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**\*\*NOTE: All 2014 season updates have been written in red\*\*  
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## PREFACE

"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 Lucas Oil Off Road Racing Series ("LOORRS") events, and, by participation in these events, all LOORRS members are deemed to have acknowledged, accepted, and complied with these rules. No express or implied warranty of safety shall result from publications of, or compliance with these rules and/or regulations. The rules are intended as a guide for the conduct of the sport, and are in no way a guarantee against injury or death to participants, spectators, or others."

**LOORRS rules are the sole property of Lucas Oil Off Road Racing Series. Use of these rules by any other organization or individual is forbidden unless prior written consent is given by the LOORRS.**

**LOORRS, its parent, affiliates, members, officers, directors, or staff, assumes no responsibility, legal or otherwise, for failure or malfunction of any products of manufacturers listed in this rulebook. LOORRS is NOT liable for actions or decisions made by individuals, promoters, or organizations, etc. using LOORRS rules.**

Specifications and/or suggested standards contained in this rule book are intended for use as a guide with respect to safety and for no other purpose either expressed or implied. The use of the specifications and/or suggested standards contained herein by any association, organization, manufacturer or individual is entirely voluntary and **LOORRS** will NOT accept any responsibility for consequences resulting from the application of said specifications and/or suggested standards.

## TERMINOLOGY

**LOORRS** – Lucas Oil Off Road Racing Series

**LOORRS Headquarters** – 302 North Sheridan Street, Corona, CA 92880

**LOORRS Rules** – The rules in this rule book, along with any amendments issued by LOORRS Headquarters

**LOORRS Officials** – Any person appointed by LOORRS to officiate at a LOORRS event either as an employee or independent contractor

**LOORRS Event** – A LOORRS sanctioned motor sports event, to include the designated race as well as all periods for track move-in, registration, pre and post-race inspections, time trials, qualifying races, practice, and track move-out

**Participant** – A driver, crew member, team owner, mechanic, or any other team member or person who participates competitively in an LOORRS event

**OEM** – Original Equipment Manufacturer

**Race Vehicle** – Any vehicle, prototype, or model that fits the specifications in this rulebook

**DOT Tires** – Department of Transportation approved, street legal tires

**Rookie** – Any driver who has not competed in 7 races (in the class he/she plans to run this season) in a professional short course off road racing series. Drivers must apply for rookie status when registering with LOORRS headquarters

## LUCAS OIL OFF ROAD RACING SERIES GENERAL RULES

### SECTION 1 – RULE BOOK

- 1.1. **Effective Date** – The LOORRS rules are effective upon the date of publication regardless of when a competitor receives actual notice.
- 1.2. **Amendment** – LOORRS rules may be amended or changed by written notice from LOORRS headquarters at any time. The amendment/change is also effective upon the date of publication.
- 1.3. **Interpretation and Application** – If there is a disagreement regarding the meaning or application of the LOORRS rules, the interpretation and application by the LOORRS officials at the event shall prevail. This decision is final and non-appealable.
- 1.4. **Finality of Interpretation and Application** – All participants, including but not necessarily limited to competitors, team owners, sponsors and officials, expressly agree that determinations by LOORRS officials as to the application and interpretation of the rules are non-litigable, and covenant that they will not initiate or maintain litigation of any kind against LOORRS or anyone acting on its behalf with respect to such determinations, unless it is determined that the LOORRS officials made such determinations for no other purpose other than a bad faith intent

to harm or cause economic loss to the participant or official. In the event that a participant violates this covenant and initiates litigation, it is agreed that the participant will reimburse LOORRS for all litigation costs and that the right to a trial by jury will be waived. LOORRS reserves the right to take any other action hereunder, including suspension or termination of license/membership for violation of this covenant not to sue.

## SECTION 2 – SAFETY

- 2.1. **Responsibility** – Off road racing is a dangerous sport. Each participant assumes the risk of bodily injury, death, or property damage when he/she participates in an event. Although safety is a concern, LOORRS cannot be held responsible for the safety of participants.
- A. LOORRS considers safety a top priority and works with competitors, track owners, manufacturers, and outside experts to exchange useful information regarding safety designs, products, practices, and procedures and to publish and amend rules to reflect the latest safety practices as needed. LOORRS is not and does not claim to be an expert in safety standards, designs, practices, or procedures, nor is LOORRS a standards organization or a designer, manufacturer, or seller of safety-related products, facility, or vehicle designs.
  - B. All officials and participants are obligated to inspect the racing facilities, safety personnel, equipment, and conditions at the track on a continuing basis throughout the event. Any inadequacy should be reported to senior LOORRS officials immediately.
  - C. Participants are solely responsible for their own safety when performing duties as a driver, owner, or crew member and should carry out these duties in a way that ensures minimum amount of risk or injury to themselves and others.
  - D. Neither LOORRS nor the track owner will be responsible for the adequacy of a participant's race vehicle, equipment, or racing activity.
- 2.2. **Injury Reports** – Any participant involved in an accident while on the racing premises must report to a LOORRS official before leaving the premises if able to do so, or as soon as the participant is physically able.

## SECTION 3 – LICENSES

- 3.1. **License Required** – Any person who desires to participate in a LOORRS sanctioned event as a driver, crew member, or spotter must apply for, purchase, and receive a valid, current LOORRS license. No person will be allowed in the hot pit or spotter area without the proper license.
- 3.2. **Eligibility/Requirements** – To secure a LOORRS driver's license, a person must:
- A. Be at least 16 years of age for the Pro 4 and Pro 2 classes.
  - B. Be at least 14 years of age and have prior approval from LOORRS for the Pro Lite and Pro Buggy classes
  - C. Be at least 8 years of age for the Kart classes in accordance with page 15 of the LOORRS Kart Rule Book.
  - D. Be approved by LOORRS officials prior to competing. Drivers may be removed from competition, qualifying or testing any time at the sole discretion of LOORRS.
  - E. If required by LOORRS officials, submit list of prior racing experience, pass driving ability tests and/or compete in specified number of regional events conducted by and at the discretion of LOORRS officials.
  - F. Be physically fit in the sole discretion of LOORRS. LOORRS reserves the right to require an applicant to pass a physical examination by a qualified physician at the applicant's expense.
  - G. Execute and deliver all authorizations, releases, applications, consents, waivers, and other documents as may be required by LOORRS.
- 3.3. **Application Process** – Application forms must be fully executed, signed, and submitted to LOORRS Headquarters accompanied by the requisite fee. Receipt of an application does not guarantee a license will be issued. Applicants will receive a license following LOORRS approval of their application. LOORRS reserves the right to reject a license application for any reason.
- 3.4. **Minors** – Any applicant legally considered a minor under the laws of his/her state must also submit a fully executed and signed minor's release. This release must be signed by the applicant's legal guardian.
- 3.5. **License Non-Transferable** – A LOORRS driver's license is non-transferable. Any attempt to transfer, lend, or permit any other person to use any license shall result in a penalty imposed on the licensee and/or the driver that

licensee is affiliated with. LOORRS will not be responsible for any damages arising in connection with such unauthorized use of a license.

- 3.6. **Suspension/Termination** – LOORRS may suspend or terminate a license in the interest of off road racing or LOORRS. The participant will not be obligated to a refund of any license fees submitted.
- 3.7. **Expiration** – A license automatically expires on the last day of the calendar year in which it was issued.
- 3.8. **Ejection** – A LOORRS official may eject a licensed participant from an event or from the racing premises to promote the orderly conduct of an event. An ejection is final and not appealable.
- 3.9. **Interim Review of Qualifications** – LOORRS may review the qualifications of a licensee at any time and may require the licensee to submit to additional physical exams, to pass additional driver tests, to submit a resume of experience, or take any other action that LOORRS deems appropriate to determine whether the licensee continues to qualify for a license.

## **LUCAS OIL OFF ROAD RACING SERIES EVENT PROCEDURES**

### **SECTION 1 – MEMBER OBLIGATIONS/AGREEMENTS/RELEASES**

- 1.1. **General Agreements** – By submitting an entry blank and/or participating in any activity related to a LOORRS event, a participant agrees to the following:
  - A. All rules set forth in the LOORRS rule book and its amendments are applicable and will be followed.
  - B. All decisions of LOORRS officials are final, non-appealable, and non-litigable with the exception of those instances described in the protest procedure.
  - C. All participants voluntarily assume the risk of damage to the race vehicle, the driver, pit crew, or any other person and have no claim for said damages against LOORRS, track owners, officials, agents, or employees of LOORRS.
  - D. All participants assume full responsibility for any and all injuries sustained, including death and property damage, anytime they are in the racing areas or en-route to or from the racing areas.
  - E. All participants understand the risk of serious injury or death, which may result from racing, and that participants solely assume that risk when choosing to participate in a LOORRS event.
  - F. No participant may enter the racing areas (to include the hot pits) unless he/she has personally signed all required entry forms, waivers, release of liability forms, and pit permits applicable to the event.
- 1.2. **Advertising and Promotion Release** – Each participant by entering a LOORRS sanctioned event, grants to LOORRS and authorized agents and assigns a license to use and sub-license on an exclusive basis with regard to the products/services of the series sponsors, and otherwise a non-exclusive basis his/her name, likeness and performance, including photographs, images and sounds of the participant and/or any of the participant's race vehicles in any way, medium, or material for promoting, advertising, and publicizing any LOORRS sanctioned event or related telecast or programming. Each participant hereby relinquishes to LOORRS in perpetuity all rights there to for such purposes.
- 1.3. **Telecast and Other Rights** – Each participant, by entering a LOORRS sanctioned event, acknowledges that LOORRS, and licensees and assigns, exclusively and in perpetuity own any and all rights to broadcast, transmit, film, tape, capture, overhear, photograph, collect, or record by any means, process, medium or device whether or not currently in existence, all images, sounds, and data arising from or during any LOORRS sanctioned event or the participant's performance in the event, and that, except for works created pursuant to the fair use doctrine or the LOORRS Media Access Policy, LOORRS is and shall be the sole owner of any and all copyrights, intellectual property rights, and proprietary rights worldwide in and to these works and in to any other works, copyrightable or otherwise, created from the images, sounds, and data arising from or during any LOORRS event or the participant's performance in the event. Each participant agrees to take all steps reasonably necessary and all steps requested by LOORRS, to protect, perfect or effectuate LOORRS' ownership or interest in these rights. Each participant agrees not to take any action, nor cause others to take any action, nor enter into any third party agreement that would contravene, diminish, encroach, or infringe upon these LOORRS rights.

- 1.4. **Substance Abuse** – No LOORRS participant may use or be under the influence of any stimulants, depressants, or tranquilizers during an event. This includes but is not limited to alcohol, narcotics, etc. LOORRS reserves the right to require drug and/or alcohol testing of any event participant.
- 1.5. **General Conduct** – No LOORRS participant or team member is permitted to come into race control for any reason during the race event time. Any discussion or communication during a race weekend with the Competition Director may be done at the end of the race day at the Tech trailer.

## SECTION 2 – ENTRIES

- 2.1. **Entry Requirements** – In order to compete in a LOORRS event, a participant must complete and submit an official entry blank for each event by the deadline specified. LOORRS is not responsible for forms not received or filled out incorrectly.
- 2.2. **Entry Approval** – Acceptance of any entry is at the discretion of LOORRS. A participant is not eligible to compete until entry blank is received and approved by LOORRS headquarters regardless of fees submitted.
- 2.3. **Late Entries** – In the event an entry is submitted after the specified deadline, LOORRS may accept the late entry with a late registration fee.
- 2.4. **Refund Policy** – All refunds must be requested through LOORRS Headquarters within 14 days of the scheduled event. Once a vehicle enters the race course, whether in practice or competition, a refund can no longer be issued.

## SECTION 3 – ELIGIBILITY

- 3.1. **Vehicle Eligibility** – Only vehicles, parts, components, and equipment determined by LOORRS officials to meet the specifications set forth in the stated rules are eligible to compete in a LOORRS event. Determinations can be made at any time before, during, or after an event.

## SECTION 4 – INSPECTIONS

- 4.1. **Time/Manner** – All vehicles, parts, components, and equipment are subject to inspection by LOORRS officials at any time and in any manner. Decisions made in regards to the time or manner of inspection are final, non-appealable, and non-reviewable.
- 4.2. **Inspection Area** – Only those persons permitted by LOORRS officials are allowed in the inspection area.
- 4.3. **Competitor Obligations** – A participant must take whatever steps requested by LOORRS officials, including tear down of the vehicle to facilitate inspection. This may include but is not limited to installing inspection holes, inspection ports, and any other means of inspection deemed necessary. Any inspection that requires tear down or dismantling of any assembly to inspect components is the sole financial responsibility of the competitor and or team. LOORRS is not in any way financially responsible for any tear down or disassembly or reassembly of components to ensure rules compliance. In passing a vehicle through technical inspection, LOORRS does not warrant that vehicle's adherence to all rules. The participant is responsible for ensuring his/her vehicle is in compliance with all LOORRS rules at every event.
- 4.4. **Pre-Race Inspection** – All vehicles must pass a technical inspection before entering the race track.
  - A. If a vehicle does not pass this inspection it will not be allowed to compete unless, in the opinion of the LOORRS official, the deficiency: will not adversely affect the race, cannot be corrected in time for qualifying for the race or it is insubstantial and does not warrant disqualification from the race.
  - B. If technical inspection is passed but a deficiency is noted on the inspection sheet, it must be corrected by the date and time specified or a penalty may be imposed.
  - C. **All helmets and driver gear to be used during the weekend must be presented for pre-race inspection with vehicle. All gear must be clean.**
- 4.5. **Post-Qualifying/Race Inspection** – All vehicles must either be inspected or released from inspection by a LOORRS official at the conclusion of each race/qualifying session. If a vehicle leaves the inspection area without

being cleared by a LOORRS official a penalty may be imposed.

- 4.6. **Technical Penalties** - Penalties imposed for technical infractions are final, non-appealable, and non-reviewable.
- 4.7. **Equipment/Parts Failing Inspection** – LOORRS can confiscate any illegal parts and/or equipment found during any inspection.
- 4.8. **Sealing/Impounding** – LOORRS has the right to seal or impound race vehicles or parts for inspection purposes. LOORRS assumes no responsibility for those parts or vehicles.

## SECTION 5 – RACE PROCEDURES

- 5.1. **Finality** – All decisions made by LOORRS officials involving race procedures are final and may not be appealed – subject only to review if one or more officials determine that a review is required. If a review determines that action is required, officials reserve the right to revise race results, impose penalties, and/or award or subtract points.
- 5.2. **Driver/Crew Responsibilities** – The driver is ultimately responsible for the behavior and actions of all members of his/her team to include crew members, team owners, and spotters. Penalties can be imposed on drivers for actions taken by members of his/her team.
  - A. Drivers must check in and attend all driver meetings.
  - B. Drivers must be on time to compete in events as scheduled. Any driver or vehicle that is not ready to compete at the designated race time may be sent to the back of the field or be disqualified from the race completely at the discretion of LOORRS officials.
  - C. An eligible driver may drive any qualified vehicle in any event. A rookie driver must have practiced in the vehicle before driving it in competition.
  - D. A driver may not attempt to qualify more than one vehicle per race division.
- 5.3. **Engine Replacement** - Engines may be replaced during a LOORRS event only after the LOORRS technical director has been notified. An engine change may result in a starting position change.
- 5.4. **Starting Positions** – Qualifying positions for the first event will be determined by random drawing. Drivers who do not draw or enter after the close of registration for an event will be placed at the back of the field.
- 5.5. **Race Start**
  - A. Starting grid position will be established by LOORRS prior to each event.
  - B. Race vehicles must be in the staging area thirty minutes prior to the beginning of the race.
  - C. All vehicles must be ready to race when entering the starting grid.
  - D. Late vehicles may start after the green flag, only with permission from a LOORRS official.
  - E. The penalty for making contact with the official pace truck is disqualification. This is not appealable. Passing the pace truck without permission will also result in a penalty.
  - F. Scoring and timing of the race does not begin until the official starter waves the green flag. Any vehicle that does not maintain its designated position to that point may be repositioned and/or penalized by LOORRS officials at their discretion.
- 5.6. **Race Halt** – LOORRS officials may stop a race at any time the track is deemed unsuitable for racing. Under adverse conditions, a race may be called official after 50% of the laps have been completed.
  - A. When a race is halted prior to the completion of one lap, there shall be a complete restart in the original starting position.
  - B. In the event of a complete restart, all vehicles that took the first green flag will be awarded the appropriate finishing position based on the position in the field. Starting grid position settles any multiple vehicle issues in the same location on the track.
  - C. When a race is halted after the completion of one lap, vehicles will line up in the order in which they were running at the completion of the last full lap before the halt. If there is no restart, drivers will be scored and paid on the positions they would have held in a restart.
  - D. When an event is halted due to rain or adverse circumstances prize money shall only be paid for the races completed. LOORRS may reschedule the event to a mutually agreeable date. In that case, the incomplete races

would be finished first, and original entries would start in the position they were halted in previously.

5.7. **Race Start/Finish Line** – The official race start/finish line will be indicated at each event during pre-race driver's meetings. The start line may be different from the finish line.

5.8. **Race Course Procedure**

- A. A vehicle may be pulled from competition at any time if a LOORRS official feels it is a hazard to others.
- B. Vehicles must race under their own power and in forward gears only.
- C. If a vehicle gets off the designated race track, speed must be reduced significantly and the vehicle must merge back into the line safely without gaining time or position.

5.9. **Official Competition** – All races will run until the leader has completed the required distance.

5.10. **Hot Pit Procedures**

- A. Hot pit speed limit is 30 MPH.
- B. Race vehicles may not be pushed onto the race track from the hot pit area. Vehicles may be started by hand pushing in the hot pit area, but may not be pushed past the flagman at the track entrance.
- C. All equipment used to service the race vehicle must be removed from the vehicle before entering the race track and must be returned to the equipment side of the pit wall immediately following the pit stop.
- D. Lug nuts must be fully tightened before the race vehicle leaves the pit area. Vehicles will return to pit area for inspection if LOORRS officials detect a violation of this rule.
- E. All major repairs must be done behind the pit wall.
- F. Only one jack may be used for tire changes. The same jack must be used when changing tires on both sides of the vehicle during a pit stop. A second jack may only be used in the event that a vehicle falls off the first jack, in order to facilitate the use of the first jack.
- G. Air supply tanks and pressure regulators for all air equipment must remain on the equipment side of the pit wall.
- H. There is no fueling in the hot pits.
- I. During a pit stop, one crew member must stand at the front of the vehicle in the driver's direct view for the duration of the stop. The vehicle may not leave the pit until that crew member sees that all work is completed and signals that it is safe to proceed.
- J. No more than five crew members may be over the hot pit wall during their division race.
- K. Long pants and closed toe shoes must be worn in the hot pits and racetrack area at all times.
- L. All pro truck team crew members are required to wear team uniform shirts in the hot pits.
- M. Crew member or driver license is required for access to the hot pits.

5.11. **Team Spotters**- All teams in all divisions are required to have one spotter per race vehicle, in the LOORRS designated area any time the race vehicle is on the race track.

- A. Spotter must check in with the LOORRS official in the designated spotter area before the start of the race and must remain in the area as long as his/her vehicle is on the track.
- B. Spotters must have 2 working radios consisting of 1 working "listen only" radio and headset with the ability to hear the competition director as well as 1 two way radio to communicate directly with the driver in the race vehicle.
- C. Drivers may be penalized for inappropriate spotter behavior.
- D. Spotters must have vehicle numbers marked clearly on front and back of person so as to be easily visible to LOORRS officials. Numbers must be black on a white background with a minimum size of 2 inches by 3 inches.
- E. Spotters for rookie drivers must have yellow stripes on headset on both sides of race car number.

**SECTION 6 – FLAG RULES**

6.1. **Green Flag (Start/Restart)** – All race vehicles must remain in appropriate positions until the starter displays the green flag signifying the start or restart of the race.

6.2. **Blue Flag with Diagonal Yellow Stripe (Passing Flag)** – Race vehicles given this flag must prepare to yield to overtaking traffic.

- 6.3. **Yellow Flag (Caution)** – Race vehicle must immediately slow to 30 miles per hour or other speed indicated by LOORRS officials. No passing is allowed under a yellow flag. In-car light activation is to be treated the same as seeing the yellow flag displayed.
- A. Waiving yellow flag indicates a caution affecting only area where flag is being displayed.
  - B. Stationary yellow flag indicates a full course caution situation. Lap counting may or may not cease during a full course caution at the discretion of LOORRS. The activation of the in-car yellow caution light will be treated the same as seeing a stationary yellow flag.
  - C. Penalties will be imposed for vehicles not abiding the yellow flag. Violators will be notified by receipt of a black flag at the finish line. Continued participation in the race after the black flag for this offense may result in disqualification of the vehicle. This is not an appealable disqualification.
  - D. Only LOORRS safety personnel will attend to race vehicles and drivers involved in caution incidents. LOORRS officials may request assistance from trained crew members as needed, but other than that crewmembers may not enter the race track to assist their vehicles.
- 6.4. **Red Flag (Race Stop)** – Race vehicle must stop in a safe matter immediately, regardless of your scored position on track. In-car light activation is to be treated the same as seeing a red flag displayed.
- A. Failure to obey the red flag will result in disqualification. This is not an appealable disqualification.
  - B. Repairs, refueling, or service of any nature is not allowed during a red flag. If a vehicle is in the hot pits being serviced, all work must stop immediately when the red flag is displayed and nothing can be continued until the flag is withdrawn and the race is restarted.
  - C. Red and yellow flags together designate a complete restart before one lap has been completed. Damaged vehicles may go to the hot pit area for repairs and restart the race in their original position only if they are able to return before the restart of the race. Timing on the restart is at the discretion of LOORRS officials.
- 6.5. **Black Flag (Penalty)** – Race vehicle must report to penalty area and remain until released by a LOORRS official. This flag will be displayed at the finish line only.
- A. The black flag may be displayed for rough driving, an unsafe vehicle, failure to acknowledge other flags, failure to adhere to LOORRS rules or directives, and other offenses at the discretion of LOORRS officials.
  - B. After a black flag is displayed to the driver for three consecutive laps with no penalty served, scoring of the vehicle will be discontinued for the remainder of the race.
  - C. If a driver receives a black flag during the final two laps and does not serve the penalty, LOORRS officials may drop the finishing position of the vehicle, deduct championship points, or both.
  - D. **Any black flag penalty shall put the offending Drivers' vehicle to the back of the pack one lap down. LOORRS officials will place vehicle back on track after penalty is served.**
- 6.6. **White Flag (One Lap to Go)** – Display of the white flag at the finish line means the leader has started his/her last lap.
- A. No race vehicle may receive any assistance after the white flag has been shown with the exception of those making regular pit stops.
- 6.7. **Checkered Flag (End of Race)** – display of the checkered flag at the finish line means the race is completed. All vehicles must go to the designated finish area and remain there until released by a LOORRS official.
- A. When the checkered flag is displayed to the leader, the balance of the field receives the checkered flag in the same lap. Finishing position will be awarded according to most laps traveled in the allocated amount of time, whether the vehicle is still running or not.

## SECTION 7 – TIMING AND SCORING

- 7.1. **Official Scoring** – All decisions of the designated LOORRS official scorer for an event are final unless a recheck has been requested by a driver or a LOORRS official.
- 7.2. **Scoring Re-Check Procedures** – A participant must submit a request for a scoring re-check in person within twenty minutes after the declaration of finishing positions has been made by LOORRS officials. Results are not

considered official until any requested re-checks have been concluded. Any recheck request must be accompanied by a \$100.00 deposit. If an error is found, the deposit will be refunded. If no error is found, the deposit is forfeited.

## SECTION 8 – VIOLATIONS AND DISCIPLINARY ACTIONS

- 8.1. **General Procedure** – If it comes to the attention of LOORRS officials that a participant has violated a LOORRS rule or has acted in a manner that is detrimental to off road racing or to LOORRS, and the act warrants a penalty, the member will be notified by LOORRS officials of the violation, the circumstances involved, and the penalty imposed.
- 8.2. **Emergency Action** – LOORRS reserves the right to take temporary emergency action against a participant in the event that he/she acts in a manner that can be considered a threat to the orderly conduct of an event. Such action may include ejection from premises, suspension of license, or any other action designed to remove the threat created. Consumption of alcohol or drugs before or during an event, fighting, inappropriate driving, and failure to obey the black flag or other directive of a LOORRS official are examples of conduct that would warrant emergency action.
- 8.3. **Payment of Fines** – Fines shall be paid to LOORRS headquarters promptly after receipt of penalty notice. Teams with outstanding fines will not be permitted to compete in future events. All unpaid fines can be collected by deduction from winnings. Any fines left unpaid at the end of the season will be grounds for refusal of a LOORRS license for the next year.
- 8.4. **General Scope of Penalties** – Penalties for violation of LOORRS rules are determined by the severity of the violations and the effect on fairness of competition, the orderly conduct of the event, and the interests of off-road racing and LOORRS. Penalties may include, but are not limited to: disqualification, probation, license suspension, fines, or loss of points.
- 8.5. **Unsportsmanlike Conduct** – Any participant found by LOORRS officials to be engaging in unsportsmanlike behavior or any inappropriate behavior that affects the orderly conduct of an event, the interests of off road racing, or LOORRS will receive a penalty. This includes any aggressive action toward a LOORRS official by participant including arguing, yelling or raising your voice when talking to an official, or touching the official in any physical way. Drivers are solely responsible for the actions of all team members at all times and in the event that a team member shows Unsportsmanlike Conduct, LOORRS officials may penalize the driver for the actions of the team member in addition to any penalty to the team member for his / her actions.
- 8.6. **Repeat offenses**- Any participant found by LOORRS officials to be engaged in any repeat offense of any technical violation or any other action that causes the LOORRS officials to impose any penalty to the driver or team will see the penalty more than double on the second offense for the same action or violation. In the event that any participant is found repeating any offense for a third time the participant may be removed from the event and put on suspension solely at the discretion of the LOORRS Competition Director.
- 8.7. ~~**Appeal**— If the participant wishes to appeal the penalty decision, a written request for hearing must be presented to LOORRS Headquarters within five days of issuance of the penalty in accordance with section 9.2 below.~~

## SECTION 9 – PROTESTS & APPEALS

- 9.1. ~~**Protest Process**— Any driver in a Pro class with an active LOORRS license may file a protest concerning the following incidents:~~
  - A. ~~Scoring or LOORRS official directed placement in the field following a yellow flag~~

### ~~Process~~

- ~~1.— The protest must be presented in writing to Competition Director or Technical Director within 20 minutes following the conclusion of the race in which the incident occurred.~~
- ~~2.— The protest may be presented by the crew chief or team owner if the driver is on the race track and is unable to meet the 20 minute deadline specified above.~~
- ~~3.— If the protesting driver chooses to formally protest LOORRS' decision, he/she must provide a \$300.00 deposit.~~
- ~~4.— LOORRS officials will review relevant race footage to determine if the protest has merit and will render a decision and explanation to the driver regarding the protest.~~
- ~~5.— If the protest is granted, the \$300 deposit will be returned to the driver and a suitable remedy issued.~~

~~6. If the protest is denied, LOORRS will retain the \$300 deposit.~~

~~9.2 **Appeal** – If the participant wishes to appeal the penalty decision, a written request for hearing must be presented to LOORRS Headquarters within five days of issuance of the penalty.~~

~~A. Appeals may only be filed concerning the following incidents:~~

~~1. Any disciplinary action(s) taken by officials that resulted in a team being removed from the premises of the event~~

~~B. The request must be accompanied by a \$1000.00 hearing fee, and must be hand-delivered or postmarked for delivery within the five-day period. The filing fee will be refunded only if the appealing party prevails.~~

~~C. LOORRS will review all materials submitted as required and will, in the interest of deterring unsubstantiated appeals, determine whether, in its sole and absolute discretion, the circumstances of the appeal warrant the convening of an appeal board.~~

~~D. Following the appeal submission, LOORRS shall take one of three initial actions:~~

~~1. Rule in favor of the appealing party, take appropriate remedial action and refund the filing fee.~~

~~2. Convene a Competition Review Board (CRB) to hear the appeal, in accordance with the CRB Hearing Procedures outlined below.~~

~~3. Determine the appeal to be without merit. If the appeal is determined to be without merit, an amount in addition to the \$1000.00 filing fee may be assessed against the appealing party. This amount will be equal to any actual costs incurred by LOORRS in making the initial determination and shall be considered a fine.~~

#### ~~Competition Review Board (CRB) Procedures~~

~~1. Three drivers from each class will be selected at each event to serve on the CRB and may be notified at the beginning of the race weekend~~

~~2. If required and notified by the Competition Director, All CRB members are to meet at a time and place determined by the Competition Director.~~

~~3. The competition director will select three drivers from the CRB to hear the appeal.~~

#### ~~Competition Review Board (CRB) Hearing Procedures~~

~~1. The three member CRB will accept testimony, review relevant footage, and seek additional information from LOORRS officials as needed.~~

~~2. All hearing proceedings will be completely transparent and all testimony and questioning will be conducted with all parties present.~~

~~3. Following presentation of the protest and evidence, the CRB will deliberate privately.~~

~~4. A unanimous decision must be reached for the appeal to prevail. If this is not possible, the appeal fails.~~

~~5. Member's votes will remain anonymous and members will not discuss deliberations or individual decisions with anyone. The decision will be provided to the appealing driver.~~

~~6. All CRB decisions are final.~~

#### ~~Resolution~~

~~1. If the appeal is granted, the deposit will be returned to the protesting driver and a suitable remedy issued.~~

~~2. If the appeal is denied, LOORRS will retain the deposit.~~

### **SECTION 9 – PRIZE MONEY/EVENT PAYBACK**

9.1. **Distribution of Prize Money and/or Event Payback** - all events shall be contested for a guaranteed finishing position purse as set forth in the payoff schedule.

A. Prize money shall be distributed by LOORRS Headquarters.

B. In the event of a protest, filed in accordance with section 9 of this rulebook, prize money shall be held until the protest and all appeals are decided.

## SECTION 10 – POINTS AND POINTS FUND

### 10.1 Eligibility for Points and Points Fund

1. A driver cannot receive points for more than one race vehicle in the race.
  2. Points are awarded to the driver who starts the race under his/her registered vehicle number. Any driver changes must be reported to LOORRS to insure proper scoring for the driver. If a different driver races the vehicle, a number change must be made and reported. All points follow the driver.
  3. To be eligible to receive points, the driver and race vehicle must take the green flag and start the race.
  4. To participate in year end points fund awards, the driver must compete in 50 % of all event weekends in that season. An event weekend is defined as 2 consecutive rounds of racing held at the same facility. The driver will receive credit for participation if his/her vehicle is damaged in the first round of the weekend and is unable to compete in the second event of the weekend.
  5. In the event that a driver is unable to compete due to a death in the family, injury or other special non-racing circumstance, another LOORRS licensed driver may act as a substitute driver. This driver substitution can only be done one time in a season and must be approved by the LOORRS competition director.
  6. In the case of a tie for first place in year end points, the tie will be broken by using the greatest number of first place finishes. If a tie still exists, seconds, thirds, etc. will be considered until the tie is broken. If a tie still exists, the driver establishing the first victory of the season will prevail. In the event of a tie for second place or lower, there is no tiebreaker and those drivers affected will share equally the combined total of the tied positions.
  7. Point fund money will be awarded at the annual LOORRS Awards Banquet with the date and location to be announced.
  8. Eligibility to participate in the points fund may be forfeited by any member violating LOORRS rules or regulations prior to the presentation of the awards.
  9. The points championship is not official until after the last race.
2. **Driver Points** – Points will be awarded according to the following point scale:

Position	Points	Position	Points
1	50	14	24
2	48	15	22
3	46	16	20
4	44	17	18
5	42	18	16
6	40	19	14
7	38	20	12
8	36	21	10
9	34	22	8
10	32	23	6
11	30	24	4
12	28	25	2
13	26	26	1

3. **Manufacturer Points Championship** –Manufacturer’s championship points will be awarded to the top finishing vehicle of each manufacturer in the Pro Truck classes based on its final official finishing position in each race. Tire manufacturers will also be calculated. These points will be according to driver point schedule including any deductions or additions incurred during the race.

## LUCAS OIL OFF ROAD RACING SERIES SAFETY RULES

*The aforementioned safety rules will apply to the Pro 4, Pro 2, Pro Lite and Pro Buggy classes:*

### SR-1 Equipment

- A. No passenger is allowed on the race vehicle any time the vehicle is in motion.
- B. Race vehicles will not be allowed on the race track without safety and emergency equipment on the premises.
- C. No race vehicle is permitted on the track without approval from a LOORRS official.
- D. No driver will compete in any event with his/her head or arm extended outside of the vehicle.
- E. 1 UTV and 1 pit bike will be allowed per entry. These pit vehicles must be registered with LOORRS headquarters, must be driven in a safe manner, and may not be driven by anyone under 16 at any time other than a driver registered and banded in a pro class

### SR-2 Driver's Wear

- A. One-piece driver suits are required. The suits must cover from the neck to the ankles and to the wrists. All suits must have the SFI label attached and meet SFI Spec 3-2A/5 or higher.
- B. Drivers must wear gloves and driving shoes that meet SFI Spec 3.3/5 or higher and have the SFI label attached. Gloves may not be modified or have any holes in them. If at any time any LOORRS official notices a driver missing a glove or having a glove with holes or fingers cut out the driver will be black flagged from the track immediately and it will be the sole discretion of the competition director if the driver will be allowed to re-join the race or if they will be parked for the duration.
- C. All driver apparel must be clean, in good condition, and free from rips or worn areas.
- D. The designated LOORRS patch will be attached to the suit on the upper front right breast area, no more than six inches from the top of driver's shoulder. No other racing sanctioning body patches or decals are to be worn on the suit. LOORRS patch must be sewn on to suit with thread.

### SR-3 Helmets

- A. Full face helmets with a Lexan shield are required.
- B. Helmets must be certified to a minimum of one or more of the following standards:
  - 1. Snell Memorial Foundation SA 2005 or better with a legible Snell sticker attached. **Effective 5-1-2014 minimum standard will be SA 2010. Effective 1-1-2015 the rule will follow Snell Memorial Foundation guidelines and have a minimum requirement of the current rating or one prior rating only. Certification information may be found at the following web site <http://www.smf.org/stds>**
  - 2. SFI Spec 31.1/2005 with a legible SFI sticker attached.
  - 3. FIA 8868 with a legible FIA sticker attached.

### SR-4 Eye Protection

- A. It is required that drivers wear eye protection in the form of Lexan shields.

### SR-5 Seats

- A. Only manufactured race seats are permitted. Custom manufactured seats must be approved by LOORRS.
- B. All seats, rib protectors, leg extensions, and head rests must be padded. Head rest padding must be certified to SFI Spec 45.2.
- C. **Seat must be located within roll cage structure.**

### SR-6 Seat Belts and Shoulder Harnesses

- A. A quick release lap belt not less than three inches wide is required. A 2 inch belt may be used provided it is certified to SFI spec 16.5. Both ends of the lap belt must be fastened to the roll cage bar. Bolt in style belts must be fastened with high quality graded bolts, not less than  $\frac{3}{8}$ ". Clip in style belts must be cotter pinned or safety wired. Cam Lock type belts are not allowed.
- B. Shoulder harnesses are mandatory. Harnesses must be no less than three inches wide and must come from behind driver's seat. 2 inch harnesses may be used provided they are certified to SFI spec 16.5. When crossing the roll cage the harness must pass through a steel guide welded to the cage that will prevent the harness from sliding from side to side.

- C. A crotch belt is mandatory and must be securely mounted to the lower seat frame or roll cage at the bottom, and to the lap seat belt on the top.
- D. Sternum straps are not allowed.
- E. At any place the lap belt, harness, or crotch belt passes over any substance that could cause cutting of the belt, the belt must be rolled, padded, or have a grommet installed.
- F. All seat belts and shoulder harnesses must connect at the lap belt with a quick release buckle.
- G. Seat belts must be certified to SFI specs 16.1 or 16.5 and dated by the manufacturer. Belts must not be used beyond two years after stated date.
- H. Seat belts may be rejected by LOORRS officials if dirty, frayed, oily, greasy, or otherwise considered unsafe by officials.

### SR-7 Head and Neck Restraints

- A. Head and neck restraints are mandatory in all classes any time the vehicle is on the track.
  - 1. D-Cell, R3, Hans, Hybrid or other restraint certified to SFI spec 38.1 with a legible sticker attached are allowed.
  - 2. The head and neck restraint, when connected, must be mounted, configured, maintained and used in accordance with the manufacturer's instructions.
  - 3. It is the responsibility of the driver to ensure that his/her restraint is correctly installed, maintained, and properly used.

### SR-8 Gas Pedals

- A. All vehicles must have a flat full support gas pedal with a toe hook.
- B. Toe hook must enable the driver to pull back on the pedal with foot in the event of a stuck throttle. See diagram on page 36.

### SR-9 Roll Bars

- A. Round steel seamless tubing or D.O.M. is required for the basic roll cage and must be LOORRS approved. Aluminum and/or soft metals are not allowed. Roll bar construction must be welded.
- B. Specific size and wall thickness of roll bars is addressed in race division rules and outlined in included diagrams.
- C. High density flame proof roll bar padding with an SFI rating of 45.1 is required on all bars that may come in contact with driver. Padding must be firmly attached so it cannot rotate or move.

### SR-10 Windshield Area

- A. Trucks must have complete left half of windshield opening covered with a LOORRS approved rock guard. **Buggies** **Open wheel vehicles** must have complete windshield opening covered with a LOORRS approved rock guard. Rock guard must have a minimum 1/8 inch rod and a maximum 1.5 inch square opening welded at each intersection.
- B. A 7 inch by 10 inch section may have vertical bars only. See diagram on page 37.

### SR-11 Side Window Nets

- A. Window nets must be certified to SFI spec 27.1 and have the manufacturer's SFI label attached. Ribbon style window nets only. The ribbon type should be made from exactly 1 inch nylon material with a maximum 1 3/4 inch square opening between the ribbons.
- B. The window net must fill the entire window opening of the race vehicle to allow no more than 3 inches access to the drivers.
- C. Rods must be made from a minimum of 1/2 inch solid steel and go 1 inch through upper rear mounting tab. 1/2 inch rod top and bottom.
- D. All window net mounts must be welded to the roll cage. The window net, when in closed position must fit tight and be secured with a safety belt type of latch. Push button latches are not allowed.
- E. Window net latch must also utilize a secondary Velcro strap. Strap must be red and measure a minimum of 3 inches x 1 inch. Velcro strap must be sewn to net or bolted/riveted to cage and bolted to latch handle. See diagram on page 34.
- F. The window net latch must be located at the front top of the window opening.
- G. No brackets protruding towards the driver.
- H. Spring type mounting of nets on the top or bottom is not permitted.

## **SR-12 Helmet Nets**

- A. For seats NOT considered a full containment seat (seats that do not have adequate head containment on both sides of the seat):
  - 1. Pro 4, Pro 2 and Pro Lite vehicles must use a center and door side driver net. Only SFI 37.1 Polyester or Kevlar approved nets are allowed.
  - 2. Nets must have an approved quick release mechanism accessible to the driver.
  - 3. The nets should be as close to the helmet as possible, with as minimal angular divergence as possible.
  - 4. For seats with lateral head supports, nets must be in contact with the head supports and attached slightly inboard at the rear, so as to partially wrap around the support.
  - 5. The nets should be installed with some tension.
  - 6. The upper strap of the net must be at or above the center of gravity of the helmet for all drivers.
- B. For full containment seat (Seats that have adequate head containment sides built into the seat structure):
  - 1. Pro 4, Pro 2 and Pro Lite vehicles may not be required to use center or door side helmet nets if using a full containment seat system that provides the same or better protection to the drivers head movement as helmet nets would provide. Must be approved by the Tech Director

## **SR-13 Headlights and Parking Lights – Grill Assembly**

- A. Headlight and parking light openings must be covered. Decals will be permitted.
- B. Single section grill pieces, which have been approved by the LOORRS Technical Director, may be used in place of factory production grills provided it fits the required template and maintains stock appearance of vehicle represented.

## **SR-14 Rear View Mirror**

- A. Rear view mirrors will be permitted.

## **SR-15 Firewall**

- A. Firewalls must be metal (aluminum- .040 inch minimum or steel-20 gauge minimum) and separate the engine and fuel source from the driver's compartment.
- B. Complete front and rear firewalls are required. Firewalls must extend to mid-rail bar.
- C. Engine and air cleaner must be completely covered with a metal cover. Cover must be a minimum thickness of .040 inches or use a LOORRS approved fire resistant air cleaner side vent containment system to trap any fluid and route it out the side of the vehicle. Any competitor may consult with the LOORRS Technical Director for the approved systems.
- D. The air cleaner opening must face away from driver.
- E. All race vehicles that have an enclosed engine and/or transmission compartment must have all breathers and vents routed out the rear of the vehicle behind the rear axle.

## **SR-16 Fire Protection**

- A. It is mandatory that all teams have 2 fully charged 10 pound dry chemical ABC fire extinguishers per entry in their pit area at all times.
- B. Bulk fuel storage is prohibited in pits.
- C. Metal drums, electric fuel pumps, and metal hand pumps are not allowed.
- D. Fuel jugs must be plastic and DOT approved.
- E. Plastic fuel pumps are the only fuel pumps allowed in the pits.
- F. Every pit must have "no smoking" signs posted every 30 feet at the front of the pit closest to the public walkways.
- G. Any awning over 100 square feet must have a valid flame certificate.
- H. All race vehicles are required to have a remote, on board, 5 pound minimum fire suppression system.
- I. All trucks with automatic transmissions must have the fire suppression system piped to the engine and transmission compartments.
- J. All race trucks must have an access door on the right side of the driver's compartment. The door must be a minimum of 8 inches by 8 inches, painted red, labeled FIRE DOOR and fold down toward the rear or the outside

of the truck and allow unobstructed access to the engine and transmission. The fire door opening mechanism must only be a 2 inch by 2 inch butterfly wing quarter turn Dzus button. No push button or other styles are allowed.

- K. All gas caps must be tethered to vehicle with a cable.

#### **SR-17 Batteries**

- A. No liquid lead acid batteries will be permitted.

#### **SR-18 Driver Medical Attention**

- A. If a competitor requires medical attention, by track or other medical teams, the medical technician must release competitor before he/she may return to competition. Failure to comply with advice of the medical technician will result in disqualification from competition for the remainder of the event.
- B. If a driver loses consciousness at any time during an event, the driver cannot compete for at least 7 days or must be cleared by doctor before returning to competition.

#### **SR-19 Quality of Workmanship**

- A. Race vehicle workmanship must meet with LOORRS officials' approval.

#### **SR-20 Fueling of Race Vehicle**

- A. No fuel will be added to race vehicles in staging or on the starting line prior to a race or practice.

#### **SR-21 In Vehicle Caution / Red Light System**

- A. Each vehicle must have installed a mandatory LOORRS issued in car caution light system. These systems must be obtained from LOORRS. Installation instructions will be provided by LOORRS.
- B. The light must be mounted in the driver's side front windshield area so that it is readily and easily visible to the driver at all times. The light placement must be approved by LOORRS officials. The light mount must be affixed in a way that it will not come lose or fall out during competition at any time. Solid mounting is required by screws, bolts, or hose clamps so that the light unit will not come lose in the event of contact from debris or in the event of an accident.
- C. The system must be installed so that it draws from the 12 Volt power system in the vehicle and wired so that the system has no switch or interrupt in the power supply other than the direct battery cut off switch.
- D. The receiving unit should be mounted on the driver's side of the vehicle in the door area where one may place a radio receiver. The unit should be mounted in a bag or carrier so that the team can easily change the unit in the event of any electrical or mechanical issue with the system.

## LUCAS OIL OFF ROAD RACING SERIES PROTRUCK RULES

*The following rules apply to trucks in the Pro 4, Pro 2, and Pro Lite divisions.*

**Pro 4:** Truck built or manufactured as a full size 4 wheel drive type utility vehicle, capable of being driven through front wheels.

**Pro 2:** Truck built or manufactured as a full size 2 wheel drive type utility vehicle.

**Pro Lite:** Vehicle manufactured as a 2 wheel drive compact pickup truck.

– All pro trucks must be a standard manufacturer production model available to the general public in the USA. Vehicle style must have a manufacturer production of at least 5,000.

– All makes and models must be approved by Lucas Oil Off Road Racing Series.

### PTR-1 MARKING AND IDENTIFICATION

- A. All vehicle numbering is subject to approval and is assigned by LOORRS.
- B. Single digit numbers can only be used in truck classes. Division ID must be indicated in lower right hand corner of number area.
- C. LOORRS officials may require a competitor to use a different number to avoid confusion or duplication at an event.
- D. In the event that a vehicle number is not visible from the timing and scoring area, the competitor will not be scored. It is the competitor's responsibility to make sure that the number is visible during all race conditions.
- E. Advertising on race vehicles must be in good taste.
- F. Foil or reflective numbers are not permitted.
- G. All LOORRS vehicles are required to have LOORRS stickers on each side of the front of the door area, 4 inches down from the window opening.
- H. LOORRS may require the use of specific sponsor decals.
- I. Team vehicles with the same paint and colors must have distinguishing markings of some kind.

### PTR-2 NUMBERS

- A. Numbers are 1-99 for each truck class.
- B. All numbers must be block style only.
- C. Numbers must be side by side. No outlines, stacking or shadows allowed. Italic slant of 25 degrees or less is allowed.
- D. Fonts must be chosen from one the below approved styles only:
  1. Impact
  2. Helvetica Black
  3. Mechanical Bold
- E. Numbers will be located in the following positions:
  1. (1) number plate on each side, **front edge of number plate to be 4 inches from back of cab. Bottom edge to be 2 inches above top of bed side. Side number plates should not be taller than the roof of the body. Side number plates should not have any material between them connecting them together from side to side. Number plates and mounting may not be used as air directing tools in any way. All side number plates must be approved by LOORRS officials for all size, mounting, and connections. high and close to the back of the cab** (must also include division identification in this area)
  2. Roof of vehicle, as viewed from passenger side
  3. (1) number plate on the back of vehicle facing rear
  4. Driver's side upper left hand corner of windshield area (must also include division identification in this area)
- F. *Pro 4 & Pro 2:*
  1. The side number plate must be white with a minimum size of 17 by 20 inches. Numbers must be solid black with a minimum height of 15 inches.
  2. Roof numbers must be a minimum height of 24 inches.
  3. Rear facing numbers must be on a white number plate measuring 10 inches by 12 inches. Numbers must be solid black with a minimum height of 8 inches.
  4. Windshield number and division must be solid black on a white surface with a minimum height of 4 inches.

G. *Pro Lite:*

1. The side number plate must be white with a minimum size of 15 by 18 inches. Numbers must be solid black with a minimum height of 13 inches.
2. Roof numbers must be a minimum height of 22 inches.
3. Rear facing numbers must be on a white number plate measuring 10 inches by 12 inches. Numbers must be solid black with a minimum height of 8 inches.
4. Windshield number and division must be solid black on a white surface with a minimum height of 4 inches.

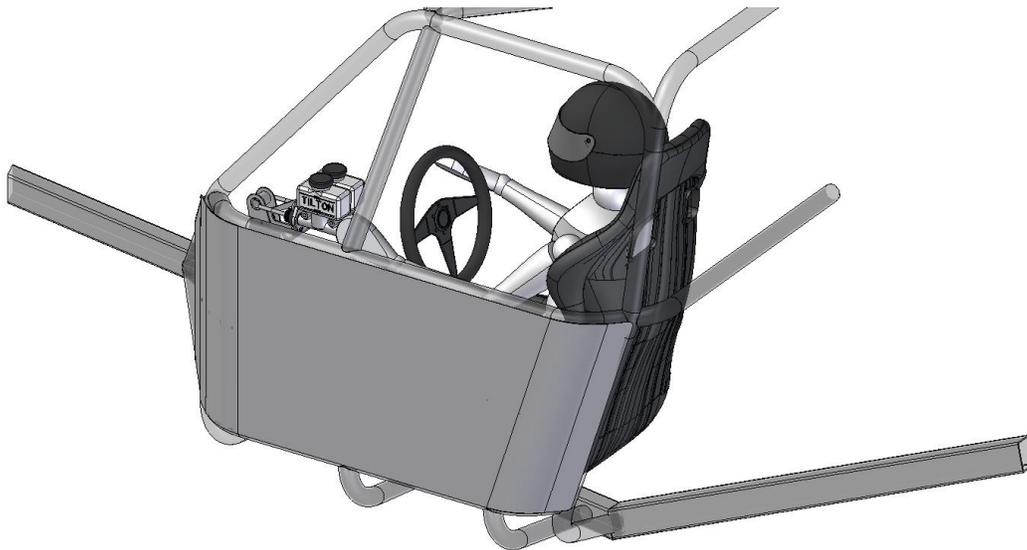
**PTR-3 CHASSIS/ROLL CAGE**

- A. All trucks must be left side steer only. Steering wheel, seat, and pedals must be in approximate stock location.
- B. All tubing, welds, gussets, and roll cage construction must be approved by LOORRS.
- C. ~~Material for roll cage construction must be 4130 chromoly or ASTM 1018/1026 CDS/DOM round tubing. Round steel seamless or D.O.M. tubing is compulsory for the basic roll cage construction and must be LOORRS approved. Aluminum and/or other composite soft metals are not allowed.~~
- D. Minimum tubing diameter and thickness for vehicles weighing:
  1. -Up to 3000 pounds – 1 ½ inch diameter by .120
  2. -3001 to 5000 pounds – 1 ¾ inch diameter by .120
  3. -Over 5000 pounds – 2 inch diameter by .120
- E. ~~All tubes must be welded 360-degrees around the circumference of the tube. Roll bar construction must be welded.~~
- F. Gussets are required on all intersections in driving compartments within 3 inches of intersection.
- G. All plate gussets must be of the same material and thickness as the roll cage, measuring 3 inches by 3 inches.
- H. Tube gussets and wrap gussets must be a minimum of .065.
- I. All trucks must have 3 horizontal door bars per side. Effective immediately all newly built trucks must incorporate the driver's side extended impact zone bars. See diagram. Existing race vehicles will be required to update to the new driver side extended impact door bars before the 2013 race season. The driver's seating location and head area in relation to the left side window opening and roof area tubing locations and construction will be under review on all trucks to maximize the driver's safety and head protection.
- J. All roll bars that may come in contact with driver must be covered with high density flame proof roll bar padding certified to SFI Spec 45.1 or better.



- K. All race vehicles are required to have a steering wheel pad.
- L. There must be a minimum of 2 inches of clearance between the driver's helmet and the cage.
- M. Diagonals or similar bracing is mandatory for all truck roof openings as well as front and rear roll bar hoops.
- N. Driver's side door bars must be covered with a minimum of .125 inch steel plate welded or bolted on, using a minimum of 3/8" bolts on 6" centers or welded with a minimum of 1" welds at 6" centers on entire perimeter of panel. ~~Effective 5-1-2014 all steel plates must be bolted only as outlined. Any welded plates must be changed to bolted.~~

- O. Door plating must completely cover from bottom of main rail to top of door bar and extend a minimum of 4 inches in front of pedals to a minimum of 4 inches behind the seat.
- P. All trucks must have back and under seat plating installed. Back and under seat plating must be .188" thick minimum steel plate from the b pillar of the rear of the back firewall and cover the entire bottom area of the seat and past the outer edge plus 3 inches in both directions to protect the driver from protrusion of objects from bottom of the vehicle. Plate must also run across the back of the seat from the under seat plating up a minimum of 12" to protect the back of the seat area and must run the full width of the under seat plate. Both plates must be mounted between the roll cage and the seat. Steel plate may be welded or bolted on, using a minimum of 3/8" bolts on 6" centers or welded with a minimum of 1" welds at 6" centers on entire perimeter of panel
- Q. Effective 1-1-2015 Diagonal tube above drivers head must be installed with removable cage couplings to allow it to be removed in the case of an emergency. Cage couplings must be LOORRS approved and must be installed as close to the corner welded intersection as possible to allow room to remove driver through roof if needed. Couplings must be made of same material as roll cage. Must be same outside diameter as tube.



- R. **Pro 4:**
  - 1. Top roll cage minimum width shall be 43 inches from outside of bar to outside of bar.
  - 2. Elbow bar shall be a 60 inch minimum from outside of bar to outside of bar.
- S. **Pro 2:**
  - 1. Chassis must be constructed of 3 inch by 2 inch rectangular tubing only, with a minimum wall thickness of 1/8 inch and must be built in accordance to the LOORRS standardized prints.
  - 2. Removal of frame material is permitted only for steering rack clearance. Removal of this material must be approved by LOORRS.
  - 3. Top roll cage minimum width shall be 43 inches from outside of bar to outside of bar.
  - 4. Elbow bar shall be a 60 inch minimum from outside of bar to outside of bar.
- T. **Pro Lite:**
  - 1. Chassis must be constructed of 3 inch by 2 inch rectangular tubing only, with a minimum wall thickness of 1/8 inch and must be built in accordance to the LOORRS standardized prints.
  - 2. Removal of frame material is permitted only for steering rack clearance. Removal of this material must be approved by LOORRS.
  - 3. Pro Lite top roll cage width will be 46 1/2 inches from outside of bar to outside of bar.
  - 4. Elbow bar shall be a 61 1/2 inch minimum from outside of bar to outside of bar.

5. Pro Lites constructed prior to July 1, 2011 which were originally constructed using 1 ½ inch by .120 inch tubing may be permitted to compete pending inspection and approval by LOORRS technical director.

#### **PTR-4 EXOTIC MATERIALS**

- A. No titanium or any other exotic materials or fasteners may be used anywhere in the vehicle with the exception of the engine components.

#### **PTR-5 MEASUREMENTS**

- A. All trucks will be measured with all tires inflated to 13 psi in outer tire at the required ride height of 10 inches.
- B. All measurements will be performed with LOORRS technical instruments or gauges.
- C. Wheelbase will be measured on one side from center of the front wheel to the center of the rear wheel on the same side. Maximum allowable tolerance cannot exceed ½ inch plus or minus on the other side.
- D. Front wheel travel is measured on a vertical plane from the center point on the end of the spindle. Rear wheel travel is measured on a vertical plane from the center of the rear axle.
- E. All wheel travel measurements will be from stop to stop with spring removed.
- F. Track width measurement will be taken at the widest outer surface of the tire. **Gauge must pass freely all the way to the ground.**
- G. LOORRS officials determine all measurements and center points.
- H. **Pro 4:**
  1. Maximum track width is 93 inches.
  2. Minimum wheelbase is 113 inches and maximum wheelbase is 122 inches.
- I. **Pro 2:**
  1. Maximum track width is 93 inches.
  2. Wheelbase is 117 inches.
- J. **Pro Lite:**
  1. Maximum track width is 74 inches.
  2. Wheelbase is 106 inches.

#### **PTR-6 RIDE HEIGHT**

- A. Truck must race at a minimum 10 inch ride height.
- B. Trucks may be measured for proper ride height before and after competition.

#### **PTR-7 BODY**

- A. All trucks must have complete bodies, cabs, hoods, doors, fenders, grills, and roofs in top quality condition, in standard location, maintaining make and model body lines.
- B. Complete bodies must be attached at start of competition, practice, or any on track activities. Bodies must be attached in such a fashion as not to create a pointed or sharp extrusion when panels are removed. A rounded loop body mounting bracket construction is mandatory.
- C. Original dimensions of all bodies must remain as manufactured, except changes for tire clearance, which must be approved by LOORRS.
- D. All body components must be installed in their standard location, plus or minus 1 inch, as referenced by a production model truck.
- E. Additions to the body **or** the race vehicle, such as fins, scoops, wings, and other extruding additions will not be permitted.
- F. **The addition of front air dams under grill is restricted to be no taller than 9" from the bottom of the grill. Air dam must also be a minimum of 12" from the ground at ride height.**
- G. The interior of the race vehicle must be completely enclosed by metal with a minimum thickness of .040 from front to rear. This includes both front and rear fire walls.
- H. Vehicles must be equipped with a complete set of LOORRS approved bumpers.

- I. Roof line, rocker panels, and top of bed side must be parallel to horizontal frame members.
- J. Body hangers may be constructed from aluminum flat materials with a minimum thickness of .090". All hangers must have a minimum of 4 bolts attaching the aluminum hanger to the main chassis. Bolts must be evenly spaced. The inner attachment points of the body hanger must have a minimum span of 12 inches. Bolts must be a minimum of ¼" diameter. All parts must not have any sharp corners or dangerous edges. All hangers must be rounded. All parts must be approved by the Tech Director.
- K. Bed sides must be full length including the tail light wrap around.
- L. Bed sides must have a minimum of four ¼ inch minimum bolts or Dzus buttons evenly spaced at front of bedside and four ¼ inch minimum bolts or Dzus buttons evenly spaced at rear of bedside. Bolts or Dzus buttons must have 2 inch washers and be aligned in a vertical fashion. See diagram on page 33.
- M. Door panels must retain all factory-molded contours and accent lines and be fastened with Dzus buttons or hex head bolts only.
- N. Driver's compartment floors must be a minimum of 1/8 inch for all classes. Floor must extend from 4 inches in front of pedals to 4 inches behind seat.
  
- O. Mud flaps are required and must extend from 6 inches above center line of rear axle to 3 inches from ground at ride height. See diagram on page 35.
  - 1. Flaps must be 14 inches wide and made from hard plastic polymer or equivalent with a minimum thickness of ¼ inch.
  - 2. No mounting with zip ties or chains.
  - 3. Must be captured between two ⅝ inch by 1 inch metal plates and mounted to resist folding back.
  - 4. Each flap must be installed with a minimum of five ¼ inch bolts.
  - 5. Must be centered on tire.
- P. Roof must be properly attached to the roll cage of the truck and be fastened with Dzus buttons or hex head bolts only.
- Q. Aluminum or steel sheeting (minimum thickness of ¼ inch aluminum or 1/8 inch steel) must completely cover the top left of the roll cage above driver's head from the front to the rear of the roll bar tube.
  - 1. Sheeting must be firmly attached to the cage and extend ½ inch past the center line of tubes in all four directions.
  - 2. Sheeting must be installed with a minimum of 6 evenly spaced 5/16 inch bolts, not protruding toward the driver. Bolts must be hex head only for use with a 6 point, ½ inch socket or wrench, with clear access for removal from the top of vehicle when bodywork is removed. All nuts must be fixed in place underneath to the roll cage mounting tabs either by welding, use of captive nut plates or clip-on threaded nuts. No use of Riv-nuts or press in Captive nuts permitted unless they are welded in place. Bolts should be lubricated for easy removal. Use of Lock-tite should be avoided.
  - 3. Mounting tabs must be at least .095.
- R. **Pro 4 & Pro 2:**
  - 1. The hood must be locked down with 4 hood pins or 4 bolts with 2 inch washers evenly spaced across the front of the hood. The rear of the hood should be fastened securely to retain body integrity with bolts, hood pins, etc.
  - 2. The maximum body width is 80 inches as measured between the A-pillars.
  - 3. Fenders may be flared to the outside of the tire.
- S. **Pro Lite:**
  - 1. The hood must be locked down with 3 hood pins or 3 bolts with 2 inch washers evenly spaced across the front of the hood. The rear of the hood should be fastened securely to retain body integrity with bolts, hood pins, etc.
  - 2. Tires must retract into fender wells.

## **PTR-8 BUMPERS**

- A. Race vehicles must have front and rear bumpers. LOORRS officials must approve all bumpers.

- B. Front bumper must be 1 inch in front of, and cannot extend more than 12 inches beyond grill. Bumper can be no wider than the inner side wall of the front tire when straight.
- C. Rear bumper must have a minimum of 6 inches between bumper and fuel cell and may not extend more than 1 inch beyond the outside front to rear tire line.
- D. Bumpers must be constructed of tubing with a minimum of 1.5 inch diameter by .095.
- E. Any bumper brackets must be a minimum of .095.
- F. Rear bumper must be 1 inch behind bed side as measured in a straight line between the rear of stock production length bedsides.
- G. Nerf bars may not extend more than 2 inches beyond the outside front to rear tire line.
- H. Nerf bars and bumpers must be rounded.
- I. All rookie drivers must have the rear bumper painted or taped yellow.

J. **Pro 4 & Pro 2:**

- 1. Minimum front and rear bumper width is 36 inches.

K. **Pro Lite:**

- 1. Minimum front and rear bumper width is 32 inches.

**PTR-9 SUSPENSION**

- A. All four corners must be coil over suspension.
- B. No suspension or sway bar adjustment of any kind is allowed when vehicle is moving. This includes but is not limited to hydraulic, electric, mechanical, and manual adjustment.

C. **Pro 4:**

- 1. Front wheel travel limit is 18 inches maximum.
- 2. Rear wheel travel limit is 20 inches maximum.
- 3. Spindles may be reinforced or manufactured and must retain same basic design concept as originally mounted.
- 4. No limits or restrictions on: ball joints, spring rate capacities, or pivot point bushings.

D. **Pro 2:**

- 1. Front wheel travel limit is 18 inches maximum.
- 2. Rear wheel travel limit is 20 inches maximum.
- 3. Four bar rear suspension only.
- 4. Rear axle may not rotate separately from axle housing

E. **Pro Lite:**

- 1. Front wheel travel limit is 12 inches maximum.
- 2. Rear wheel travel limit is 14 inches maximum.
- 3. Sway bars are allowed.
- 4. Four bar rear suspension only.
- 5. Rear axle may not rotate separately from axle housing.
- 6. On the front suspension, the A arm must be constructed symmetrical about the center line.

**PTR-10 STEERING COMPONENTS**

- A. LOORRS officials must approve universal joints in steering shaft.
- B. Hydraulic power steering is permitted.
- C. Steering wheel quick release metal coupling is mandatory and must be approved by LOORRS officials.
- D. All race vehicles are required to have a steering wheel pad.

## PTR-11 SHOCKS

- A. LOORRS officials must approve all shocks.
- B. All trucks must have at least one working shock on each wheel and a maximum of 2 shocks per corner.
- C. Shocks may have external bypass tubes and reservoir cans.
- D. External bypass is allowed on 1 shock per corner.
- E. Shocks cannot be adjusted while truck is in motion.
- F. Heating or cooling liquids or chemicals in shock is not permitted.
- G. Shocks cannot be linked together in any way. This includes but is not limited to hydraulic, electric, manual, or mechanical links.
- H. ~~Remote mounted shocks are not allowed.~~ No linkage mounted shocks.
- I. Determination of air shock usage will be done in the following manner: Truck will be presented to LOORRS officials on level ground at existing ride height. Truck height will be measured from a given point on the chassis and all canisters will be purged of air, nitrogen, or other charged support. If truck droops more than 1 ½ inches, the truck will be illegal.
- J. Bump stops will be allowed on the front and rear.
- K. **Pro 4**
  - 1. 1 spring stack is allowed per corner with a maximum of 3 springs on 1 shock.
- L. **Pro 2:**
  - 1. Bump stops will only be legal if they absorb a maximum of the last 6 inches of upward compression.
  - 2. 1 spring stack is allowed per corner with a maximum of 3 springs on 1 shock.
- M. **Pro Lite:**
  - 1. Bump stops will only be legal if they absorb a maximum of the last 3 inches of upward compression.
  - 2. Bump stops cannot be attached to any moving suspension parts and may only be attached to the chassis of the truck.
  - 3. 1 spring stack is allowed per corner with a maximum of 2 springs on 1 shock.

## PTR-12 BRAKES & BRAKE COOLING

- A. Brakes must be operational on all four wheels at all times. All brake operation must be LOORRS approved.
- B. Only disc brakes with steel (magnetic) rotors using standard metal mounting hats are permitted.
- C. Electronic wheel speed sensors or brake actuators will not be permitted.

## PTR-13 WEIGHT

- A. Driver will be included in race vehicle's minimum weight.
- B. Vehicles can be courtesy weighed prior to competition.
- C. LOORRS officials must approve all weight material.
- D. Added weight must be in block form.
- E. Blocks must weigh no less than 5 pounds each and cannot be made of liquid of any type, pellets, or other granulated weight.
- F. Added weight must be securely bolted in place on the race vehicle.
- G. Dislodged weight cannot be returned to the vehicle for weighing at the end of the race.
- H. All block ballast must be painted white and identified with vehicle number.
- I. Weight can be sealed at the discretion of LOORRS officials.
- J. No weight shifting devices of any kind are allowed. This includes, but is not limited to hydraulic or electronic devices.
- K. All vehicles will weigh in before and/or after competition at the discretion of LOORRS officials. Failure to do so will result in disqualification.
- L. All vehicles must meet minimum weight and front percentage both pre and post-race.
- M. All weight lost on track will result in a \$5.00 per pound fine.

N. **Pro 4:**

1. Trucks must weigh a minimum of 4000 pounds.
2. Minimum front axle weight is 48% of total truck weight.
3. Truck weight is set according to the following formula:
  - a. 2 valves per cylinder must weigh 10 pounds per cubic inch.
  - b. 3 or more valves per cylinder must weigh 11.5 pounds per cubic inch.

O. **Pro 2:**

1. Trucks must weigh a minimum of 3750 pounds.
2. Minimum front axle weight is 45% of total truck weight.
3. Truck weight is set according to the following formula:
  - a. 2 valves per cylinder must weigh 9.75 pounds per cubic inch.
  - b. 3 or more valves per cylinder must weigh 10.75 pounds per cubic inch.

P. **Pro Lite:**

1. 4 cylinder trucks using individual runner intake manifolds must weigh a minimum of 2800 pounds.
2. 4 cylinder trucks not using individual runner intake manifolds including those using plenums or balance pipes, must weigh a minimum of 2875 pounds.
3. Spec V-8 trucks must weigh a minimum of 3200 pounds.
4. Minimum front axle weight is 45% of total truck weight.

#### **PTR-14 ENGINE BLOCK**

- A. Cubic inch of race vehicle motor must be declared at time of inspection.
- B. Engines are subject to inspection by LOORRS officials at any time.
- C. LOORRS officials' method of measuring the weight to displacement ratio is the only valid method of cubic inch P & G testing.
- D. At LOORRS officials' discretion, engines will be prepared for mechanical cubic inch certification and measurement.

E. **Pro 4:**

1. Engine block must be of OEM design and made from steel or aluminum.
2. Block must be available to the general public.
3. No more than 8 cylinders are allowed.

F. **Pro 2:**

1. Engine block must be of OEM design and made from steel or aluminum.
2. Block must be available to the general public.
3. No more than 8 cylinders are allowed.
4. The maximum engine setback is 42 inches from the front spindle center line to rear of bell housing mount flange on rear of the block.
5. The center line of the crank shaft cannot be less than 8 ½ inches above the lowest part of the frame rail as measured from the front of the engine.

G. **Pro Lite:**

1. LOORRS officials must approve all manufacturer engine blocks.
2. Engine block must of the same material as delivered by the manufacturer and must be for sale in the USA.
3. The center line of the crankshaft cannot be less than 8 inches above the lowest part of the frame rail, as measured from the front of the engine.
4. No rear engine trucks will be allowed. Engine must remain in the front of the truck
5. Blocks may not be modified by addition of material unless approved by LOORRS officials.
6. 4 Cylinder engines
  - a. Maximum displacement is as follows:
    1. 2 valves per cylinder – 2900 cc (176.9 ci)

2. More than 2 valves per cylinder – 2700 cc (164.7 ci)
- b. Magnetic steel crankshaft only.
- c. LOORRS pre-approved engine blocks:
  1. Ford SVO tall block number M6011B230, M6010E2300or M6010E2300T
  2. GM Block number 10093306
- d. Engine block and head must be positioned between frame rails as viewed from the top.
7. V8 Spec engines
  - a. Motor set back will be a maximum of 42 inches + or - 2 inches measured from the spindle centerline to the back of the block at the bell housing mounting surface.
  - b. Engine and transmission oil pans must be positioned between frame rails as viewed from the top
  - c. Cylinder bore maximum size is 4.062"
8. Blocks may not be modified by addition of material unless approved by LOORRS officials.

## PTR-15 ENGINE HEADS

### A. *Pro Lite:*

1. 4 cylinder engines:
  - a. LOORRS officials must approve all heads.
  - b. Aluminum heads are permitted.
  - c. LOORRS approved heads:
    1. Chevrolet/GM/Pontiac/Brodix
      - a. Section number – 10049801
      - b. Chevy Vortec 2.8 and 2.9 head
    2. Ford SVO Section numbers: Any cast iron head
      - a. M6049A230
      - b. M6049A230A/C
    3. Toyota part numbers:
      - a. 11101-79106
      - b. 11101-79266
    4. Nissan part numbers:
      - a. 11040-40F11
      - b. 11040-53F01
  - d. ~~Valve angle cannot be changed from stock location.~~
  - e. No welding or material added without LOORRS approval ~~unless for repairs.~~
  - f. Valve location cannot be changed.
  - g. Spark plug location cannot be changed.
  - h. Modification to combustion chamber is allowed.
  - i. Cam location and mounting cannot be changed.
  - j. LOORRS must have each approved head in inventory before said head can be used in competition.
  - k. No variable valve timing or lift is allowed.
  - l. Other heads may be available for use after they are LOORRS approved and in inventory.
2. V8 Spec engines:
  - a. Only LOORRS authorized engine builders or agents will be allowed to perform any internal maintenance or repairs and then re-certify engine with LOORRS serial numbered bolt head seals. A list of authorized engine builders is available from LOORRS technical officials upon request.
    1. All V8 spec engines must have LOORRS serial numbered seals or LOORRS approved OEM engine supplier serial numbered seals applied only by LOORRS authorized engine builders or agents on the following parts.:
      - a. Valve covers
      - b. Intake manifold
      - c. Front engine timing chain cover
  - b. LOORRS approved engines:
    1. General Motors 88958604 from GM Performance Parts(GM 604 engine will be permitted to change: rocker arm ratio, studs and valve springs)
    2. General Motors LS Based LOORRS Spec Engine

3. Ford D347SR from Ford Racing.
4. Mopar ASA75360 in LOORRS spec
  - a. Mopar spec engine must run 1.5 rocker arm on exhaust and intake. Part# SCT 1000 BL, PDM 800-16
  - b. Mopar spec engine must use minimum .060" thick head gasket
  - c. No V8 spec engine can exceed a compression ratio of 10.75 to 1 as measured by a LOORRS official.

## **PTR-16 ENGINE OILING SYSTEM**

- A. **Pro Lite**
  1. Engines may be wet or dry sump. Any type of oil pan is allowed on either setup.
  2. V8 Spec engine:
    - a. Engine oil pans will not be part of the sealed engine program.
    - b. Dry sump pump can have no more than 4 stages (3 scavenge, 1 pressure).

## **PTR-17 IGNITION SYSTEMS**

- A. All ignition systems must be approved by LOORRS.
- B. **Pro Lite**
  1. MSD Ignition with module 6AL-6420-6430-6440-6425 (or ALN) will be required with RPM limits as stated below. Other ignitions may be run upon approval only. Ignition boxes may be sealed by LOORRS during technical inspection.
    - a. Mopar engines may use up to 6000 RPM limit maximum.
    - b. Ford engines may use up to 6200 RPM limit maximum.
    - c. Chevy/GM engines may use up to 6200 RPM limit maximum.
  2. **Ignition box must be out of reach of driver or covered with LOORRS approved fixed panel.**

## **PTR-18 ELECTRICAL ACCESSORIES**

- A. At the request of television, certain vehicles may compete with telemetry systems, as so installed by the series production television network requesting such information.
- B. Vehicle digital dashes, data recording devices and/or any other form of measurement, sensors or recording of any kind or nature is permitted only for the following:
  1. Engine Related items - engine RPM, water temperature, engine oil temperature, engine oil pressure, fuel pressure, voltage, lambda O2 (Oxygen Sensors), exhaust gas temperature, intake manifold vacuum/pressure (the same sensor may be used in intake or crank case), water pressure, power steering pump pressure, power steering oil temperature
  2. Transmission Related items - automatic transmission temp, Transmission main pump PSI. Sensors may not be directly connected to the transmission and must use a minimum of 12 inch soft line type hose to eliminate any direct connection to the transmission of any wiring. Electronic gear indicators for manual transmissions only in Pro 2 or Pro 4 may be used only with a complete stand-alone wire loom and may not be connected to the data collection or engine management system in any way. The electronic gear indicator provides the driver with a numeric indicator of what gear the transmission is in at any given time. Any systems intended to be used for this purpose must be approved by LOORRS prior to use and must be able to function 100% when removed from the vehicle by providing nothing more than a 12 volt power and ground to the unit. Electronic gear indicator may use a sensor connected to the transmission gear shifter or to the linkage directly on the transmission.
  3. Other Drive Train Related Items – Transfer case oil temperature, Transfer case oil pressure, gear oil temperature. Sensors may not be directly connected to the transfer case or gear case and must use a minimum of 12 inch soft line type hose to eliminate any direct connection to the transfer case or gear case of any wiring.
- C. No other sensors, measurement, GPS, track mapping, lap timing device or recording device of any kind is permitted at any time during the entire LOORRS event weekend.
- D. Any configuration of data measurement or recording must be completely open and available for LOORRS inspection at any time during a LOORRS event weekend.
- E. The following Digital dash units are permitted
  1. Motec – any model
  2. RacePack – any model

3. AIM – any model
- F. No traction control devices allowed. This includes but is not limited to speed sensors, linear transducers, drive shaft RPM, steering position, etc.
- G. No wireless devices in or on the vehicle are permitted.
- H. No data transfer is allowed to or from vehicle when in motion.

### **PTR-19 ENGINE & RACE VEHICLE ELECTRICAL SYSTEMS**

- A. All ignition systems must be approved by LOORRS.
- B. No computerized systems are permitted unless LOORRS approved.
- C. Any make or brand of spark plug may be used.
- D. All vehicles must have a working alternator/generator system.
- E. All vehicles must have a self-starter in working condition and must be capable of starting on their own power.
- F. All electrical switches must be located on the dash panel.
- G. All vehicles must have a master on/off switch wired to the battery in a manner that will cut off all electrical power and the engine.
- H. Master switch must be labeled as such, have a red circle around it, be located on the left hand side of the dash panel, and must be accessible from the outside of the race vehicle. Red circle must be at least 1 inch wide.

### **PTR-20 ENGINE COOLING SYSTEMS**

- A. Installation, location, and type of electrical cooling fan must be acceptable to LOORRS.
- B. No icing refrigerant chemicals may be used in or near the engine compartment or in any place on the truck.
- C. Electrical engine cooling fans are optional.
- D. **Pro Lite:**
  1. 1 radiator of any size may be used.
  2. Radiator may be placed in front or rear of vehicle.

### **PTR-21 ENGINE EXHAUST SYSTEMS**

- A. Exhaust mufflers are required on all exhaust systems.
- B. Muffler must meet a maximum decibel of 100 as measured 50 feet from track side.
- C. Exhaust pipes must be attached to headers in a secure manner.
- D. Exhaust pipes must extend past driver compartment to the outer edge of the truck and to the rear of the driver.
- E. All exhaust must discharge downward or outward to either side of vehicle.
- F. Exhaust heat shields are permitted.
- G. Exhaust pipes that enter the cab of the truck must have a protective heat shield.
- H. V8 Spec engines :
  1. Headers must be made from 1 ¼ inch primary tubing with a simple formed canister style collector (not merged **and may not have internal dividers, cone, finger of any form inside or any other flow control / modification method. No change in diameter of tube from where 4 tubes join to muffler**). 1 5/8 inch primary tubing may be used in the first 10 inches as measured from the exhaust flange.

### **PTR-22 CARBURETOR**

- A. No turbo, nitrous, or superchargers permitted.
- B. All vehicles must use a LOORRS approved float bowl vent tube check valve to limit fuel leakage or escape when the vehicle is upside down.
- C. **Pro 4 & Pro 2:**
  1. 1 four-barrel carburetor permitted.
- D. **Pro Lite:**
  1. 4 cylinder engines:
    - a. All trucks will run a maximum of 2 Weber side draft or downdraft carburetors.

- b. All trucks using individual runner intake manifolds will have a maximum carburetor venturi size of 48 mm.
  - c. All trucks using anything other than individual runner intake manifolds, such as plenums or balance pipes, will have a maximum carburetor venturi size of 42 mm.
  - d. No modifications to throttle shaft, throttle plate, or venturi.
2. V8 Spec engines:
- a. A single 650 Holley 80541-1 650 CFM is mandated.
  - b. Adjustments to maintain performance levels or tailor the metering system are permitted.
  - c. Adjustments which are not perceived as modifications are:- Idle speed, idle mixture, power valve, jets, air bleeds and float level.
  - d. Replacement float bowl of original design with fuel sight glass window may be used.
  - e. No other modifications are allowed.
  - f. A single 1 inch spacer that must have 4 holes is allowed. Tapering of holes is permitted.

### **PTR-23 CARBURETOR RESTRICTOR PLATES**

- A. No devices between the carburetor and the intake manifold designed to increase or redirect airflow will be allowed.
- B. Trucks must use open plenum or straight bore design spacer with standard design gaskets only.

### **PTR-24 AIR AND INTAKE CLEANERS**

- A. Intake air or filtered air cannot be blended with alcohols, ether, or other oxygenates, nor blended with aniline or its derivatives, nitrous compounds, or any other nitrogen containing compounds.

### **PTR-25 FUEL INJECTION**

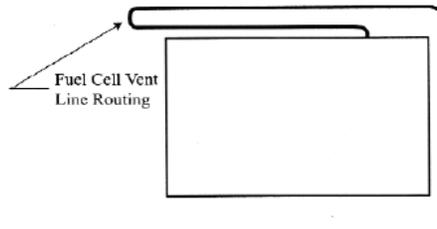
- A. Fuel injection is not allowed.

### **PTR-26 FUEL CELL**

- A. All fuel cells must be LOORRS approved.
- B. LOORRS will reject any previously approved fuel cell, which appears to be defective, damaged, or not in proper condition.
- C. No pressure systems will be allowed. Any concealed or not concealed pressure type containers, feed lines or actuating mechanisms will not be permitted, even if inoperable.
- D. Icing, Freon type chemicals, or refrigerants may not be used in or near the fuel system.
- E. Electric fuel pumps must have oil pressure shut-off. Loss of oil pressure will automatically shut off fuel pump. A momentary on bypass may be installed. The momentary on by pass may be like a push button, 2-pole starter button, which can be mounted in a position best suited to the driver. The oil pressure-sending unit is either AC Delco part number 25036938, Niehoff part number OP23481, Wells part number PS119 or PS122, Napa part number OP6624 or OP6616, Standard ignition Blue Streak part number PS126 or Niehoff Borg Warner part number OP23311. The sending unit receives power from the ground.
- F. Digital dash or electrical device such as Performance Engineering's Fuel Pump Safety Switch may replace mandated mechanical fuel pressure switch for operation of electric fuel pump, provided operation can be verified by the tech team to only allow power to fuel pump for a maximum of 4 seconds when engine is not running.
- G. No material other than standard foam as provided by the fuel cell manufacturer is permitted.
- H. Rear mounted fuel cell must have a chassis or body cross member of substance between the fuel cell and driver and be protected from ground obstacles.
- I. Fuel cells must be dated by manufacturer. Fuel cells will become obsolete five (5) years after date of manufacture and must be replaced.
- J. All fuel cell fillers and vents must have check valves installed.
- K. Fuel pressure regulator vent line must do one of the following:
  - 1. Connect to intake manifold vacuum.
  - 2. Connect to air cleaner so that any fuel enters engine.
  - 3. Connect to fuel cell.
  - 4. Have vent hose routed past the rear axle.

- L. A splash shield must be in place to direct any spill away from the driver, motor, and motor exhaust. A body panel is considered sufficient splash shield.
- M. Fuel cell cannot be vented into the driver's compartment of any truck.
- N. The fuel cell must be located behind the cab. The fuel cell must have a 1/8 inch skid plate minimum covering the complete bottom, sides and rear of the cell. All mountings must be LOORRS approved. Fuel cell cannot be mounted to skid plate. Cell must be mounted to chassis. See diagram on page 34.
- O. Fuel cell must have two 2 1/2 inch straps, evenly spaced on top of the cell with a minimum of two 5/16 inch bolts on each end of strap. Fuel cell must also have two 2 1/2 inch straps or 1 1/2 inch tubing underneath cell. Alternative mounting methods may be approved at the discretion of the LOORRS Technical Director. See diagram.

**FUEL VENT ROUTING**



**ALL FUEL CELL LINES AND VENTS MUST COME OUT OF THE TOP OF THE FUEL CELL (PICTURED).**

**PTR-27 FUEL**

- A. All cars shall use fuel, as defined in the following graph, unless a specific exemption is made in the provisions for a specific category/class.
- B. Permitted Fuel: Permitted fuel is herein defined as gasoline meeting specified dielectric constant standards and not contain any prohibited substance in excess of stated limits. Gasoline is a mixture of refined hydrocarbons. Gasoline is an electrical insulator and its relative effectiveness as an insulator is represented by its dielectric constant (D.C.). The D.C. of gasoline will be measured by an LOORRS FTK01 Fuel Check Meter. The 0 (zero) calibration of the LOORRS Fuel Check Meter is set against reagent or laboratory grade cyclohexane. Gasoline may be tested and certified at LOORRS events by the determination of the dielectric constant using the LOORRS Fuel Check meter and through the application of various chemical analyses. If a competitor's fuel is not compliant with the fuel standards below, LOORRS shall take appropriate action. Penalties for use of non-compliant fuel can include fine, and/or reduction of points, and/or suspension.
- C. Cooling: The cooling of fuel is not permitted during competition.  
 Fuel Samples: LOORRS has the right to sample a Competitor's fuel at any time during the Event. Samples will be impounded for observation and or testing by LOORRS and/or any outside laboratories at LOORRS discretion. If the services of an outside laboratory were used and the fuel was found to be non-compliant by the laboratory, the racer will be assessed the cost of the fuel transportation to the laboratory and laboratory fees.
- D. Restricted Substances: The fuel must not be blended with other alcohols, ethers, or oxygenates, and it must not be blended with aniline or its derivatives, nitro paraffins or other nitrogen containing compounds. Nitrous oxide is forbidden.

Fuel Standards		
Classes	Type	DC Max
All classes except Karts	Gasoline without added oil	3
Karts	Sunoco 260 GTX	1.5

The use of any substance in the following table in excess of the stated limit is prohibited either in fuel or otherwise introduced into the engine.

Chemical Compounds Prohibited or Restricted in LOORRS Race Fuels		
Compounds	Examples	Maximum Weight Or Percentage by Weight Allowed
Total Aldehydes	Acetaldehyde, Acrolein, Formaldehyde	1.00%
Benzene		5.60%
3,3-dimethyl-1 butene		0.05%
Total ethers	1,4 Dioxane, ETBE, Furan, MTBE, Tetrahydrofuran	0.00%
Total Dienes (Diolefins)	1,d Butadiene, Isoprene	1.00%
Ethanol		0.00%
Total Epoxides	Ethylene oxide, Propylene oxide	0.00%
Total Nitrogen Compounds	Nitromethane, Nitroethane. Nitropropane, and all aromatic nitrogen compounds such as Nitrobenzene, Ammonia, Amines and their salts, Aniline, Hydrazine, Pyridine, Pyrrole, Benzidine	0.00%

- E. Specified Fuel: LOORRS reserves the right to have all cars use the same blend of fuel in a given event or series class. When this right is exercised, it will be stated in the LOORRS rule book and/or in other LOORRS bulletins. In all such cases, fuel used for practice, qualifying and the race itself must be the specified fuel blend as produced by the manufacturer of the fuel. At an event where a specified fuel has been named, LOORRS will use a sample of the actual fuel provided at the event by the specified fuel supplier to determine whether the fuel used by a competitor conforms to the specifications of the specified fuel blend. The addition of chemicals additives or fuels to the specified fuel is strictly forbidden.
- F. If LOORRS officials suspects maskers in fuel, chemical testing will be conducted at possible expense to the competitor.
- G. Penalties for use of hazardous chemicals will be severe including fine, and/or reduction of points, and/or suspension.

#### **PTR-28 OIL COOLERS**

- A. All oil coolers and their installation must be approved by LOORRS.
- B. Engine and transmission oil to air or oil to water heat exchangers are permitted.
- C. Cooling fans are permitted. No coolers are allowed in the driver's compartment.

#### **PTR-29 CLUTCH**

- A. Maximum of 3 disk clutches may be used.

#### **PTR-30 TRANSMISSION**

- A. Transmissions must be standard production, catalogued, and available through regular dealer channels.
- B. All forward and reverse gears must be in working order.
- C. Components must be installed in stock order: engine to transmission to differential via a drive shaft. Engine must be located in front of truck.
- D. All transmissions must be approved by LOORRS officials.

- E. Motor crankshaft must be connected to transmission input shaft via a conventional clutch assembly or vane type torque converter.
- F. Automatic transmissions must operate through a conventional torque converter.
- G. Manual shifting of all transmissions is mandatory, unless other method is needed to accommodate handicap condition of driver. LOORRS officials must approve all non-manual shifting procedures.

H. **Pro 4 & Pro 2:**

- 1. Auxiliary under drive or over drive units may be shifted electronically, but only by manually operated switch.
- 2. Sequential shift transmissions are allowed.
- 3. No paddle shifters, solenoids, wires to transmission, bell housing, shifter, or linkage. No interfaces between ECU and transmission will be allowed.
- 4. No shift interrupt will be allowed.
- 5. Temperature gauge will be mechanical on transmission.
- 6. No electrical gauges allowed on transmission.

I. **Pro Lite:**

- 1. 4 cylinder engines:
  - a. Manual transmission may have no more than 5 forward speeds.
  - b. Automatic transmissions may have no more than 4 forward speeds.
  - c. Manual transmissions must have neutral between each gear. Shifting must pass through neutral each time a gear is advanced or decreased.
  - d. Sequential shifting is illegal.
  - e. Remote accessory drives are not allowed with the exception of the alternator off the rear of the transmission.
  - f. No electrical gauges allowed on transmission.
- 2. V8 spec engines::
  - a. GM turbo 400 transmission with standard gearing (2:48, 1:48, 1:0) will be the only transmission allowed.
  - b. Aftermarket short extension housing is allowed.
  - c. Use of aftermarket SFI transmission case allowed.
  - d. Transmission must operate through a conventional torque converter.
  - e. Manual shifting of transmission is mandatory unless other method need be employed for handicap condition of the driver.
  - f. Remote accessory drives are not allowed.
  - g. Torque converter must be steel with a minimum of 8 inch diameter. Two piece take apart torque converter is allowed.
  - h. All transmission hubs, drums, planetaries, shafts and carriers must be of magnetic metal based materials.

**PTR-31 DRIVE PARTS**

- A. Engine to transmission adapter plate can be a maximum of 1 ½ inch thick.
- B. A combination of multiple adapter plates can be used if it does not exceed 1 ½ inch thickness.

**PTR-32 PROTECTIVE SHIELDS**

- A. Location of all shields must be approved by LOORRS.
- B. Transmission must be covered completely by a protective shield placed to protect the driver from exploding parts from beginning of transmission case/bell housing to 4 inches before a bolt on tail housing. All shields must be approved by LOORRS.
- C. Shields must be constructed of a metal covering with a thickness of ¼ inch aluminum or 1/8 inch steel or be SFI approved.
- D. If you have an SFI approved transmission no shield will be required.

### **PTR-33 DIP STICKS**

- A. All dipsticks must be secured in dipstick tube with a positive locking or secured method.

### **PTR-34 DRIVE SHAFT**

- A. One 360-degree solid steel bracket, no less than 2 inches wide and ¼ inch thick or 1 inch tubing with a minimum thickness of .095 inches must be placed around each drive shaft.
- B. Drive shaft must be painted white and have vehicle number on it.

### **PTR-35 REAR AXLE/DIFFERENTIAL**

- A. Quick change rear ends are not allowed.
- B. Only steel axles are permitted.
- C. Independent rear suspension is not allowed.
- D. Must be in stock location as approved by LOORRS officials.
- E. Rear differential must be spool type only and approved by LOORRS officials.
- F. Rear differential must have a minimum of 1 ½ inch inspection bung or plate placed in such a manner that LOORRS officials can see and identify the spool. If inspection area does not exist, crew chief will remove differential for LOORRS technical inspection.
- G. **Must use a Hypoid ring and pinion gear set based off of a conventional automotive design.**
- H. **Pro Lite:** Must use conventional Ford style 9 inch third member assembly.

### **PTR-36 TIRES**

#### **A. Pro 4 & Pro 2:**

1. Maximum tire size is 35" x 12.50" or the metric equivalent.
2. DOT or Project tires are allowed.
3. Inner liners are allowed.
4. Tire soaking is not permitted.
5. Minimum air pressure on the starting line is 13 psi.
6. Equipment used to adjust air pressure during the race is not allowed.
7. Maximum tread width is 10.2
8. Maximum tire diameter is 35".
9. All tires will be measured on a 17" diameter x 9" maximum width race ready wheel with tire pressure at 13 psi.
10. Tires will be measured using calipers as well as a box provided by the LOORRS technical staff. See diagram on page 35. All tires, to include the spare, must fit through box at all times when race vehicles are competing on the track to include pre/post qualifying and pre/post-race. This applies to new, used or second hand tires.
11. Any incoming manufacturer wishing to run their product in this series must submit a tire for inspection and use by LOORRS technical staff prior to the start of any race season and or, prior to any vehicle entering the track on any product that has not been previously submitted and approved, or at any time upon request from the Tech Director or Competition Director.
12. Any manufacturer wishing to run their product in this series must make available the same tire they offer to their sponsored teams to be sold to any team that wants to buy tires from them.
  - a. Tires must be available to be sold to teams that wish to buy tires at any given time. Tires must not exceed \$500.00 each in cost when sold to any team.

#### **B. Pro Lite:**

1. Tires must be DOT only.
  - a. DOT tire classes are restricted to tires that are intended for highway use and are available to the general public through standard dealers. Internet or one store only tires are NOT acceptable. **All tires must be designed, built, and sold for use on passenger car or pickup truck ONLY.**
  - b. Tires need to be part of a multiple line of tire sizes within a currently sold design. A tire used in the race should be identical in construction: rubber compound, **durometer, construction**, sidewall

with identical tread design as other sizes not used in the race (Example – if the tire used is a 32” tire, other tires from the manufacturer in sizes like 31” and 33” will be the same as the tires raced upon).

- c. The tire must not exceed \$275.00 in cost.
2. ~~The only allowed tire sizes are 265-75-16”, as indicated on the tire, or 31x10.5-15” as indicated on the tire. Maximum tire size is 32” x 11.50” or the metric equivalent, as indicated on the tire.~~
3. Tire circumference may not exceed 101”.
4. Tires will be measured without load of vehicle, from the widest and highest point, inflated to 13 psi, and mounted on a race ready wheel.
5. Durometer testing will be done and shall not be below 58 points. Tires may be Durometer tested with race ready conditions prior to any competition on the track.
6. No inner liner allowed.
7. Each tire manufacturer must submit for approval from LOORRS a list of the tires they wish to use in competition no less than 3 weeks prior to any event they wish to compete with said tire. This notice should be sent by email to the Technical director at ([gary@lucasoiloffroad.com](mailto:gary@lucasoiloffroad.com)) and the Competition director at ([gregf@lucasoiloffroad.com](mailto:gregf@lucasoiloffroad.com)) and is not considered received if no confirmation of receipt is sent by the Technical director or Competition director of LOORRS. It is the responsibility of the tire manufacturer to submit the tire use request list before expecting to use any tire make or model or size at any LOORRS event. Once any tire make / model / size has been submitted and approved for use the manufacturer may consider that approved for the rest of the race season and is not required to submit again unless a change is made in construction or compound of the tire in question. Any change to construction, compound, or tread design will be considered a “new” tire and must be re-submitted and follow all tire guidelines for the class.
8. LOORRS at its sole discretion may purchase tire(s) from a retail outlet of its choosing at any given time to be brought to the track to be used in the inspection process. Any cost associated with LOORRS obtaining the required tire(s) for comparison to the tire(s) brought to the track will be billed back to the participating manufacturer at the same cost incurred by LOORRS in the process. LOORRS officials may at their sole discretion dis-assemble or cut the tire(s) apart for testing purposes as part of the testing process. At the end of the inspection process time the purchased tire(s) will be returned to the manufacturer by LOORRS tech officials.

#### **PTR-37 WHEELS**

- A. All wheels must be in good repair and free from cracks or defects that could cause wheel failure.
- B. Lug nut must be open ended, and of proper size.
- C. Studs must extend a minimum of 2 full threads past the end of the lugnut.
- D. Wheel studs may be no closer than ½ inch from the outer most face of the bead lock ring opening. Stud ends must be rounded.
- E. All bead locks must have recessed bolts only that do not protrude past the face of the ring.
- F. Foam mud plugs are the only wheel cover allowed. Snap on, clip-on, or bolt on covers will not be permitted.
- G. **Pro 4 & Pro 2:**
  1. No race wheel may exceed a 9” width.
  2. Minimum backspacing for all wheels will be 3.75”.
- H. **Pro Lite:**
  1. ~~Maximum wheel diameter will be 16”~~

#### **PTR-38 RADIOS**

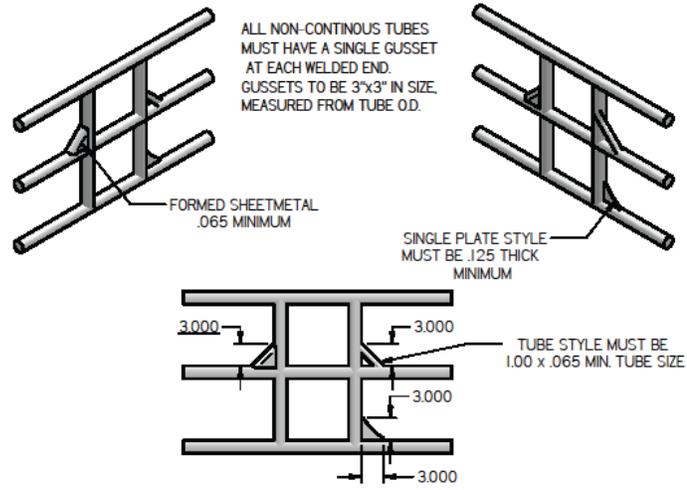
- A. Radios must be of two-way voice communication type only. Each race team is responsible for meeting FCC requirements.
- B. Radio communication between drivers is not permitted.
- C. All radio frequencies must be approved and reported to LOORRS prior to their use.
- D. All race vehicle radio communication systems must be approved by LOORRS.
- E. See Section 5 of LOORRS General Rules for spotter requirements.
- F. Spotters are required for all race teams.
- G. Any 2 way radios used at a LOORRS event may not exceed 6 watts output.

- H. Each competitor race vehicle must use at all times while on the track an override race receiver to listen to race control that overrides any communication from the spotter when race control is transmitting to the vehicles. The receiver device must be approved by LOORRS and meet LOORRS standards at all times. Competitors will not be allowed on the track at any time without the race receiver installed and functional.

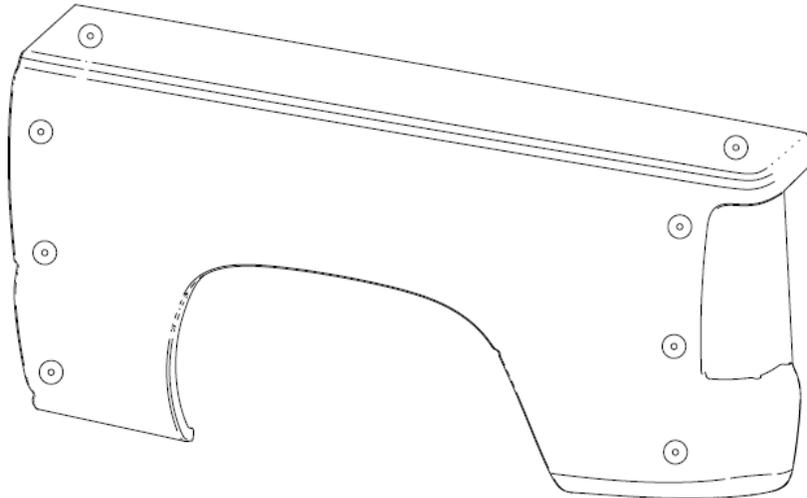
**PTR-39 TRANSPONDERS/TIMING**

- A. Remote score timing devices will not be permitted by teams, owners, or anyone associated with an entry, unless approved by LOORRS.
- B. All teams are required to purchase remote timing transponders. Transponders can only be purchased through LOORRS and numbers must be recorded with LOORRS officials.
- C. Drivers are responsible for the charging and installation of all transponders. Any entry without a properly charged, properly installed, functioning transponder may not be scored and may be subject to further penalty.
- D. Transponders must be placed from front face of the front bumper to transponder center line 115 inches back on the driver's side of the truck.

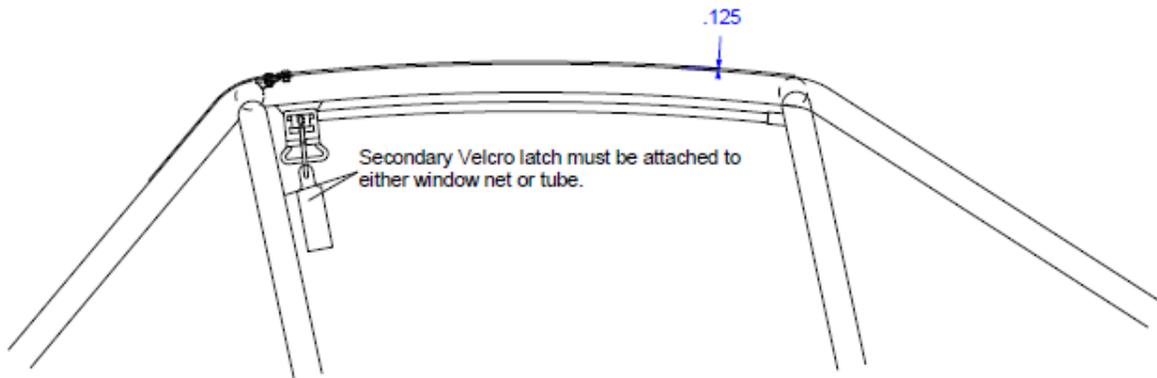
### CORNER GUSSETS



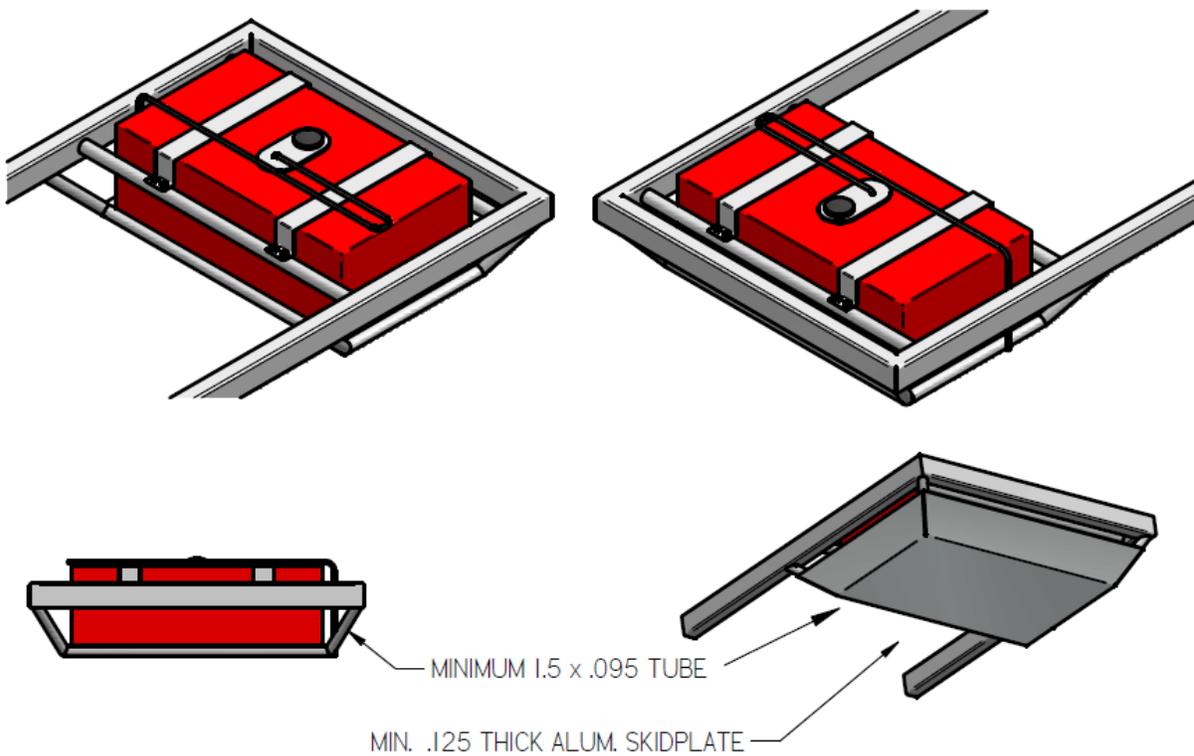
### TRUCK BEDSIDE PANEL



### WINDOW NET

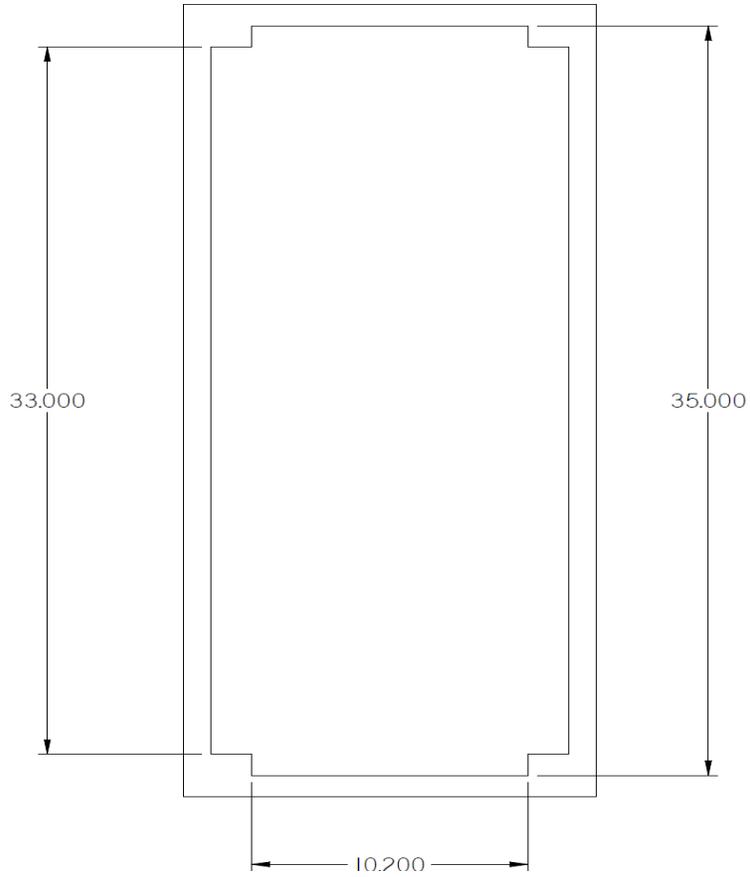


### TRUCK FUEL CELL DIAGRAM

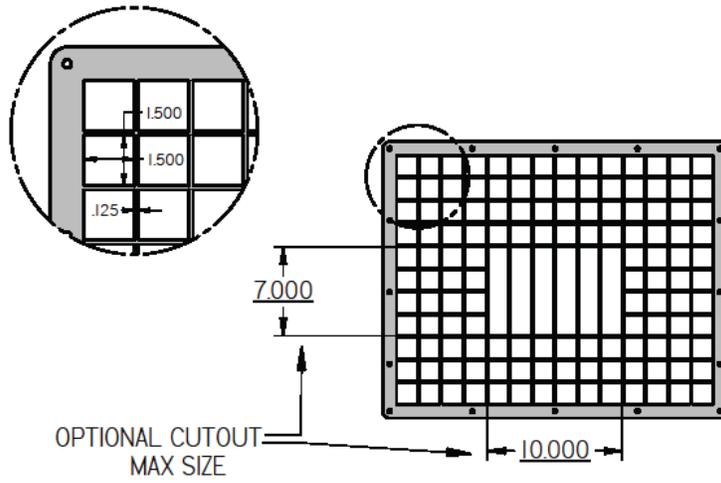


**TRUCK MUD FLAPS**

**PRO 2/4 TIRE BOX**



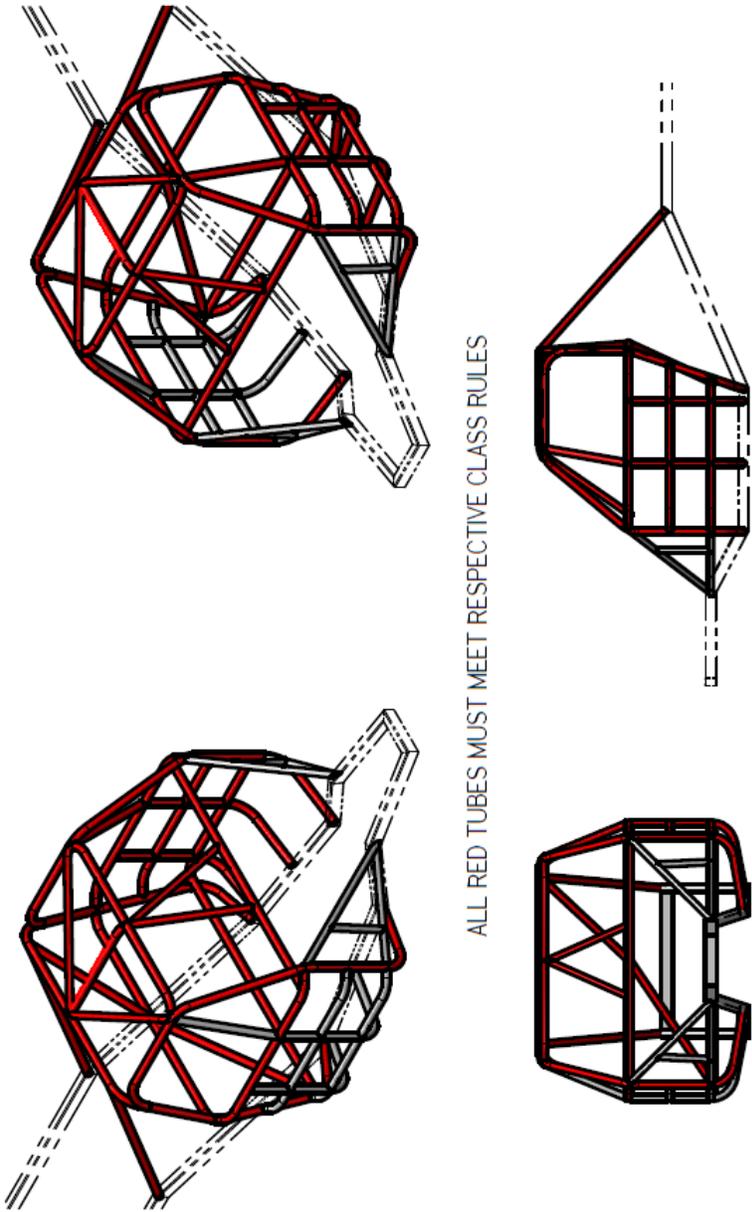
**TRUCK & BUGGY SCREENS**



**GAS PEDAL**

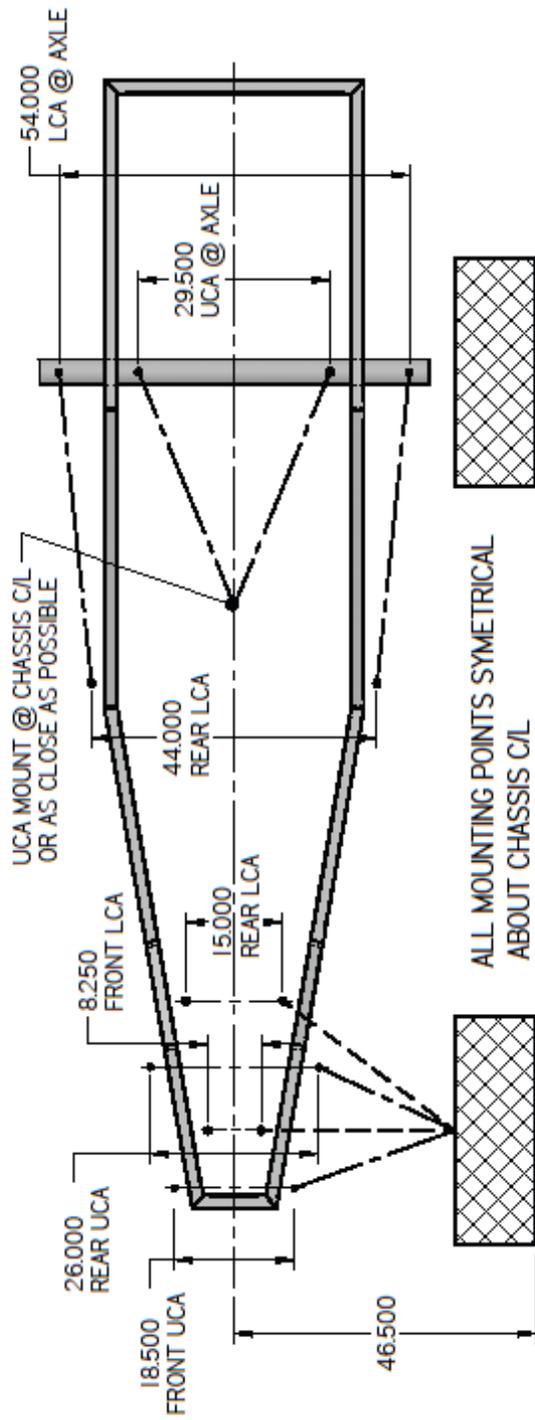


ROLL CAGE CONSTRUCTION

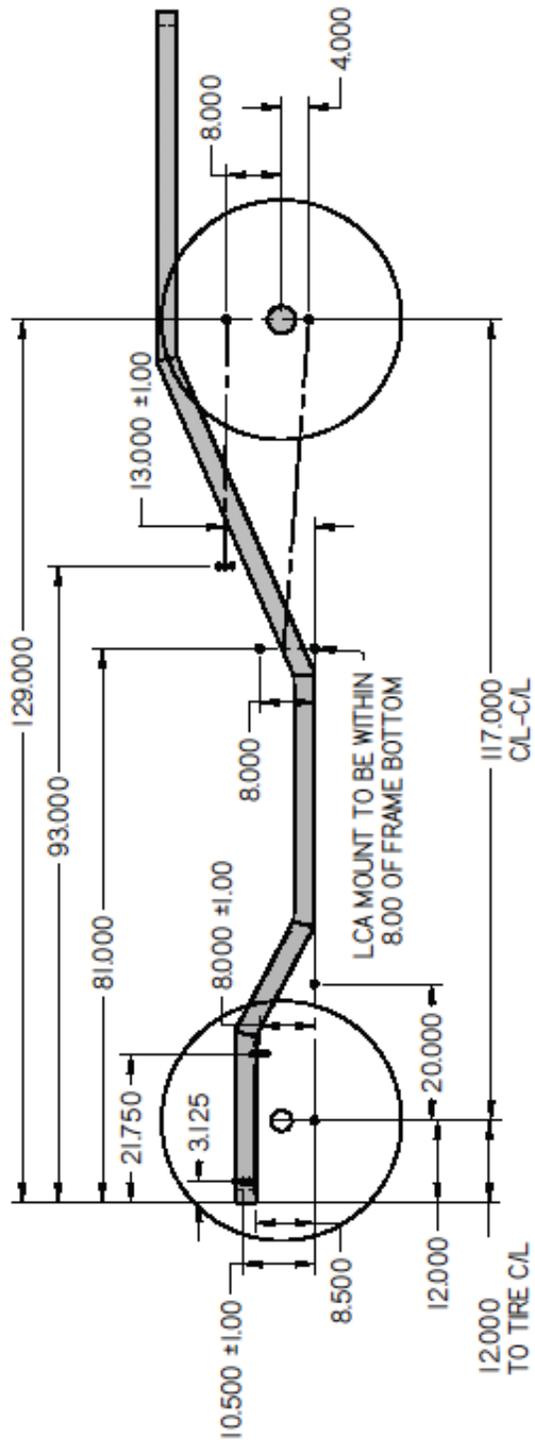


ALL RED TUBES MUST MEET RESPECTIVE CLASS RULES

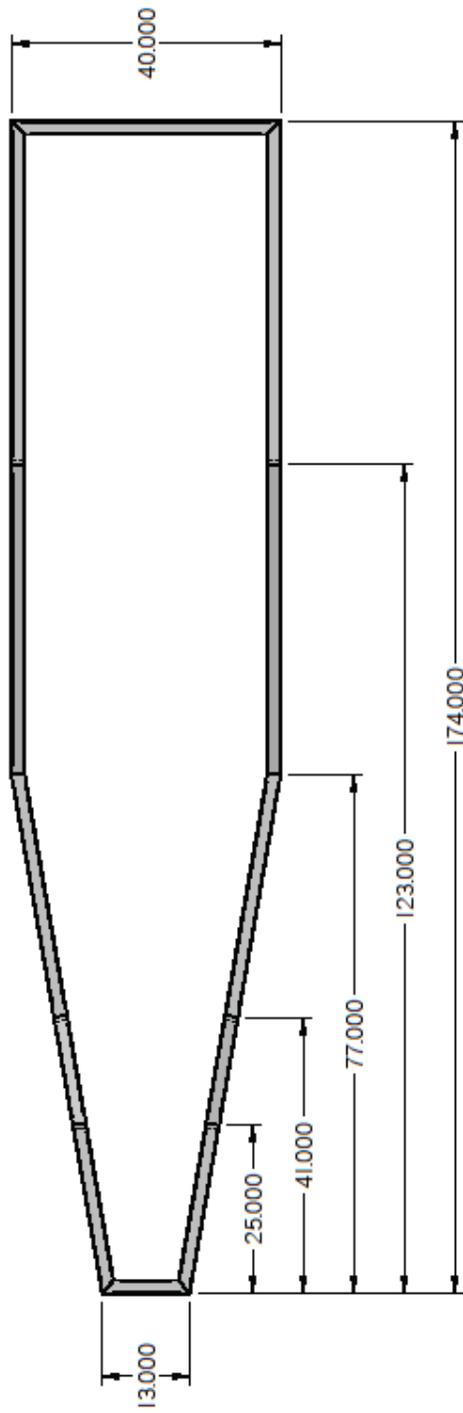
PRO 2



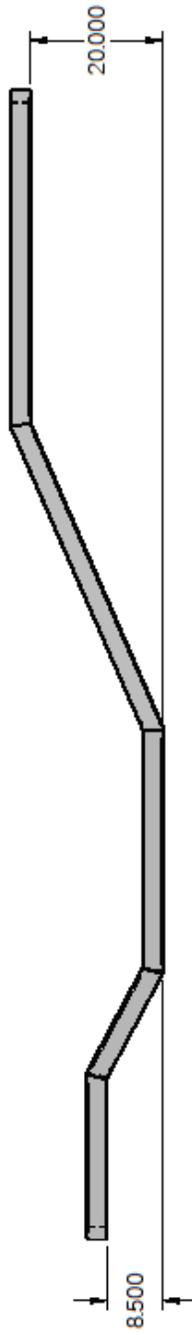
PRO 2



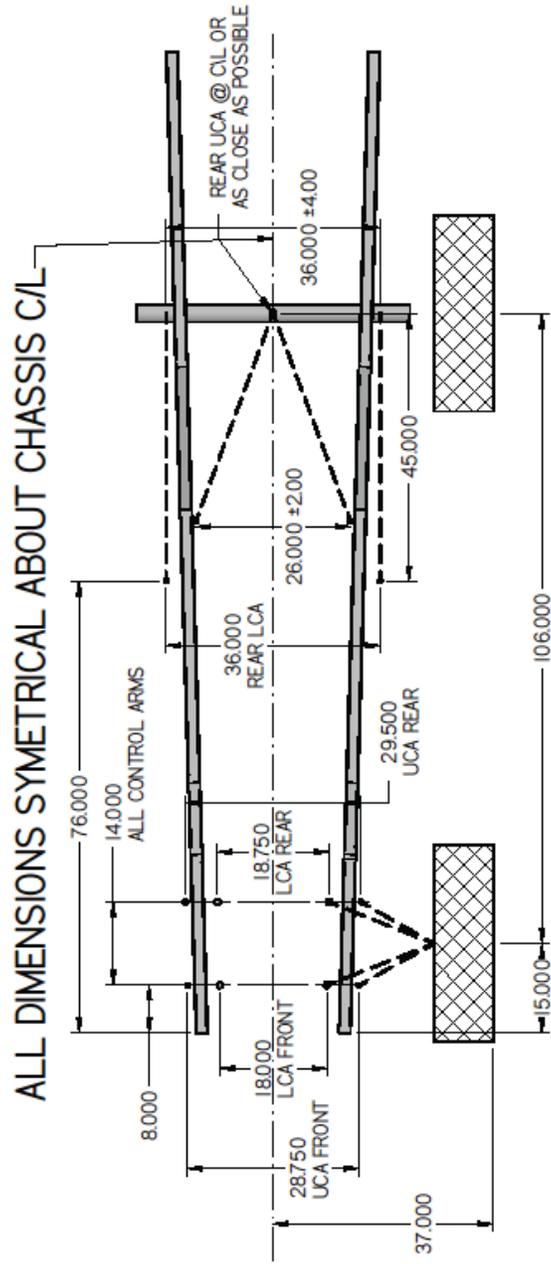
PRO 2



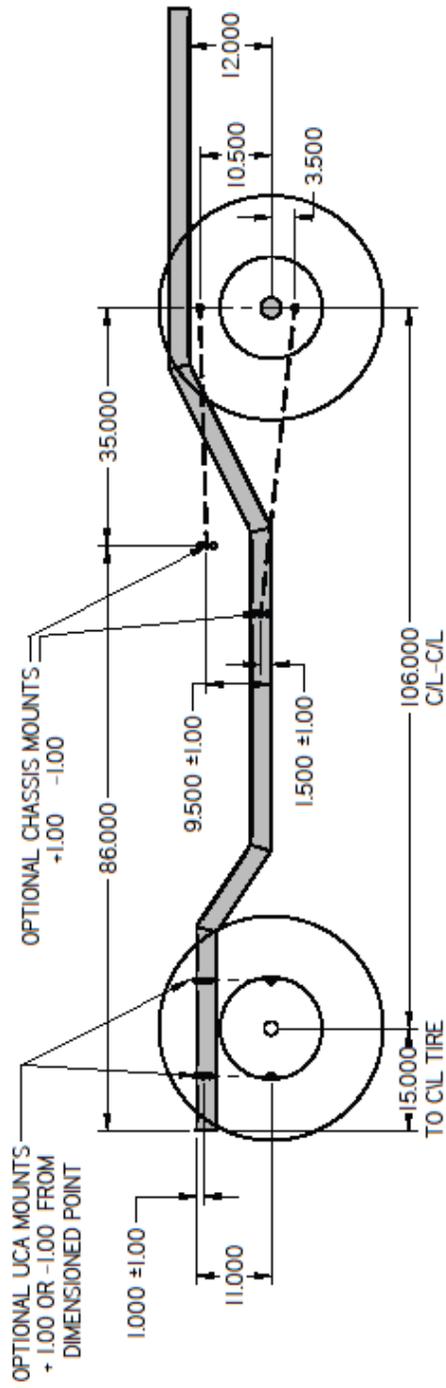
PRO 2



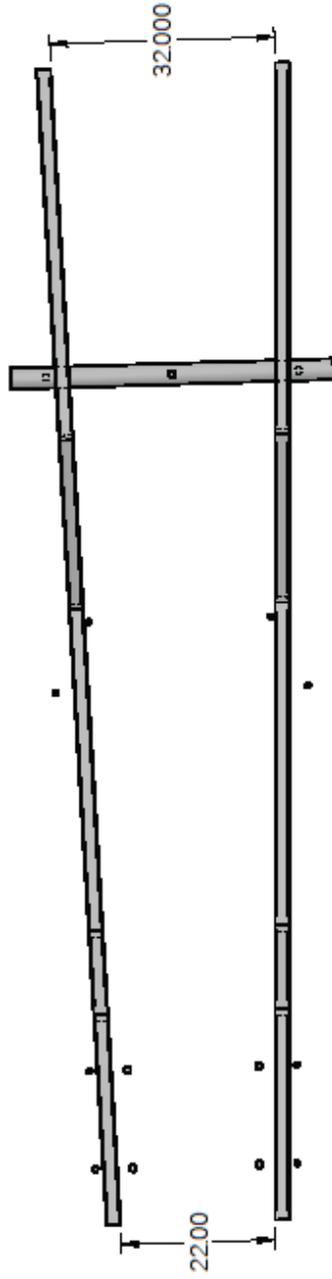
PRO LITE



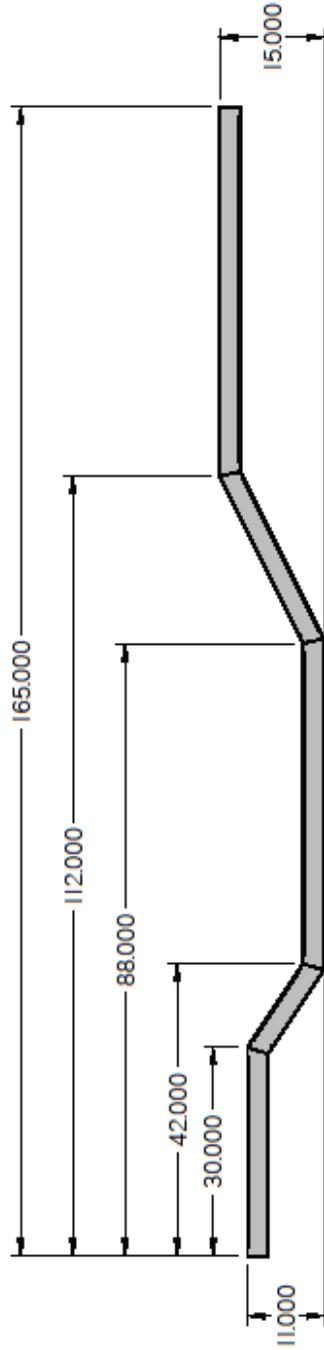
PRO LITE



PRO LITE



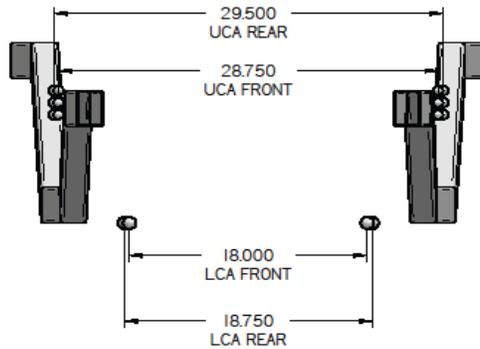
PRO LITE



FRAME MATERIAL= 2"x3"x .120 RECT. TUBE ONLY  
FRAME TO MAINTAIN 2"x3"x.120 PROFILE ENTIRE LENGTH SHOWN

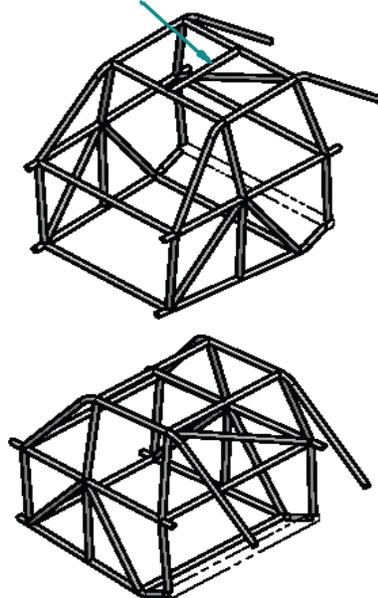
## PRO LITE

### FRONT CONTROL ARMS



### BUGGY-TOP VIEW

THIS TUBE REQUIRED FOR ROOFS WIDER THAN 34"

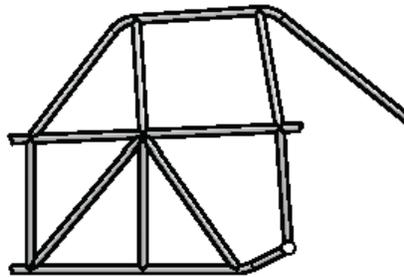
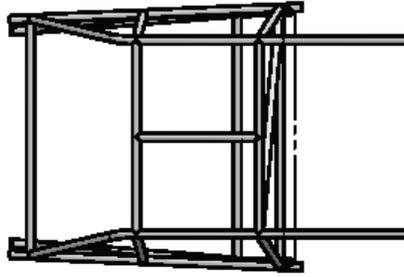


ALL TUBES SHOWN ARE REQUIRED AND TO BE 1.5 x .095

\*Suggested design for newly constructed buggies. Final design is up to individual builder, but all bars within the driver's compartment must be 1.5 inch by .095 round **4130 chromoly or ASTM 1018/1026 CDS/DOM tubing steel-seamless-or-DOM tubing**. All intersections must be gusseted. All designs are subject to LOORRS approval.

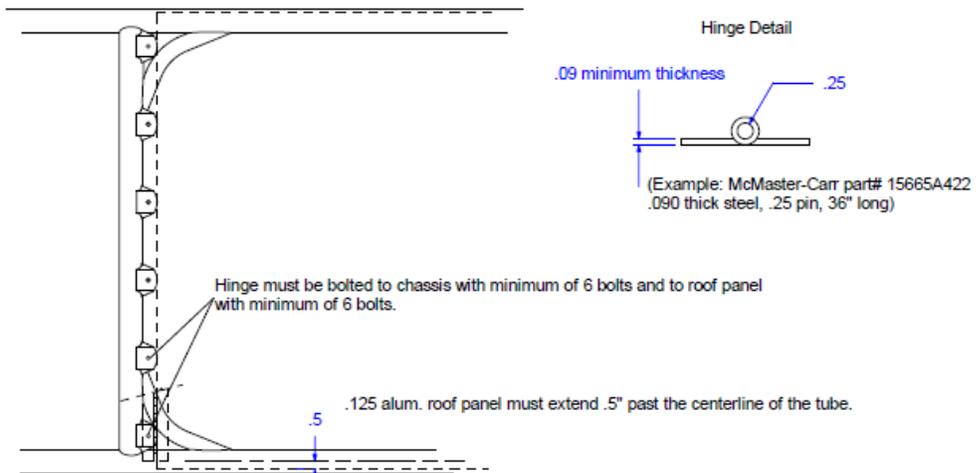
\*Buggies constructed before 2002 must have a minimum of two 1.5 inch by .095 bars added to each side of the existing frame in such a way to protect the driver from side impact. All two-seat vehicles must have 1.5 inch by .095 tubing added to the center roof. All intersections within the driver's compartment must be gusseted. All designs are subject to LOORRS approval.

### BUGGY-TOP VIEW



ALL TUBES SHOWN ARE REQUIRED  
AND TO BE 1.5 x .095

### BUGGY ROOF PANEL



## LUCAS OIL OFF ROAD RACING SERIES PRO BUGGY RULES

-A 4 wheel *rear wheel drive* vehicle utilizing many different engine combinations with unlimited suspension chassis designs. Engines are limited to cc limits from 1650 to 2000 depending on design and manufacturer with the exception of the GM Ecotec 2.4 Liter V.V.T.LE5 engine.

### PB-1 MARKING AND IDENTIFICATION

- A. All vehicle numbering is subject to approval and is assigned by LOORRS.
- B. LOORRS officials may require a competitor to use a different number to avoid confusion or duplication at an event.
- C. In the event that a vehicle number is not visible from the timing and scoring area, the competitor will not be scored. It is the competitor's responsibility to make sure that the number is visible during all race conditions.
- D. Advertising on race vehicles must be in good taste.
- E. Foil or reflective numbers are not permitted.
- F. All LOORRS vehicles are required to have LOORRS stickers on each side of the front of the door area, 4 inches down from the window opening.
- G. LOORRS may require the use of specific sponsor decals.
- H. Team vehicles with the same paint and colors must have distinguishing markings of some kind.
- I. All numbers must be block style only with a minimum space of 1 inch between them.
- J. Numbers must be applied side by side. No slanted numbers.

### PB-2 NUMBERS

- A. Pro Buggy numbers are 1-99.
- B. All numbers must be block style only.
- C. Numbers must be side by side. No outlines, stacking or shadows allowed. Italic slant of 25 degrees or less is allowed.
- D. Fonts must be chosen from one the below approved styles only:
  - 1. Impact
  - 2. Helvetica Black
  - 3. Mechanical Bold
- E. Numbers must be located in the following positions:
  - 1. One number on each side, high and close to the back of roof. Numbers must be solid black with a minimum height of 10 inches on a 12 inch by 14 inch white number plate.
  - 2. The back of the vehicle facing the rear. Numbers must be solid black with a minimum height of 8 inches on a 10 inch by 12 inch white number plate.
  - 3. Windshield number and division must be on the upper driver's side corner of the windshield area and must be solid black on a white surface with a minimum height of 4 inches.

### PB-3 ROLL BARS

- A. All tubing, welds, gussets, and roll cage construction must be approved by LOORRS.
- B. Round steel seamless or D.O.M. tubing is compulsory for the basic roll cage construction and must be LOORRS approved. Aluminum and/or other composite soft metals are not allowed.
- C. Minimum tubing diameter and thickness for all buggies is 1 ½ inch by .095.
- D. Roll bar construction must be welded.
- E. Gussets are required on all intersections in driving compartments within 3 inches of intersection.
- F. All plate gussets must be of the same material and thickness as the roll cage, measuring 3 inches by 3 inches.
- G. Tube gussets and wrap gussets must be a minimum of .065 x 3 inches.
- H. All race vehicles must have 3 door bars per side.
- I. All roll bars that may come in contact with driver must be covered with high density flame proof roll bar padding certified to SFI Spec 45.1 or better.
- J. There must be a minimum of 2 inches of clearance between the driver's helmet and the cage.

### PB-4 EXOTIC MATERIALS

- A. No titanium or any other exotic materials or fasteners may be used anywhere in the vehicle with the exception of the following:
  - 1. Pro Buggies may use titanium for engine components.

## **PB-5 MEASUREMENTS**

- A. All cars will be measured with all tires inflated to 13 psi in outer tire at the required ride height of 10 inches.
- B. Maximum track width is 93 inches. Track width measurement will be taken at the widest outer surface of the tire.
- C. The front bumper must be a minimum of 36 inches with rounded ends.

## **PB-6 BODY**

- A. Complete bodies must be attached at the start of competition, practice or any other on track activities. Bodies must be attached in such a fashion as to not create a pointed or sharp extrusion when panels are removed. A loop body mounting construction is mandatory.
- B. Driver's compartment floors must be a minimum of 1/8 inch for all classes. Floor must extend from 4 inches in front of pedals to 4 inches in rear of seat.

## **PB-7 ROOF**

- A. All vehicles must have a roof that is properly attached to the roll cage.
- B. Roof mounting must not interfere with roll bar padding.
- C. Aluminum sheeting with a minimum thickness of 1/8 inch must completely cover the top of the roll cage.
- D. Sheeting must extend 1/2 inch past the center line of tubes on sides.
- E. Sheeting must be attached with a steel hinge in front.
- F. Hinge must be full width of front of cage and must be made of steel with a minimum thickness of .090. See diagram page 47.
- G. Hinge must have a steel pin with a minimum diameter of .250.
- H. Hinge must be attached to cage with a minimum of six 1/4 bolts evenly spaced across the hinge.
- I. Hinge must be attached to sheeting with a minimum of six 1/4 inch bolts.
- J. Mounting tabs must be a minimum of .095 thick.
- K. Positive latching system must be LOORRS approved.

## **PB-8 BUMPERS**

- A. Vehicles must have front and rear bumpers.
- B. Rookie driver rear bumper must be painted or taped yellow.
- C. Use of angle iron on rear bumpers is allowed.

## **PB-9 STEERING COMPONENTS**

- A. LOORRS officials must approve universal joints in steering shaft.
- B. Hydraulic power steering is permitted.
- C. Quick release metal coupling is mandatory and must be approved by LOORRS officials.
- D. All race vehicles are required to have a steering wheel pad.

## **PB-10 SHOCKS**

- A. All vehicles must have at least one working shock on each wheel.
- B. Shocks cannot be adjusted while vehicle is in motion.
- C. Heating or cooling liquids or chemicals in shocks is not permitted.
- D. Shocks may have external bypass tubes and reservoir cans.
- E. Remote mounted shocks are not allowed unless approved by LOORRS officials.
- F. Shocks cannot be linked together in any way. This includes but is not limited to hydraulic, electric, manual, or mechanical links.

## **PB-11 BRAKES & BRAKE COOLING**

- A. Brakes must be operational on all four wheels at all times. All brake operation must be LOORRS approved.
- B. Only disc brakes with steel (magnetic) rotors using standard metal mounting hats are permitted.
- C. Electronic wheel speed sensors or brake actuators will not be permitted.

## **PB-12 WEIGHT**

- A. Minimum weight with driver is 1820 pounds.
- B. Air cooled weight with driver is 1580 pounds.
- C. Driver will be included in race vehicle's minimum weight.
- D. LOORRS officials may request vehicle be cleaned before weighing.
- E. Vehicles can be courtesy weighed prior to competition.
- F. LOORRS officials must approve all weight material.
- G. Added weight must be in block form.
- H. Blocks must weigh no less than 5 pounds each and cannot be made of liquid of any type, pellets, or other granulated weight.
- I. Added weight must be securely bolted in place on the race vehicle.
- J. Dislodged weight cannot be returned to the vehicle for weighing at the end of the race.
- K. All block ballast must be painted white and identified with vehicle number.
- L. Weight can be sealed at the discretion of LOORRS officials.
- M. No weight shifting devices of any kind are allowed. This includes, but is not limited to hydraulic or electronic devices.
- N. All vehicles will weigh in before and/or after competition at the discretion of LOORRS officials. Failure to do so will result in disqualification.
- O. All weight loss on track will result in a \$5.00 per pound fee.

## **PB-13 ENGINE BLOCKS**

- A. Engines are subject to inspection by LOORRS officials at any time.
- B. LOORRS's method of measuring the weight to displacement ratio is the only valid method of cubic P&G testing.
- C. At LOORRS officials' discretion engines will be prepared for mechanical cubic inch certification and measurement.

## **PB-14 ENGINES**

### **Non Ecotec:**

- A. Any automotive engine with production of 5000 or more and available to the public in the United States.
- B. Maximum of 4 valves per cylinder.
- C. Air cooled, 2000 cc maximum
- D. 2 valves per cylinder, 1715 cc maximum, water cooled.
- E. 3 or more valves per cylinder, 1650 cc maximum, water cooled.
- F. Rotary engines are not allowed.
- G. No fuel injection.
- H. No variable timing or cam lift.

### **Ecotec:**

- A. GM Ecotec 2.4 Liter V.V.T.LE5 engine
  - 1. All engines must have LOORRS serial numbered seals applied only by LOORRS authorized engine builders or agents on the following parts:
    - a. Top cam cover
    - b. Intake manifold
    - c. Front engine cover
  - 2. Engine must retain all stock components, configurations and specifications unless permitted by LOORRS officials.
  - 3. All internal components must be in place and be operational at all times (i.e. stock balancer shafts and drive).
- B. Engine Oiling System
  - 1. The use of an Acu-sump style remote oil reservoir system is allowed.
  - 2. Oil pan is open.
- C. Ignition/Fuel Injection System
  - 1. Only a stock GM #17202005 manual cable driven throttle body is permitted. An adaptor plate no thicker than 3/8 inch is allowed for mounting. Plate must be same as existing bore size.
  - 2. Any brand ECU may be used as long as it functions only with the stock GM trigger and pickup

## **PB-15 ELECTRICAL ACCESSORIES**

- A. At the request of television, certain vehicles may compete with telemetry systems, as so installed by the series production television network requesting such information.
- B. Vehicle digital dashes, data recording devices and/or any other form of measurement, sensors or recording of any kind or nature is permitted only for the following:
  - 1. Engine Related items - engine RPM, water temperature, Engine oil temperature, Engine oil pressure, fuel pressure, voltage, lambda O2 (Oxygen Sensors), Exhaust gas Temperature, intake manifold vacuum/pressure (the same sensor may be used in intake or crank case), Water Pressure, power steering pump pressure, power steering oil temperature
  - 2. Transmission Related items – transmission oil temp, transmission main pump PSI. Sensors may not be directly connected to the transmission and must use a minimum of 12 inch soft line type hose to eliminate any direct connection to the transmission of any wiring. Electronic gear indicators for manual transmissions may be used only with a complete stand-alone wire loom and may not be connected to the data collection or engine management system in any way. The electronic gear indicator provides the driver with a numeric indicator of what gear the transmission is in at any given time. Any systems intended to be used for this purpose must be approved by LOORRS prior to use and must be able to function 100% when removed from the vehicle by providing nothing more than a 12 volt power and ground to the unit. Electronic gear indicator may use a sensor connected to the transmission gear shifter or to the linkage directly on the transmission.
- C. No other sensors, measurement, GPS, track mapping, lap timing device or recording device of any kind is permitted at any time during the entire LOORRS event weekend.
- D. Any configuration of data measurement or recording must be completely open and available for LOORRS inspection at any time during a LOORRS event weekend.
- E. The following digital dash units are permitted:
  - 1. Motec – any model
  - 2. RacePack – any model
  - 3. AIM – any model
- F. No traction control devices allowed. This includes but is not limited to speed sensors, linear transducers, axle or drive shaft RPM, steering position, etc.
- G. No wireless devices in or on the vehicle are permitted.
- H. No data transfer is allowed to or from vehicle when in motion.

## **PB-16 ENGINE & RACE VEHICLE ELECTRICAL SYSTEMS**

- A. All ignition systems must be approved by LOORRS.
- B. No computerized systems are permitted unless LOORRS approved.
- C. Any make or brand of spark plug may be used.
- D. All vehicles must have a working alternator/generator system.
- E. All vehicles must have a self-starter in working condition and must be capable of starting on their own power.
- F. All electrical switches must be located on the dash panel.
- G. All vehicles must have a master on/off switch wired to the battery in a manner that will cut off all electrical power and the engine.
- H. Master switch must be labeled as such, have a red circle around it, be located on the left side of the dash panel, and must be accessible from the outside of the race vehicle. Red circle must be at least 1 inch wide.

## **PB-17 ENGINE COOLING SYSTEMS**

- A. Installation, location, and type of electrical cooling fan must be acceptable to LOORRS.
- B. No icing refrigerant chemicals may be used in or near the engine compartment or in any place on the car.
- C. Electrical engine cooling fans are optional.

## **PB-18 ENGINE EXHAUST SYSTEMS**

- A. Mufflers are required.
- B. Muffler must meet a maximum decibel of 100 as measured 50 feet from track side.
- C. Exhaust pipes must be attached to headers in a secure manner.
- D. Exhaust pipes must be routed to the outer edge and rear of the vehicle.

- E. All exhaust must discharge downward and outward to either side of vehicle.
- F. Exhaust heat shields are permitted.

## **PB-19 CARBURETOR**

### **Non Ecotec:**

- A. One carburetor for water-cooled; two carburetors for air-cooled.
- B. Maximum of two venturis per carburetor.
- C. Maximum venturi size:
  - a. 42 MM for two valve engines.
  - b. 29 MM for four valve engines 1600 CC and smaller
  - c. 28 MM for four valve engines 1601 CC to 1650 CC.

## **PB-20 CARBURETOR RESTRICTOR PLATES**

- A. No devices between the carburetor and the intake manifold, designed to increase or redirect airflow will be allowed.

## **PB-21 AIR AND INTAKE CLEANERS**

- A. Intake air or filtered air cannot be blended with alcohols, ether, or other oxygenates, nor blended with aniline or its derivatives, nitrous compounds, or any other nitrogen containing compounds.

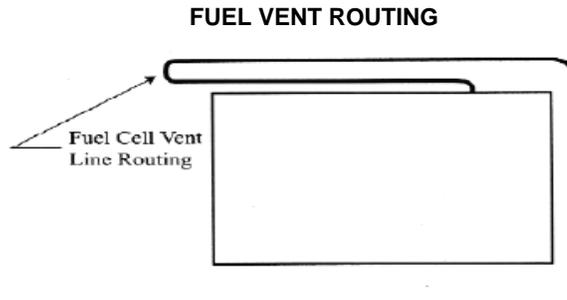
## **PB-22 FUEL INJECTION**

- A. Fuel injection is allowed on the Pro Buggy Ecotec engine only.

## **PB-23 FUEL CELL**

- A. Maximum size is 9 gallons.
- B. All fuel lines and vent lines must be routed (meaning come out) from the top of the fuel cell.
- C. All fuel cells must be LOORRS approved.
- D. LOORRS will reject any previously approved fuel cell, which appears to be defective, damaged, or not in proper condition.
- E. No pressure systems will be allowed. Any concealed or not concealed pressure type containers, feed lines or actuating mechanisms will not be permitted, even if inoperable.
- F. Icing, Freon type chemicals, or refrigerants may not be used in or near the fuel system.
- G. Electric fuel pumps must have oil pressure shut-off. Loss of oil pressure will automatically shut off fuel pump. A momentary on bypass may be installed. The momentary on by pass may be like a push button, 2-pole starter button, which can be mounted in a position best suited to the driver. The oil pressure-sending unit is either AC Delco part number 25036938, Niehoff part number OP23481, Wells part number PS119 or PS122, Napa part number OP6624 or OP6616, Standard ignition Blue Streak part number PS126 or Niehoff Borg Warner part number OP23311. The sending unit receives power from the ground.
- H. Digital dash or electrical device may replace mandated mechanical fuel pressure switch for operation of electric fuel pump, provided operation can be verified by the tech team to only allow power to fuel pump for a maximum of 4 seconds when engine is not running.
- I. No material other than standard foam as provided by the fuel cell manufacturer is permitted.
- J. Rear mounted fuel cell must have a chassis or body cross member of substance between the fuel cell and driver and be protected from ground obstacles.
- K. Fuel cells must be dated by manufacturer. Fuel cells will become obsolete 5 years after date of manufacture and must be replaced.
- L. All fuel cell fillers and vents must have check valves installed.
- M. Fuel pressure regulator vent line must do one of the following:
  - 1. Connect to intake manifold vacuum.
  - 2. Connect to air cleaner so that any fuel enters engine.
  - 3. Connect to fuel cell.
  - 4. Have vent hose routed past the rear axle.

- N. A splash shield must be in place to direct any spill away from the driver, motor, and motor exhaust. A body panel is considered sufficient splash shield.
- O. Fuel cell cannot be vented into the driver's compartment of any vehicle.



**ALL FUEL CELL LINES AND VENTS MUST COME OUT OF THE TOP OF THE FUEL CELL (PICTURED).**

**PB-24 FUEL**

- A. All cars shall use fuel, as defined in the following graph, unless a specific exemption is made in the provisions for a specific category/class
- B. Permitted Fuel: Permitted fuel is herein defined as gasoline meeting specified dielectric constant standards and not contain any prohibited substance in excess of stated limits. Gasoline is a mixture of refined hydrocarbons. Gasoline is an electrical insulator and its relative effectiveness as an insulator is represented by its dielectric constant (D.C.). The D.C. of gasoline will be measured by an LOORRS FTK01 Fuel Check Meter. The 0 (zero) calibration of the LOORRS Fuel Check Meter is set against reagent or laboratory grade cyclohexane. Gasoline may be tested and certified at LOORRS events by the determination of the dielectric constant using the LOORRS Fuel Check meter and through the application of various chemical analyses. If a competitor's fuel is not compliant with the fuel standards below, LOORRS shall take appropriate action. Penalties for use of non-compliant fuel can include one or more of the following: fine, reduction of points, and loss of prizes and/or suspension. If the services of an outside laboratory was used and the fuel was found to be non-compliant by the laboratory, the racer will be assessed the cost of the fuel transportation to the laboratory and laboratory fees.
- C. Restricted Substances: The fuel must not be blended with other alcohols, ethers, or oxygenates, and it must not be blended with aniline or its derivatives, nitro paraffins or other nitrogen containing compounds Nitrous oxide is forbidden.

Fuel Standards			
Classes	Type		DC Max
All classes except Karts	Gasoline without added oil		3
Karts	Sunoco 260 GTX		1.5
The use of any substance in the following table in excess of the stated limit is prohibited either in fuel or otherwise introduced into the engine.			
Chemical Compounds Prohibited or Restricted in LOORRS Race Fuels			
Compounds	Examples		Maximum Weight Or Percentage by Weight Allowed
Total Aldehydes	Acetaldehyde, Acrolein, Formaldehyde		1.00%
Benzene			5.60%
3,3-dimethyl-1 butene			0.05%
Total ethers	1,4 Dioxane, ETBE, Furan, MTBE, Tetrahydrofuran		0.00%
Total Dienes (Diolefins)	1,d Butadiene, Isoprene		1.00%
Ethanol			0.00%
Total Epoxides	Ethylene oxide, Propylene oxide		0.00%
Total Nitrogen Compounds	Nitromethane, Nitroethane. Nitropropane, and all aromatic nitrogen compounds such as Nitrobenzene, Ammonia, Amines and their salts, Aniline, Hydrazine, Pyridine, Pyrrole, Benzidine		0.00%

- D. Cooling: The cooling of fuel is not permitted during competition.
- E. Fuel Samples: LOORRS has the right to sample a Competitor's fuel at any time during the Event. Samples will be impounded for observation and or testing by LOORRS and/or any outside laboratories at LOORRS discretion.
- F. No nitrous oxide.
- G. If LOORRS officials suspects maskers in fuel, chemical testing will be conducted at possible expense to the competitor.
- H. Penalties for use of hazardous chemicals will be severe including fine, and/or reduction of points, and/or suspension.

#### PB-25 OIL COOLERS

- A. All oil coolers and their installation must be approved by LOORRS.
- B. Engine and transmission oil to air or oil to water heat exchangers are permitted.
- C. Cooling fans are permitted. No coolers are allowed in the driver's compartment.

#### PB-26 TRANSMISSION

- A. Transmissions must be standard production, catalogued, and available through regular dealer channels.
- B. All forward and reverse gears must be in working order.
- C. No sequential shift transmissions will be allowed.
- D. Motor crankshaft must be connected to transmission input shaft via a conventional clutch assembly or vane type torque converter

#### PB-27 DIP STICKS

- A. All dipsticks must be secured in dipstick tube with a positive locking or securing method.

#### PB-28 TIRES

- A. Tires must be DOT only, produced in quantity each year, must be available to the general public through normal dealer distribution and must not exceed \$200 in price.
  1. DOT tire classes are restricted to tires that are intended for car/truck highway use and are available to the general public through standard dealers. Internet or one store only tires are NOT acceptable. **All tires must be designed, built, and sold for use on passenger car or pickup truck ONLY.**
  2. Tires need to be part of a multiple line of tire sizes within a currently sold design. A tire used in the race should be identical in construction: rubber compound, **durometer, construction**, sidewall with identical

tread design as other sizes not used in the race (Example – if the tire used is a 32” tire, other tires from the manufacturer in sizes like 31” and 33” will be the same as the tires raced upon).

- B. Durometer testing will be done and shall not be below 58 points. Tires may be Durometer tested with race ready conditions prior to any competition on the track
- C. Each tire manufacturer must submit for approval from LOORRS a list of the tires they wish to use in competition no less than 3 weeks prior to any event they wish to compete with said tire. This notice should be sent by email to the Technical director at ([gary@lucasoiloffroad.com](mailto:gary@lucasoiloffroad.com)) and the Competition director at ([gregf@lucasoiloffroad.com](mailto:gregf@lucasoiloffroad.com)) and is not considered received if no confirmation of receipt is sent by the Technical director or Competition director of LOORRS. It is the responsibility of the tire manufacturer to submit the tire use request list before expecting to use any tire make or model or size at any LOORRS event. Once any tire make / model / size has been submitted and approved for use the manufacturer may consider that approved for the rest of the race season and is not required to submit again unless a change is made in construction or compound of the tire in question. Any change to construction, compound, or tread design will be considered a “new” tire and must be re-submitted and follow all tire guidelines for the class.
- D. LOORRS at its sole discretion may purchase tire(s) from a retail outlet of its choosing at any given time to be brought to the track to be used in the inspection process. Any cost associated with LOORRS obtaining the required tire(s) for comparison to the tire(s) brought to the track will be billed back to the participating manufacturer at the same cost incurred by LOORRS in the process. LOORRS officials may at their sole discretion dis-assemble or cut the tire(s) apart for testing purposes as part of the testing process. At the end of the inspection process time the purchased tire(s) will be returned to the manufacturer by LOORRS tech officials.

#### **PB-29 WHEELS**

- A. All wheels must be in good repair and free from cracks or defects that could cause wheel failure.
- B. Lug nut must be open ended, and of proper size.
- C. Studs must extend a minimum of 2 full threads past the end of the lugnut.
- D. Wheel studs may be no closer than ½ inch from the outer most face of the bead lock ring opening or wheel. Stud ends must be rounded.
- E. All bead locks must have recessed bolts only that do not protrude past the face of the ring.

#### **PB-30 RADIOS**

- A. Radios must be of two-way voice communication type only. Each race team is responsible for meeting FCC requirements.
- B. Radio communication between drivers is not permitted.
- C. All radio frequencies must be approved and reported to LOORRS prior to their use.
- D. All race vehicle radio communication systems must be approved by LOORRS.
- E. See Section 5 of LOORRS General Rules for spotter requirements.
- F. Spotters are required for all race teams.
- G. Any 2 way radios used at a LOORRS event may not exceed 6 watts output.
- H. Each competitor race vehicle must use at all times while on the track an override race receiver to listen to race control that overrides any communication from the spotter when race control is transmitting to the vehicles. The receiver device must be approved by LOORRS and meet LOORRS standards at all times. Competitors will not be allowed on the track at any time without the race receiver installed and functional.

#### **PB-31 TRANSPONDERS/TIMING**

- A. Remote score timing devices will not be permitted by teams, owners, or anyone associated with an entry, unless approved by LOORRS.
- B. All LOORRS teams are required to purchase remote timing transponders. Transponders can only be purchased through LOORRS and numbers must be recorded with LOORRS officials.
- C. Drivers are responsible for the charging and installation of all transponders. Any entry without a properly charged, properly installed, functioning transponder may not be scored and may be subject to further penalty.
- D. Transponders must be mounted 98 inches behind the front bumper on a Pro Buggy.