1 Class A

2.1.1.1.1 Class A is intended for the most progressive four wheel drive vehicles in use today. Restrictions on this class are intended to keep the vehicles of automotive type and design.

2.1.1.2 Class B

2.1.1.3.1 Class B is intended to resemble OEM four wheel drive vehicles modified using readily available bolt-on aftermarket parts. Restrictions on this class are intended to keep the vehicles to two seat, front engine, full frame and full body vehicles.

2.1.1.4 Class C

2.1.1.4.1 Class C is intended to resemble and keep vehicles as close to stock as possible and still be safe to race

2.1.1.5 Exhibition

2.1.1.5.1 Any vehicle not meeting the restrictions outlined in the Class A, B or C will be considered by TREC for inclusion in an exhibition only class that is not included in event or series points, purses or trophies. **Exhibition class competitors must adhere to all safety and scoring rules.**

2.2 Competitor

2.2.1 Driver and/or navigator and/or alternate navigator signed up to compete in an event. A subset of the team.

2.3 Competitive Advantage

2.3.1 Increasing the probability of winning a competition through an item, items, or actions.

2.4 Custom

2.4.1 Items which are produced for specific applications in limited quantities.

2.5 Driver

2.5.1 The person on the team who controls the vehicle while riding in it.

2.6 Event

2.6.1 For all intents and purposes, the event begins when a team arrives on-site for sign-in and ends when the team departs and includes any activities taking place in between.

2.7 OEM (Original Equipment Manufacturer)

2.7.1 The same as what would have been installed on a vehicle from the factory.

2.8 Readily Available

2.8.1 Items which are mass produced by commercial means and available for purchase through any conventional distribution channel including the Internet, catalogs, stores, manufacturer sales program, and shops.

2.10 Team

2.10.1 The team is considered the driver, navigator, alternate navigator, owner, and all support personnel.

2.11 TREC

2.11.1 Trail Racing Endurance Circuit.

3.1 TREC reserves the right to modify specifications for legal, safety or environmental issues at any time.

3.2 Current competitors in any TREC series may submit rule modification suggestions to at any time.

3.2.1 Rule change suggestions should be submitted in writing via the following methods:

3.2.1.1 Postal mail

3.2.1.2 E-mail

3.2.1.3 Fax

3.2.2 Suggestions must include the racers name, address, phone, and competitor number. Suggestions should be brief and include a reference to the existing rule number that should be changed, or a reference to the portion of the rules that need to be added to.

3.2.3 All rule suggestions are reviewed by an appointed rules committee that will determine the merits of any and all suggestions. The rules committee will also gather input from the competitor roundtable when it is warranted.

3.2.4 The rules committee presents rule changes to TREC on an ongoing basis.

3.2.5 TREC has final and absolute control over any and all rule changes.

3.3 One or more of the following ways will notify active racers of any rule change in advance of an event.

3.3.1 Notification will be given thirty days prior to an event for vehicle specification changes. Changes regarding safety or course rules can be made at any time.

3.3.1.1 Postal Mail

3.3.1.2 E-mail

3.3.1.3 The Website (www.TRECwithus.com or www.BadlandsOffRoad.com)

3.3.1.4 Fax

3.3.1.5 Drivers meeting

4. Vehicle specifications for Class A, B, C and Exhibition.

4.1 Axles

4.1.1 Definition: TREC considers axles to be the link between wheels on both front and rear ends. This application begins at the end of the drive shaft and ends at the flange for wheels. It does not include brake assemblies.

4.1.2 All axle widths, live axles, solid axles, independent, military style drop in axles are permitted.

- 4.1.3 Gear reduction may be prior to the axles or after the axles or a combination of both.
- 4.1.4 Differentials must have some form of 100% locking abilities.
- 4.1.5 Vehicles are limited to 2 axles.
- 4.1.6 Axles must be of automotive type and duty as determined by TREC Official Inspector.

4.1.6.1 Class B Additional Restrictions:

- 4.1.6.1.1 All axles must be mechanically differentiated. (i.e. no hydrostatic drive)
- 4.1.6.1.2 Must have at least one locking differential.
- 4.1.6.1.3 Axles must be located in such a way that the only change to wheelbase is due to reactive forces.

4.1.6.2 Class C Additional Restrictions:

- 4.1.6.2.1 Axles must have been available in the vehicle from the manufacturer.

4.2 Body

- 4.2.1 Definition: TREC considers the body to be the vehicles outer layer and includes the floor, sides, rear, hood, fender, grill, and firewall.
- 4.2.2 Any body panel may be made of steel, aluminum, fiberglass, Polycarbonate (LEXAN), carbon fiber or plastic.
- 4.2.3 Fenders
 - 4.2.3.1 If used, front inner fenders must have a 3" hole that is used for fire suppression access.
 - 4.2.3.2 Class A Additional Restrictions:**
 - 4.2.3.2.1 Vehicles must have front panels to cover the complete driver compartment (see 4.2.6.4).
 - 4.2.3.3 Class B Additional Restrictions:**
 - 4.2.3.3.1 Vehicles must be from the factory, a four-wheel drive product.
 - 4.2.3.3.2 Vehicles must have an outer front fender.
 - 4.2.3.3.3 Fenders must be mounted to the main portion of the passenger compartment, cowl or bottom of hood and extend to the grill. (Most tubed fenders approved.)
 - 4.2.3.3.4 All OEM fenders are approved for competition.
 - 4.2.3.3.5 Vertical material may be trimmed. This is the material that runs vertically. Tube and flat fender modifications must maintain general shape of OEM fender.
 - 4.2.3.4 Class C Additional Restrictions:**
 - 4.2.3.4.1 No major trimming of the body (With the exception of pick up style configurations they may only be "bobbed" if the vehicle maintains all other factory shapes and looks.
 - 4.2.3.4.2 All body panels must be made out of OEM materials.
 - 4.2.3.4.3 All OEM body panels must be in place and attached in a safe fashion.
 - 4.2.3.4.4 Rear inner fenders must be maintained. Moving fenders inboard or moving forward is not permitted.
 - 4.2.3.4.5 Rear inner fenders may be minimally trimmed to allow the shocks to pass though.
 - 4.2.3.4.6 All vehicles must retain their original back body corner designs (no dovetailing permitted).
 - 4.2.3.4.7 All vehicles must have rear lights for stop/turn and driving. Aftermarket lights may be used.
 - 4.2.3.4.8 Rear facing caution light that operates independently of the vehicles electrical system is recommended.
 - 4.2.3.4.9 All fenders that retain the integrity of the original vehicle's "image" will be approved. Example: creating a "flat-fender" style look and adding that to a CJ7 will be acceptable.
 - 4.2.3.4.10 Fenders must retain stock width for the entire fender; a rounded front corner is allowed to a radius no wider/larger than 6", OEM width is required up to the hoods side latch attachment points, from there the hood may angle in to the grill.
 - 4.2.3.4.11 Body lifts up to two inches are allowed.
 - 4.2.3.4.12 No clip-in body panels are allowed in this class (Zeus clipped, quick replacement panels).
 - 4.2.3.4.13 Repaired panels are acceptable.

4.2.4 Grille

4.2.4.1 Class B Additional Restrictions:

- 4.2.4.1.1 Grilles must be an approximate OEM configuration and size as approved by TREC Officials.
- 4.2.4.1.2 Grilles must also include two headlights in the stock location (if applicable). Off-road driving lights mounted in the original location of the headlights may be used as a substitute.

4.2.4.2 Class C Additional Restrictions:

4.2.4.2.1 Grilles must be the unchanged OEM grill with OEM headlights lens in OEM location.

4.2.5 Hood

4.2.5.1 Must cover the top of the engine completely including the heads, manifold, valve covers, block, alternator, water pump, fan, radiator, and fuel injection system, no matter where the engine is located.

Hoods are designed to protect the occupants.

4.2.5.2 Hood scoops and breather holes are acceptable. . If any breather hole or scoop inlet exceeds fourteen (14) square inches, it must be screened for safety. The sum dimension of all breather holes may not exceed twenty percent (20%) of total hood area.

4.2.5.3 A hood may be substituted by an occupant shield. This shield must separate the driver completely from the engine completely when used in conjunction with the fire wall and may be made from 3/16" Fire retardant Lexan.

4.2.5.3.1 If hoods are used, they must be fastened in a safe and secure manner.

4.2.5.4 Class B Additional Restrictions:

4.2.5.4.1 Must cover the entire engine compartment and/or follow the factory form.

4.2.5.4.2 Replacement hoods of different material than OEM must be readily available and conform to factory configurations and design and approved by TREC Officials.

4.2.5.4.3 Hoods may not be substituted by occupant shields.

4.2.5.5 Class C Additional Restrictions:

4.2.5.5.1 Must be unchanged OEM with the exception of fastening to vehicle.

4.2.6 Tub/Cab

4.2.6.1 General condition must be in good shape without significant rust.

4.2.6.2 Firewalls are required for fire safety and must be a minimum of 0.040" aluminum, 20-gauge magnetic steel, 3/16" fiberglass, 1/8" or Polycarbonate (LEXAN).

4.2.6.3 Firewalls must run from the left outer panel of the vehicle to the right outer panel of the vehicle and completely separate the occupants from the engine compartment. Firewalls must be a minimum of 12" tall. Firewalls must be attached with material (bolts, welds) that will not detach or break in heat (no zip ties).

4.2.6.4 All vehicles must have a floor and sides under, between and beside the driver and passenger seat to protect the occupants from flying parts during breaking and outside elements such as trees, rocks, etc. Floor must be a minimum of 0.040" aluminum, 20-gauge magnetic steel, or 3/16" fiberglass.

4.2.6.4.1 Expanded metal and 3/16" LEXAN are NOT acceptable.

4.2.6.4.2 Floors may not have holes in them larger than 3/4".

4.2.6.4.3 Floors must cover the area from the left hand outer side of the vehicle to the right hand outer side of the vehicle and from the foot pedals location to behind the front seat on both the right and left hand side.

4.2.6.4.4 A boot must cover holes in the floor designed for shift levers and links.

4.2.6.5 It is required that body panels cover the area where the quarter panels, sides and fenders are normally.

4.2.6.6 Class B Additional Restrictions:

4.2.6.6.1 Must hold two seats, side by side.

4.2.6.6.2 Excessive body damage, as determined by a TREC official, is not approved.

4.2.6.6.3 All OEM tubs and cabs are approved for competition.

4.2.6.6.4 Aftermarket replacement tubs must meet OEM specifications and be readily available and TREC approved.

4.2.6.6.5 Repaired panels are acceptable.

4.2.6.6.6 Complete floors must be maintained.

4.2.6.6.7 No cutting of floor is allowed with the following exemptions.

4.2.6.7.1 The center section of the body is approved for cutting & rising to allow drive train clearance directly over drive train components. This does not include axles or axle shafts.

4.2.6.6.8 It is recommended that all glass be removed. All non-safety glass must be taped completely.

4.2.6.6.9 Doors may be removed.

4.2.6.6.9.1 If doors are removed they must be replaced by a structural component to protect occupant from side impact and debris such as sticks, rocks, logs etc., Must be of similar shape and size and must be covered with like material of sides or of same/stronger strength.

4.2.6.6.10 Tailgates may be removed.

4.2.6.6.11 Some trimming of body allowed, such as fenders and corner panels, but not to include (rear) inner fender wells and absolutely no tubing of fender wells. Must keep the semi-circle look of wheel wells.

4.2.6.6.12 There is to be no trimming of hood or grill. Expanded mesh, LEXAN or anything similar will not be permitted in this class.

4.2.6.6.13 Body must maintain all factory measurement including length, height and width, please call for approval if you have any questions; all approvals must be given in writing.

4.2.6.7 Class C Additional Restrictions:

4.2.6.7.1 Overall body measurements (height & width) must conform to OEM specifications for proclaimed vehicle.

4.2.6.7.2 Proclaimed vehicle must have a minimum production run of 500 vehicles per production year. (clarification)

4.2.6.7.3 All OEM tubs and cabs are approved for competition.

4.2.6.7.4 Aftermarket replacement tubs must meet OEM specifications and be readily available and TREC approved.

4.2.6.7.5 Repaired panels are acceptable.

4.2.6.7.6 Complete floors must be maintained.

4.2.6.7.7 No cutting of floor is allowed.

4.2.6.7.8 It is recommended that all glass be removed. All non-safety glass must be taped completely.

4.2.6.7.9 Doors may not be removed.

4.2.6.7.10 No major cutting or trimming of any part of the Tub

4.2.6.7.11 The back of the tub/cab may be trimmed horizontally to match the rocker height. A minimum distance of 24" from the center of the axle to the back of the body must be maintained on bobbed vehicles. Bobbed vehicles must retain the original rear corners. Trucks with non-convertible tops must retain the OEM appearance of having a roof. Meaning the body lines of replacement top must follow OEM lines.

4.2.6.7.12: All items used to replace missing body parts or pieces, must be direct OEM replacement or approved by TREC and include rocker panels or rocker sections, rear quarter panels, fenders, hoods, etc.

4.2.6.7.13: All replacement body parts or pieces must be able to remain intact and whole during a competition, any replacement body parts or pieces that fail during competition, will be required to be fixed or replaced if found to be of a lesser strength than the body part or piece it is replacing if found to be a competitive advantage.

4.3 Brakes

4.3.1 Definition: TREC considers the brakes to be the source of control for slowing and stopping wheels.

4.3.2 Mechanically operated brakes are permitted.

4.3.3 Hydraulic assisted brakes are permitted.

4.3.4 The brake pedal on the floor must operate all brakes. Adequate braking resistance at the pedal is required.

4.3.5 Brakes must be in good working condition with adequate pads. Brakes that are worn out or oil soaked will not pass.

4.3.6 Brake lines must be in good shape without leaks and safely routed.

4.3.7 Master and slave cylinders must be in good shape without leaks.

4.3.8 Competitors may use secondary mechanism for operating individual wheel brakes on the vehicle.

4.3.9 Transmission brakes must be approved by a TREC official inspector.

4.3.10 Emergency brakes are required and may be hydraulic or mechanical type and must be in good shape and not worn to a point of possibly disengaging while under a load.

4.3.11 Emergency brakes must not be electric line lock.

4.3.12 All vehicles must have the main brake pedal operate at least three (3) 3"x5" rectangle or three (3) 3"x3" round (or equivalent) or larger red brake lights.

4.3.13 Two lights must be placed at mid-height on the farthest left and right of the vehicle. The third light must be placed in the center at the top/highest structural part of the vehicle.

4.3.14 Class C additional Restrictions

4.3.14.1 Must have all OEM lights in OEM locations.

4.4. Bumpers

4.4.1 Definition: TREC considers the front bumper to connect the foremost part of the frame excluding push bars, stingers, etc. The rear bumper is considered to connect the rearmost part of the frame and the rearmost part of the vehicle.

4.4.2 Bumpers must connect the right and left frame rails.

4.4.2.1 Must not be built for ramming purposes.

4.4.3 Class C Additional Restrictions

4.4.3.1 Must have at least factory bumpers.

4.4.3.2 Factory Bumpers may be trimmed slightly to allow for clearance issues.

4.4.3.3 After market bumpers must keep OEM style or look.

4.5 Cooling

4.5.1 Definition: TREC considers the following to be part of the cooling system. Radiators, hoses, engine ports, heater hoses, and coolant product.

4.5.2 Air Cooling is permitted.

4.5.3 Water-cooled systems are permitted.

4.5.4 Radiator must be covered so that, in the event of a break in the radiator, spectators, navigators and drivers are protected from the coolant spill.

4.5.4.1 Rear-mount radiators must be completely divided from the passenger compartment, this includes head room. Line of sight will be the determining factor for proper separation. Polycarbonate (Lexan) is an approved divider.

4.5.4.2 Seats are NOT considered part of the shielding.

4.5.4.3 Sides of the radiator must be completely covered.

4.5.5 Radiators must be securely mounted.

4.5.6 The use of Ethylene Glycol is not permitted.

4.5.6.1 Propylene Glycol is permitted.

4.5.7 Hoses and connections must be in good condition without cracks, all connections must have a mechanical restraint (hose clamp).

4.5.8 Top mount (roof mount) radiators are not approved.

4.5.9 Radiators must have an overflow bottle connected to the radiator by an overflow tube.

4.5.10 Overflow bottles must be containers designed for this purpose.

4.5.11 Class B and C Additional Restrictions:

4.5.11.1 Radiator must be stock location.

4.6. Drive shafts

4.6.1 Definition: TREC considers the drive shaft to be the working link between the transfer case and the axles.

4.6.2 Drive shafts must be covered so that they may not be touched from the passenger compartment. There must be complete shielding between the occupant(s) and any drive shaft u-joint. Drive shafts that could fail and swing to hit occupant(s) must be "caged" for protection.

4.7. Electrical

4.7.1 Definition: TREC includes all wires, lights, batteries, and any other item controlled by or conducting electricity as its function to be part of the electrical system.

4.7.2 Batteries must be in good shape with adequate mounting (no elastic) to keep the battery in place in the event of a roll. All batteries must be of a non-spill type.

4.7.2.1 Mounting must be a clamp type mount that "cages" the battery in position. Foot type clamp mounting is not approved.

4.7.3 Wires must be in a condition and in a position that is safe. Exposed or burnt wires are not approved.

4.7.4 Master kill switch that shuts down at least the fuel pump (if electrical) and ignition system is required. Must be marked and accessible by outside personnel.

4.7.4.1 A clearly labeled and properly working kill-switch with a proper pull-tether must be mounted in the following manner:

4.7.4.1.1 If the front hoop (Windshield area) is over thirty six (36) inches wide, the tether must be mounted vertically spanning the front windshield in the center of the windshield.

4.7.4.1.2 If the front hoop (Windshield area) is less than thirty-six (36) inches wide the tether must be mounted vertically spanning the front windshield on the right hand side of the windshield.

4.7.2 Lights.

4.7.2.1 All vehicles must have at least two lights that provide enough light to safely race the course under complete darkness.

4.7.2.2 No more than two white lights may be illuminated when the vehicle is in reverse.

4.7.2.2.1 Rear white lights may only be used for the purposes of showing others that the vehicle is in reverse.

4.7.2.3 Lights bright enough to blind oncoming drivers will not be permitted.

4.7.2.4 Other than the brake and reverse lights, all lights must face down and forward.

4.8. Engine

4.8.1 Definition: TREC considers the system designed to create torque and horsepower.

4.8.2 Engine must be free of leaks of fluids that pose a fire threat.

4.8.3 Vent tubes must be attached to a fluid containment container of an appropriate type.

4.8.4 Engine must be of automotive type, design, and duty as determined by TREC Officials prior to the event.

4.8.5 Engine mounts must be in good condition and of adequate material to support the engine.

4.8.6 Dipstick caps must be sealed.

4.8.7 Class B Additional Restrictions:

4.8.7.1 Entire engine must be in front of the foot pedals unless otherwise came from factory.

4.8.7.2 Engine must be in stock location +/- one inch (1")

4.8.8 Class C Additional Restrictions:

4.8.8.1 Engines must have been available in the vehicle from the manufacturer in that type of vehicle.

4.8.8.2 Engine must be in stock location.

4.9 Frame

4.9.1 Definition: TREC considers the frame of a vehicle to be the two rails supporting the mounting of the body and drive train as the main frame, and connecting cross members as the sub frame.

4.9.2 Any OEM or custom built frame is permitted.

4.9.3 OEM unibody construction is permitted.

4.9.4 All frame material must be magnetic steel.

4.9.5 Class B and C Additional Restrictions

4.9.5.1 All frames must meet OEM configuration (dimensions, height, width, length, number and location of cross members) If bobbed, and rear most cross is removed, a bumper must be added and fit the bumper rules. Exceptions will be the decision of TREC.

4.9.5.2 Replacement frames built by commercial manufacturers that are available on the open market to the general public can be utilized if approved by TREC official.

4.9.5.3 Frame reinforcement is approved.

4.9.5.4 No tube or partial tube frames allowed.

4.9.5.5 Notching of the frame is allowed but upper plane of frame rail must not be broken.

4.10 Fuel System

4.10.1 Definition: The fuel system includes all components and connections used to store, deliver, and mix fuel and air on the vehicle. This includes the type of fuel used.

4.10.2 Carburetors are permitted.

4.10.3 Fuel Injection systems that either injects fuel from a throttle body or through ports are permitted.

4.10.4 Non-vented gas caps are permitted.

4.10.5 Unleaded, leaded, propane, natural gas and diesel fuels are permitted.

4.10.6 Nitro methane or alcohol based fuels are not allowed. Nitrous Oxide **is not** allowed.

4.10.7 Fuel systems must be sealed with a rollover valve installed in the fuel vent line. Ball valves must be installed on all fuel vent lines.

4.10.8 Fuel lines must be safely routed from the fuel tank or cell to the engine.

4.10.9 Fuel lines must be free of leaks or cracks in hoses.

4.10.10 Throttle assemblies must be in good order and work smoothly. Throttles that do not move smoothly throughout their entire range of motion will not pass.

4.10.11 Hand throttles **are not** approved.

4.10.12 Propane systems must have an electric energized to open solenoid near the fuel tank for fire safety.

4.10.13 Propane tanks must be properly protected to prevent puncture.

4.10.14 Class B Additional Restrictions:

4.10.14.1 Must run pump gas.

4.10.15 Class C Additional Restrictions:

4.10.15.1 Unless vehicle ran in 09 TREC fuel tanks must remain in OEM location

4.10.15.2 Must use what ever type fuel vehicle originally ran on.

4.11 Fluid

4.11.1 All fluid must be contained in such a fashion to not leak onto ground during the entire race.

4.12 Numbers

4.12.1 Vehicle number must be displayed on the right, left and hood of the vehicle.

4.12.2 Numbers are to be no less than six 6" tall (may be required to be certain color).

4.12.3 Number fonts may be required and available through TREC.

4.12.4 Numbers must be of contrasting color to background.

4.12.5 TREC reserves the right to assign numbers by class or as needed.

4.12.6 Duplicate numbers

4.12.6.1 If more then one team or competitor has the same number, whoever was the first to register for a TREC event with that number shall retain the number. (First in time, first in right)

4.13 Roll Bars - Roll Cages

4.13.1 Definition: TREC considers the cage as the safety bars surrounding the occupants designed to protect the occupants in the event of a rollover.

4.13.2 A six (6) point mounting cage that protects all seats in a vehicle is required.

4.13.3 Basic roll cage must be constructed of material meeting or exceeding the following minimums:

4.13.3.1 Round magnetic steel (DOM recommended) tubing 1.50" OD with 0.120" minimum wall.

4.13.3.2 Chromoly alloy steel A 519 grade 4130 1.50" OD with .090 minimum wall.

4.13.3.3 Must be quenched.

4.13.3.4 Normalized is not approved.

4.13.3.5 Roll cages made of other material or in other wall thickness/diameters must be done through a TREC approved builder and have a certification and serial number on file with TREC. Roll cages already built of other material or specifications than those above must be inspected and approved by TREC and there may be a fee for this inspection. Contact TREC for information.

4.13.3.6 All other materials are not permitted (aluminum, composite, etc.)

4.13.3.7 All bends must be smooth with no excessive crimping or any evidence of wall fracturing.

4.13.3.8 Roll cage construction must be fully welded.

4.13.3.9 Gussets must be welded at any welded joint on the four corners of the "halo" around the occupants in both a horizontal and vertical position. Gussets must be constructed of a minimum of 0.125 (1/8) inch plate steel or one (1) inch O.D x 0.120" wall straight tubing and extend down each direction of the tubing a minimum of 1.5".

4.13.3.10 At least one spreader bar located above each seat within twelve (12) inches of the center of the seat.

4.13.3.11 At least one diagonal bar in a plane behind the seat(s) to triangulate the cage laterally.

4.13.3.12 A horizontal spreader bar behind the seat(s) of the vehicle, located at a height suitable for anchoring or routing shoulder belts.

4.13.3.13 A horizontal spreader bar in the dashboard location (between the front two uprights).

4.13.3.14 If the front hoop (windshield area) is over thirty six (36) inches wide, a vertical support between the dash bar and the front hoop must be installed near the center of the span.

4.13.3.15 If doors are not used, a bar running from the middle hoop at approximately shoulder height to the front hoop at approximately shin height must be present. This can be a bolt in piece.

4.13.3.16 A minimum of 1/8" sheet metal or 1/8" aluminum must cover 100% of the cage

perimeter immediately over any and all seats in the vehicle and be welded or bolted to at least the four tubes surrounding the seat(s). Holes may be drilled, but must not exceed 2" in diameter.

4.13.3.17 It is required that there is a minimum distance from the seat to the lowest halo bar above the occupant's head of forty (40) inches. Further, teams should build rigs with adequate distance between their helmet and the bottom of the halo. Additionally, a minimum of five (5) inches of clearance must be maintained between the top of the occupant's helmet and the roll cage. Note: Three (3) inches is acceptable if truck is already built.

4.13.3.18 The driver when properly strapped in should not be able to lean out the side of the cage.

4.13.3.19 Connecting points of the roll cage must tie in to the frame of the vehicle at six points.

4.13.3.20 Four of these points must be surrounding the occupants.

4.13.3.21 The front most position of the six points must be no farther toward the rear of the vehicle than fifteen (15) inches behind the throttle and brake pedals.

4.13.3.22 Any variance of the above rules must be approved by and TREC official inspector.

4.13.3.23 Roll Cage must have a roof covering all occupants minimum of one-eighth (1/8) inch aluminum or 16 gauge steel.

4.13.4 Class B and C Additional Restrictions:

4.13.4.1 If racing in an open top vehicle, such as Bronco, Jeep, pick-ups etc. OR if the structural components of the vehicle have been compromised, racers must adhere to, at minimum, the following standards:

4.13.4.2 Only the front four mounts of a six point cage must tie into the frame of the vehicle.

4.13.4.3 The front cowl is considered a tie in point (for a TJ).

4.13.4.4 Diagonal bar behind seat not required but recommended. (4.13.9)

4.13.4.5 Horizontal spreader bar behind seat may be bolted in. (4.13.10)

4.13.4.6 Horizontal spreader bar in the dashboard is not needed but recommended. (4.13.11)

4.13.4.7 Although it is highly recommended, that all racers adhere to the above standards, full bodied vehicles such as Cherokees, 4Runners, etc. are not required to adhere to the above rules with the following conditions:

4.13.4.8 The vehicle has never been rolled.

4.13.4.9 All structural components are in good condition and in their entirety (such as doors, hatches, roofs).

4.13.4.10 If any of these are compromised, they must revert back to the open top rules.

These restrictions are the bare minimums and it is recommended that all racers follow as much of the general roll bar cage specifications as possible. The purpose of these additional restrictions is to allow stock vehicles to race without losing the integrity of the vehicle (still drive on trail, still drive on road). All responsibility lies on the team to determine whether their vehicle is designed/sturdy enough to sustain high-speed impact. It is solely the teams' responsibility to know their limitations and if not capable, have the vehicle examined by qualified personnel.

4.14 Roll Cage Padding

4.14.1 Roll Cage padding is required on all roll cage bars that may come in contact with the driver or navigator's head or helmet.

4.14.1.1 This is defined as any bar within twelve (12) inches of the driver or navigators helmet when they are in a normal seated position.

4.14.2 TREC recommends padding meeting SFI specification 45.1.

4.14.3 TREC strongly recommends installing padding on any bar, steering column, etc. that may come in contact with any part of the driver or navigators body (arms, legs, etc.)

4.14.4 Pipe insulation, shelf lining, etc. are NOT approved padding materials.

4.15 Seating

4.15.1 Must be designed for racing

4.15.2 Only seats designed for automotive use are permitted.

4.15.3 No seats designed for use in go-carts, golf carts or other non-automotive vehicles.

4.15.4 Seat must have harness as outlined in section 4.16

4.15.5 Seats must be mounted to the roll cage. Mounting to the body is not permitted.

4.15.6 Seat configuration must incorporate whiplash protection.

4.15.7 Head rest must be at proper height for the driver.

4.15.8 All seats must be full sized adult seats.

4.15.9 Class B Additional Restrictions:

4.15.9.1 All vehicles must have two seats, mounted side by side.

4.15.9.2 It is recommended that all seats are mounted to the roll cage. If not, factory mounting points must be in good condition without rust or corrosion to be approved.

4.15.10 Class C additional Restrictions

4.15.10.1 Adequately padded headrest or neck support acceptable to TREC official inspectors is required.

4.15.10.2 OEM seats may be suitable for this class. Contact TREC for specific ruling.

4.16 Seat Harness

4.16.1 A minimum five (5) point safety harness (lap, two shoulder, and submarine) with single metal quick release must be available for driver and navigator and must be worn at all times while competing.

4.16.2 Seat harness must be free of tears or cuts.

4.16.3 Occupants when properly strapped in should not be able to lean out the side of the cage.

4.16.4 If possible, both ends of lap belt must be fastened to roll bar cage with high quality fastening.

4.16.5 Class B and C Additional Restrictions:

4.16.5.1 If cage is not present, factory seatbelts in good operation and mounted in factory positions will be sufficient.

4.17 Steering

4.17.1 Definition: TREC considers steering to be all components designed to turn the vehicle wheels to the left or right of the vehicle centerline.

4.17.2 Full hydraulic steering is permitted.

4.17.3 All steering components, u-joints, fittings must be in good working order as determined by a TREC official.

4.17.4 Hydraulic steering fluids must not leak.

4.17.5 Hydraulic lines must be safely routed and be in good shape, free of cracks or fraying as determined by a TREC official.

4.17.6 Flexible hydraulic lines must be steel-braid or commercially sold hydraulic line in good shape. All fittings must be in good shape and of proper type/quality for its respective location.

4.17.7 TREC strongly suggests that Hydraulic lines running anywhere within the passenger compartment be completely shielded to protect the occupants.

4.17.8 Vent tubes must be attached to a fluid containment container.

4.17.9 Brake steering is permitted

4.17.10 Class B Additional Restrictions:

4.17.10.1 Full hydraulic steering is not permitted.

4.17.10.2 Hydraulic assist steering is approved.

4.17.10.3 Multi-Axle/rear steering is not permitted.

4.17.10.4 Steering must be mechanical.

4.17.11 Class C Additional Restrictions

4.17.11.1 Hydro Assist is not permitted

4.17.11.2 Steering gear must be mounted in the factory location.

4.17.11.3 OEM or stock replacement steering systems are allowed.

4.17.11.4 No Brake Steering

4.17.11.5 Stock steering configuration must be maintained. Crossover and high steer is allowed.

4.18 Stickers

4.18.1 Teams may run their own stickers without restriction in size.

4.18.2 Stickers may not use profanity or be crude in nature.

4.18.3 Stickers promoting a non-TREC sanctioning body or event can not be run during a TREC sanctioned event.

4.18.4 An optional visible 2'x2' area must be made available for TREC stickers in order to qualify for TREC and Sponsors' contingency money, prizes, and awards. This area is not required to run the event or compete for the purse.

4.18.4.1 Stickers must contrast with background.

4.18.4.2 Stickers are to be run on the sides or top of the body or wheel wells.

4.18.4.3 A separate plate may be added (such as in the v of a roll cage.)

4.19 Suspension

4.19.1 Suspension pivot points, connecting points, etc. must be free of cracks and in good physical condition as determined by a TREC official.

4.19.2 Reactive suspension systems are permitted.

4.19.3 Manual controlled suspension systems are approved but may not control individual tires. These systems must control the entire front axle and/or the entire rear axle.

4.19.3.1 Components from differing suppliers can be used on one vehicle. Contact TREC official if there are questions regarding a manufacturer or kit.

4.19.4 Class B Additional Restrictions:

4.19.4.1 Bypass Shocks are allowed

4.19.5 Class C Additional Restrictions:

4.19.5.1 Coil-over, air and bypass shocks are not allowed.

4.19.5.2 Shock mounts may be relocated and reinforced.

4.19.5.3 Wheel base must remain stock.

4.19.5.4 Air/hydraulic bump stops are not permitted. Only stationary and OEM style bump stops are acceptable in this class.

4.19.5.5 Coils independent of another suspension items (including shocks), must be able to maintain the vehicle ride height.

4.19.5.6 Wheel travel shall be no greater than 10 inches measured at ride height on front and rear axles.

4.19.5.7 Any manufacturer's suspension kit that increases vehicle ride height 5 inches or less and is mass produced and readily available (or was available in the past) to the general public is approved.

4.19.5.8 Kits must be installed per manufacturer's instructions.

4.19.5.9 Sub frames or relocation brackets are not permitted.

4.19.5.10 Suspension brackets and components may be strengthened by adding material but must remain in OEM location.

4.20 Tires

4.20.1 Any type pneumatic construction, bias, bias belted & radial are permitted.

4.20.2 Tractor tires are not permitted.

4.20.3 Paddle-type tires are not permitted.

4.20.4 Individual lugs may be cut, but not fully removed. No more than 50% of each lug may be removed.

4.20.5 No metal studs, tracks, or chains permitted.

4.20.6 Tire size is limited to 48" diameter, measured using a measuring device and measuring actual diameter on the wheels that will be used for competition with the vehicle on the ground measuring in a horizontal plane at the tire center line with 12 psi air pressure. (This value may be adjusted for regional competition.)

4.20.7 Tires are to be the only source of forward, side, or back movement of the vehicle.

4.20.8 Tires must be inflated with air, nitrogen, CO2, commercial weight enhancing products, or water.

4.20.9 Tires must be Readily Available (see Definitions section above) at least two weeks prior to the event.

4.20.10 Class B and C Additional Restrictions:

4.20.10.1 Vehicles must have four (4) independent tires.

4.20.10.2 Maximum tire diameter is 35", stamped or metric equivalent.

4.20.10.3 Tires must be DOT approved.

4.21 Transfer Case

4.21.1 Definition: The transfer case transfers power to the front axle and rear axle of a vehicle.

4.21.2 All transfer cases are permitted.

4.21.3 Vent tubes must be attached to a fluid containment container designed for this purpose.

4.21.4 Class B Additional Restrictions:

4.21.4.1 Only mechanical transfer cases are permitted.

4.21.5 Class C Additional Restrictions

4.21.5.1 Must have been available in that model from OEM.

4.22 Transmission

4.22.1 All automatic or manually operated transmissions are permitted.

4.22.2 Vent tubes must be attached to a fluid containment container designed for this purpose.

4.22.3 Dipsticks must be secured to prevent leaking and/or falling out in the event of a rollover.

4.23 Wheels

4.23.1 The following is approved for competition:

4.23.1.1 All steel and aluminum wheels.

4.23.1.2 Wheels and bead locks must not interfere with the proper operation of brakes.

4.23.1.3 Wheels must be mounted onto the axle with a minimum of 4 lug studs in proper condition.

4.23.1.4 All lug studs must have the proper nuts on them.

4.23.1.5 Tire studs, screws, or anything added to the tire to aid traction will not be permitted.

4.23.1.6 Bead lock wheels with locks on both the inner and outer side of the wheel or any combination thereof is approved.

4.24 Recover Points

4.24.1 All vehicles in all classes must have some sort secure and safe recovery point on the front and back of the race vehicle.

4.25 Winches

4.25.1 Winches are not required but recommended.

All specifications below apply to all classes of competition.

5. Safety

5.1 Fire Protection

5.1.1 The following are required for competition:

5.1.1.1 A minimum of two (2) fire extinguishers must be mounted in the vehicle.

5.1.1.1.1 One must be easily accessible by the driver. The other must be mounted to the roll cage on the vertical bar immediately behind the passenger seat.

5.1.1.1.2 They must be fully charged.

5.1.1.1.3 ABC type extinguisher.

5.1.1.1.4 They must be easy to remove from their mounts.

5.1.1.2 Tie wraps and/or duct tape are NOT acceptable mounting methods.

5.1.1.3 It is mandatory that all entrants have, in their pit area as part of their equipment, at all times, a fully charged 10-pound or more, dry chemical, ABC, fire extinguisher.

5.1.1.4 It is recommended on all race vehicles: A remote on board fire suppression system, piped to the engine transmission compartments (five pound minimum system).

5.2 First Aid Kit

5.2.1 The vehicle must contain a basic first aid kit.

5.3 Helmets

5.3.1 Helmets must meet one of the following specifications:

5.3.1.1 DOT

5.3.1.2 Snell SA2000

5.3.1.3 Snell SA-95

- 5.3.1.4 Snell M2000
- 5.3.1.5 Snell M-95
- 5.3.1.6 SFI 31.1, 31.2, 41.1, 41.2
- 5.3.2 Certification sticker must be attached and clearly visible.
- 5.3.3 Helmets with chinstraps are required for everyone inside the vehicle.
- 5.3.4 Bicycle and water sport helmets are NOT approved.
- 5.3.5 Helmets must be presented at tech inspection for approval.
- 5.3.6 Neck braces are recommended

5.4 Catastrophic failure

- 5.4.1 If catastrophic failure is experienced during an event on a hot course, it is important to move your vehicle as far off the marked course as possible.
- 5.4.2 Each team should carry in their race vehicle at all times a white strobe light that operates independently of the vehicles electrical system (battery operated) and has a magnetic base.
- 5.4.3 In the event of catastrophic failure the competitor should place the white strobe light on the side of the vehicle from which traffic is approaching and keep it illuminated for the duration of the event.

5.5 Attire

- 5.5.1 Fire suits are suggested for all classes. Fire suit may be of one or two piece design.
- 5.5.2 All competitors must wear a reflective vest during an event to allow them to be easily seen upon exiting the vehicle especially at night.

6.1 Vehicle Rejection

- 6.1.1 TREC reserves the right to reject any vehicle for any reason.
 - 8.1.1.1 If rejected, a written rejection notice may be provided to the competitor, a verbal rejection by a TREC official is valid.
- 6.1.2 TREC reserves the right to pick specific or random vehicles throughout the event for a re -tech.
- 6.1.3 If a vehicle passes tech with an item that is not legal, that does not make it legal nor allow them to run with the infraction. Penalty points and/or disqualification can be issue for infractions to TREC rules.