



***SONOMA* DRIFT**

2016-2018 Solo and Tandem Tech Rule Book

2016 SINGLE RUN GROUP TECH REQUIREMENTS

ANYTHING NOT MENTIONED IN THIS DOCUMENT IS SUBJECT TO THE INTERPRETATION OF THE DIRECTOR
Rulebook Version 707.3

Driver Requirements

ELIGIBILITY

- Drivers must be of legal driving age, and if under 18 must submit a minor release form signed and notarized by their parents/guardians, provided by Sonoma Raceway.

1. Helmet – SA2010 or newer (DOT and M not approved)
2. Neck Brace – All occupants must wear a neck brace / neck collar
3. Seat Belts & Harnesses - Stock seats must have stock seat belt, After market seats must have at minimum a 4 point harness
4. Closed-Toed Shoe
5. Pants (No shorts)
6. Shirt (No tank tops)

Car Requirements

1. 4pt. Roll Cage & door Bars are required for tandems only
2. Battery must be bolted down (even inside box). All batteries that are not AGM or Dry Cell Batteries must be in a box or protected compartment. Batteries that don't require a box must have all positive conductive materials covered to protect against shorts.
3. Fluid Leaks
4. Lug Nuts (tight and complete)
5. Radiator must have an overflow

6. Windshield (no cracks)
7. Seats must be securely fastened.
8. Doors must open from the outside.
9. Fuel cells must have a partition separating it from the drivers compartment. Fuel cell must be have a bladder.
10. All participants are limited to a 115db maximum. Same sound regulations as drag strip.
11. Convertibles running solo with the top down must have at minimum a 4pt roll bar with the main hoop that consists of one continuous piece of tubing. Roll bars must also pass “the broom stick test” to determine head clearance.
12. Aftermarket seats cannot use stock seatbelts. Stock seats cannot use aftermarket harness. All exceptions must be approved by a tech inspector. Please refer to Tandem Tech Rules for harness requirements. For harness details please reference

2016 TANDEM TECH RULES

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Rulebook Version 707.3

Driver Requirements

ELIGIBILITY

- Drivers must be of legal driving age, and if under 18 must submit a minor release form signed and notarized by their parents/guardians, provided by Sonoma Raceway.

OCCUPANT SAFETY

Each occupant must wear the following equipment

- **Helmet:** Only helmets certified to meet or exceed the following standards are permitted:

Snell Memorial Foundation: SA2010

SFI Foundation Spec: 31.2, Spec 31.2A

- **NECK BRACE:** All occupants must wear a Neck Brace/ Neck collar

-**Driving Suit on track only:** The driving suit has to be made of fire resistant material and certified to SFI spec 3/2A-1 or better.

-Fire resistant gloves, shoes, socks and balaclava are recommended, but not required.

-Drivers must wear closed-toe shoes.

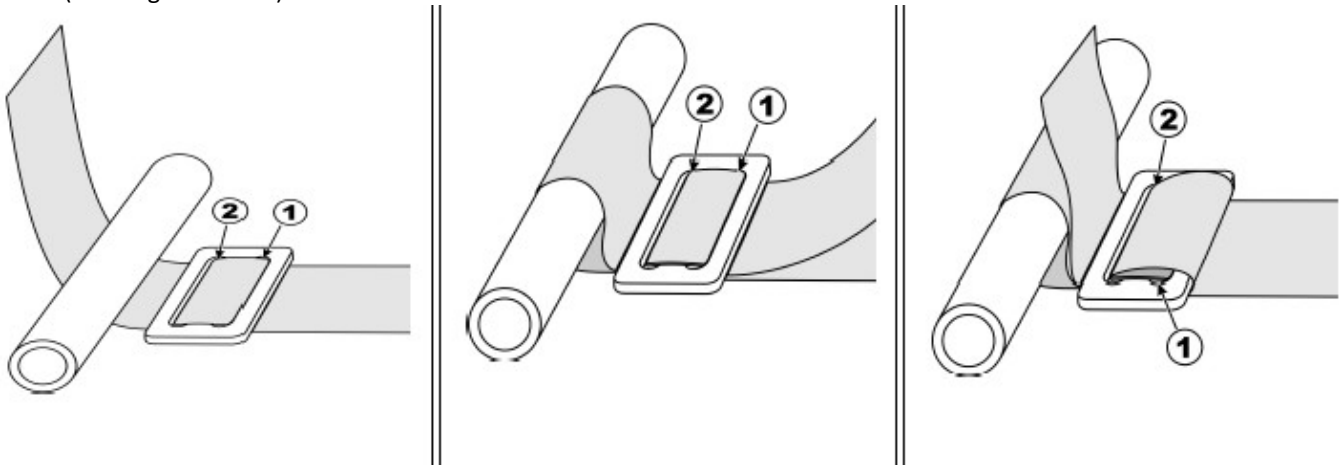
-**Seat:** Stock seats must have stock seat belt, After market seats must have a 4 point harness

-Restraint Systems:

SFI Certification: Harness systems may be certified to SFI spec 16.1 or 16.5 and have the appropriate labeling. Each harness is hole punched with the year and month of manufacture. This certification shall expire (2) years after the punched month and date on the belt. SFI 16.1 belts need to have a 3 inch lap belt. SFI 16.5 belts may have a 2 in lap belt. 2 in Head and Neck Restraint specific shoulders are permitted when used with an approved SFI 38.1 Head and Neck Restraint. If a certified belt is out of approval age but in good condition, it may be approved at the discretion of the tech inspector.

FIA Certification –Harness systems may be homologated by the FIA to specification 8853/98, and have the appropriate labeling. FIA belts are dated with an expiration year with the belts expiring on December 31st of the year punched or printed on the FIA tags. If the belts are damaged, frayed, or deemed unsafe at technical inspection, the belts must be replaced.

Shoulder harnesses must be mounted so they extend at no more than 45 degrees from the drivers shoulders. Seats that are more than 6" from the seat-supporting bar on the roll cage must be braced. All belt loops must be routed properly and secure. (see diagram below)



Car Requirements

SAFETY (COMPETITION and TANDEM SPECIFIC RULES ARE IN RED)

- Roll Cages

COMPETITION and TANDEM cars must be equipped with at least a 4pt roll bar with the addition of double door bars (SD roll bar see diagram 2.1) if the OEM metal remains in place. The forward most landing point for the doorbars must be as close to the "A pillar" as possible. A "pedestal" landing maybe used to land both door bars in their forward most point, but is not required. Door bars maybe bent in order to accommodate seat and driver clearance. If the OEM door metal has been altered a welded-in NASA legal roll cage, as is defined in 15.6 of NASA's Club Codes and Regulations with the addition of double door bars for the passenger side, is required. All COMPETITION AND TANDEM cars must pass the technical inspection of a NASA certified tech inspector which will good for one racing season unless the car is altered in a way that prevents it from meeting the technical criteria, or if the vehicle sustains a substantial collision. After passing a NASA tech inspection, TANDEM and COMPETITION cars will be provided with a log book to present to the technical inspector on Weds Night Drifts along with a self tech form. This will relinquish their responsibility to go through a full tech inspection every week. A visual safety check will be required on every appearance to the track.

- Basic Design Considerations

A) The basic purpose of the roll cage is to protect the occupant if the car rolls over, runs into an obstacle, or is struck by another car. It must be designed to withstand compression forces from the weight of the car coming down on the rollover structure and to take fore/aft and lateral loads resulting from the car skidding along on its rollover structure.

B) Forward braces and portions of the main hoop subject to contact by the occupant's helmet (as seated normally and restrained by seatbelt/shoulder harness) shall be padded with non-resilient material. Ethafoam® or Ensolite®, or other similar material with a minimum thickness of one-half (1/2) inch and conforming to SFI spec 45.1 is required

- General Construction

All roll cages must be based on a single Main Hoop of one (1) continuous length of tubing with smooth continuous bends and no evidence of crimping or wall failure. The radius of bends in the roll cage hoop (measured at centerline of tubing) shall not be less than three (3) times the diameter of the tubing.

1. The weld shall have no cracks.
2. Thorough fusion shall exist between weld metal and base metal.
3. All craters shall be filled to the cross section of the weld.
4. Undercut shall be no more than 0.01 inch deep.

The main components of the cage must be made of the same material, size and thickness of tubing. Aluminum bronze or silicon bronze welding technique is permitted, but extreme care shall be used in preparation of parts before bronze welding and in the design of the attaching joints.

- Roll Cage Material

Seamless SAE 1020 or 1025, etc. mild steel tubing (DOM) is the preferred material for Roll Cage construction. Please contact Sonoma Drift for approval if any alloy material will be used. An approved supplier MUST construct alloy steel cages. No ERW tube allowed.

- Tubing Size

For cars up to 3500lbs, Roll Cage tubing must be at least 1.500" x .095". The minus tolerance for wall thickness should not be less than .010" below the nominal thickness.

- Inspection Hole

An inspection hole at least 3/16 inch diameter, but no greater than 1/4 inch diameter, shall be drilled in a non-critical area of all tubes to facilitate verification of wall thickness.

- Main Hoop

The main roll hoop (behind the driver) shall extend the full width of the driver/passenger compartment and shall be as near the roof as possible with a maximum of 4 bends, totaling 180 degrees \pm 10 degrees. The roll cage Main Hoop should start from the floor of the car, and, in the case of tube frame construction, be attached to the chassis tubes by means of gussets or sheet metal webs with support tubes beneath the joints to distribute the loads. It is recommended that gussets be used. **The Main Hoop shall incorporate a diagonal lateral brace to prevent lateral distortion of the hoop.** Any number of additional reinforcing bars is permitted within the structure of the cage. **A section of tubing equal to the roll bar shall be installed horizontally from the main hoop to the diagonal brace behind the drivers seat. This tube shall be no higher than shoulder height and continue from the diagonal to the passenger side main hoop upright**

- Rear Hoop Supports

The main roll hoop shall have two braces extending to the rear attaching to the frame or chassis. Braces shall be attached as near as possible to the top of the main hoop not more than six (6) inches below the top and at an included angle of at least thirty (30) degrees. No bends are allowed on rear braces.

- Mounting Plates

Each mounting plate shall be at least .080" thick. Mounting plates must be fully welded or bolted securely to the structure of the vehicle. Each mounting plate shall not be greater than 100 square inches and shall be no greater than twelve (12) inches or less than two (2) inches on a side. The mounting plate may be multi-angled but must not exceed these dimensions in a flat plane. Whenever possible, mounting plates shall extend onto a vertical section of the structure (such as a rocker box or door pillar). Any number of tubes may attach to a single plate or to each other.

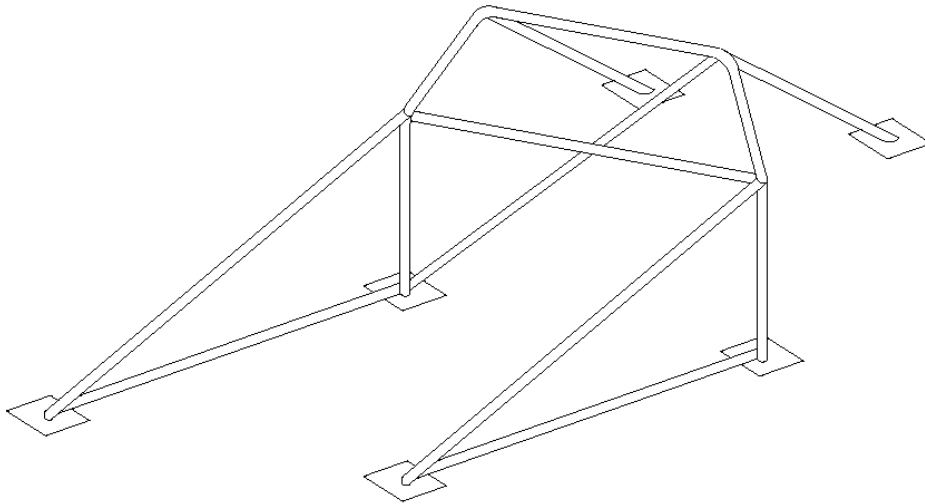
- Exceptions and Alternatives

The afore mentioned rules should be used as a guideline to building a roll structure specific to Sonoma Drift competition. If your competition vehicle is already equipped with something equivalent or better, you do not need to redesign your roll structure to meet the specific SD Rules. Equivalency will be determined by the CHIEF OF TECH, and/or the DIRECTOR.

- Mounting Hardware (bolts)

All hardware used in the mounting of seats, or other structural supports shall be SAE Grade 5 or better with a 5/16" minimum diameter.

Diagram 2.1



MECHANICAL

- ABSOLUTELY ALL FLUID SYSTEMS MUST BE FREE OF LEAKS and IF CATCH TANKS ARE NEEDED IN ORDER TO PREVENT FLUID OVER FLOW AND SPILLAGE THEY ARE THEN DEEMED MANDATORY FOR THAT GIVEN VEHICLE.

- Fuel Cells are free, if fuel cell/ tank is relocated to the trunk or driver compartment there must be a firewall separating the driver and the fuel cell/tank. Fuel lines and fittings must be high-pressure type and routed in such a way that they do not interfere with moving parts and be securely insulated and attached to the unibody or chassis, no fuel lines running inside the cab. All fuel cell must have a bladder.

- Batteries must be securely fastened without possibility of coming loose or shifting during the point of an impact. The positive terminal must be completely insulated to avoid contact with any other metal parts. Batteries may be relocated. If battery is located inside the driver's compartment it must be in a sealed box unless it is a AGM or Dry Cell Battery.

- The interior of the vehicle must be clean and all non-essential and/or loose items must be removed. Any removable equipment such as spare tires, tools, bins, etc., shall be removed along with attaching hardware, brackets and covers.

-Vehicle exterior and interior must be free of sharp exposed edges.

- All lug nuts must be present and secure.

TOWING APPARATUS

All cars must have a minimum (1) front and (1) rear permanently installed towing apparatus (eye, strap, cable, etc.) with a minimum hole diameter of 50 mm or 2".

- The apparatus shall be strong enough to withstand the weight of the vehicle being pulled from non-racing surfaces such as gravel traps, approximately equal to 5000 lbs. Tow apparatus must be a unique-purpose device. Using other structures i.e; a wing, body panel, or wheel is not allowed. The use of factory "tie down loops" is not permitted.

FIRE EXTHIGUISHER

2.5lb ABC Fire extinguisher must be mounted during driver reach and mounted using a secure metal bracket.

RULE BOOK DISCLAIMER

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

The race director shall be empowered to permit reasonable and appropriate deviation from any of the specifications herein or impose any further restrictions that in his opinion do not alter the minimum acceptable requirements. **NO EXPRESSED OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM SUCH ALTERATION OF SPECIFICATIONS.**

Any interpretation or deviation of these rules is left to the discretion of the officials. Their decision is final. Rules are subject to change as needed.