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2024

# RULEBOOK

KINGS OF THUNDER  
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**SUBJECT TO CHANGE – NEWEST VERSION WILL ALWAYS BE ON KINGSOFTHUNDER.COM**

**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 express or implied warranty of safety shall result from publications of our compliance with these rules and/or regulations. They are intended as a guide for the conduct of the sport and are in no way a guarantee against injury or death to a participant, spectator or official. **Minor drivers and their parents** are responsible to read and understand the rules and regulations set forth in this rule book.

The RACE DIRECTOR shall be empowered to permit minor deviation from any of the specifications herein or impose any further restrictions that in his opinion do not alter the minimum acceptable requirements. No express 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. **Management reserves the right to check any cars for rule compliance at any time.**

**COMPETITOR OBLIGATION**

Any driver entering any racing event is considered to have inspected the track and determined that all conditions are satisfactory. If the driver does not feel that conditions are satisfactory, then the driver should not race. The driver further acknowledges that he/she is aware that auto racing involves risks and that by competing in that event the driver assumes these risks with full awareness and knowledge.

Track Tech officials are authorized to decide if an equipment change, or modification is an attempt to circumvent these rules. If this rule book does not specifically state that you can alter, change, or otherwise modify something on your car, you should consider it a violation of these rules. No part is deemed to have been approved by track officials by passing through prior technical inspections.

**GENERAL INFORMATION**

The Owner / Driver of each car represents to the Promoter and all others, that his/her car has satisfied all applicable rules, including but not limited to safety rules, whenever such Driver participated in any warm-up, practice, or competitive laps. The Owner /Driver of each car is also completely responsible for ALL actions of Crew Members, Sponsors, or anyone else associated with their team. If you have any complaints, disputes, problems, or questions, only the Driver and/or Car Owner, or a designated team representative may approach and Official, in a civil manner to resolve the situation.

It is expected that all discussions and disputes between participants or participants and track officials will be conducted in an orderly and sportsman-like fashion.

## **SAFETY RULES**

*It is the car owner's responsibility to ensure his/her car is safe and properly maintained for racing.*

- No modifications of any manufactured safety products allowed.
- All applicable items must be nomex and SFI rated and must be worn any time the engine is running.
- Snell SA 2015 or newer full-face helmet designed for racing required.
- Arm Restraints – **Highly Recommended**
- Full Fire suit - minimum two layers.
  - **PROTECTIVE CLOTHING**
  - All drivers will be required to wear a fire-resistant driving uniform meeting the minimum of the SFI 3.2A/5 specifications and display a valid SFI 3.2A/5 label on the outside of the uniform.
  - Driver's gloves must meet or exceed the SFI 3.3/1 specification and have a legible and valid SFI 3.3 label.
  - Drivers must wear shoes that meet the minimum of the SFI 3.3 specifications and display a valid SFI 3.3 label.
- Underwear – top, bottom and foot socks. **Highly Recommended**
- Neck collar or Hans style restraint recommended.
- Head Sock or helmet skirt. **Highly Recommended**
- Roll cage must be 2" above drivers Helmet. Measure from top of roll bar to the top of drivers helmet.
- Approved roll bar padding on roll bars within range of drivers head.
- Each car will be equipped with minimum of an SFI 16.1 or SFI 16.5 approved restraint system, **UNTIL THE DATE OF THE BELT EXPIRATION (TWO YEARS FROM THE DATE OF MANUFACTURE). LATCH TYPE 5-POINT SEAT BELTS** mounted per manufacturer. (must have label) Seat belt restraint systems shall be installed and used in accordance with manufacturer's instructions. In any type of manufacturer's installation, the fasteners must be magnetic steel unless using type of mount in which the seat belt wraps around the roll cage. A seven- point harness is recommended. b) Seat belt material should not be permitted to come in contact with any sharp or metal edge, including when the material passes through the seat.
- When wheel packing, **COMPLETE SAFETY GEAR** is mandatory.
- When pushing off to fire, **COMPLETE SAFETY GEAR** is mandatory for Sprint Cars. Self-starting cars recommended.
- **ADDING WEIGHT** – WEIGHTS MUST BE WHITE AND HAVE CAR #. IF WEIGHT FALLS OFF OF YOUR CAR FOR ANY REASON, YOU WILL BE DISQUALIFIED & SCORED LAST IN SAID EVENT.
- **MUST HAVE REAR BUMPER TO START AND RECEIVE A PUSH. NO PUSH WITHOUT REAR BUMPER.**
- **Fire suppression systems ARE MANDATORY.**
- **Axle Tethers ARE MANDATORY.**

## **SEATS**

1. Aluminum and/or carbon fiber-type seats will be permitted. All seats must be mounted to the frame as required by the seat and chassis manufacturer.
2. Headrest (behind the head) should include padding.
3. Seat must be mounted in 4 places to the chassis with minimum 3/8" steel grade 8 bolt, minimum of 1 1/2" washer and bolt.
4. Mounting hole in seat must have a 2" diameter mounting plate with a minimum .060".
5. Positively no homemade aluminum, plastic or fiberglass seats will be allowed.
6. A right head net or support is highly suggested - head nets must be equipped with quick release mechanisms.
7. Full containment seats are required.

## **IN ADDITION TO ABOVE MENTIONED SAFETY RULES – THESE ARE IN PLACE FOR SPRINT CARS**

- **Fire Suppression Systems are mandatory.**
- **Axle Tethers are mandatory.**
- **CAR # NEEDS TO BE AT LEAST 16” TALL – IF LETTER IS ADDED THAT NEEDS TO BE AT LEAST 6” TALL.**
- Padded knee guards **HIGHLY RECOMMENDED!**
- Rock Screens are **MANDATORY.**
- All cars must utilize either a drive-line strap or a drive-line hoop restraint constructed of .065 inch steel either welded or bolted to the chassis.
- Sealed firewall between the driver and engine.
- Hood must cover the radiator cap and engine.
- Floor pan must be securely fastened and extend to each frame rail and from the motor plate to the seat. Not allowed under the engine or fuel tank.
- Throttle pedal must have a toe strap. Not recommended to mount to floor pan.
- A minimum of two throttle return springs must be used to close the throttle.
- Main fuel line must have ¼ turn shut off if fuel pump is mounted in front of motor.
- Fuel lines must be reinforced pressure hose. No plastic lines.
- Approved fuel tanks with bladders only. Flush mount caps and non-spill vents. **Fuel tanks shall retain the traditional sprint car tank shape, no square back shapes.**
- On/off or push/pull ignition switches only. No keys.
- No mirrors or communication devices **except Receiver. Only track officials may talk to drivers, violators will be disqualified & fined \$250.**
- **Driveline must be enclosed in driver’s compartment.**
- Hollow and/or drilled bolts, fasteners, and/or Heim joints (rod ends) will not be permitted.
- No external coolers.
- Wheel wing nuts not to extend past rim.
- All wheels must be approved for racing.
- All hubs must be approved for racing.
- Wheel covers must be securely attached by **minimum 5 Dzus fasteners or 3 5/16 flange head bolts. Approved fastening systems: Keyser Manufacturing, part #100 7-101. Wehrs Manufacturing Part # (WM377A-312 Aluminum 5/16) (WM377S-312 Steel 5/16) Triple X Chassis Part # SC-WH-7810 (for 1” spring) / SC-WH-7820(for 1 3/8” spring) Smith Precision Products Part # MC-516-18**
- **Bead locks REQUIRED on rear wheels.**
- Foot operated hydraulic brakes that work required.
- All cars must have top wing at all times.
- Roll cage must be 2” above drivers Helmet. Measure from top of roll bar to the top of drivers helmet.
- **Drag Link, Tie rod, and LF radius rod must be made of 4130 steel with steel rod ends. Drag Link must be tethered to frame.** Swedging of the tubing for Tie Rod and Drag Link will not be permitted.

## **Chassis Rules**

The following frame measurements are minimum dimensions. Only those areas indicated are mandatory and subject to technical inspections. In lieu of the "BUTT" BAR a car's rear end can be tethered to the rear chassis. Only ASTM4130 normalized steel or equivalent material may be used in the chassis/frame construction. See drawing 16.5.a.s:

- A. TOP RAILS 1 ½" X .095"
- B. BOTTOM RAILS 1 3/8" X .095" OR 1 ½" X .083"
- C. ROLL CAGE UPRIGHTS 1 3/8" X .083"
- D. ROLL CAGE CROSSMEMBER 1 ½" X .095"
- E. UPPER RAILS 1 3/8" X .083"
- F. REAR END SAFETY "BUTT" BAR 1" X .083" OR 1 ¼ X .065"
- G. BRACE 1 ¼" X .065"

**TORSION ARM RETAINERS WILL BE MANDATORY** on both sides of the front torsion bars. The retainer may be of the rod-type with a securing cap or insert with an expanding mandrel and/or any other approved Torsion arm retainer design. Torsion arm retainers must be installed and used in accordance with the manufacturer's instructions. The following torsion bar arm retainers have been approved for competition:

- A. MOOSE BLOCK 1200 RETAINER KIT
- B. ALL STAR PERFORMANCE ALL STAR 10730 RETAINER
- C. MARING SAFETY RETAINER
- D. BUTLERBUILT MANDREL
- E. KKR GROVE AND CLIP
- F. KAEDING CLIP
- G. DMI – T-REX (TORSION RESTRAINT EXPRESS SYSTEM)
- H. SCHROEDER PART NUMBER: "BARS" (FOR SCHOEDER BARS WITH RELIEF IN ENDS)
- I. SCHROEDER PART NUMBER: "RWLAR" (WEDGE LOCK)

## **AXLE TETHERS ARE MANDATORY**

Approved front axle tether systems are mandatory. The tether mounting must meet the SFI 55.1 specifications which includes two (2) Vectran® HS V-12, or Dynemma 12 tethers attached to the chassis. Tether systems must include a "kingpin to kingpin" tether that will attach to the axle clamp/band or pass through the loop of wrap style axle tethers. Tether cables should be installed using the manufacturer's provided fasteners. Tether systems of any type must be pre-approved and installed in accordance with the manufacturer's instructions. "Bolt to bolt" radius rod axle tethers NOT allowed. All axle tether systems must clamp to or wrap around the axle per the manufacturer's instructions.

## **NEW CHASSIS BARS**

**2019 forward - all chassis will be required to have additional bars installed to support and decrease the span between the front and rear uprights. The new support bars must be an addition to the front and rear uprights. The left and right side support bar do not have to be the same. These additional bars will be minimum 1.375 X .083 ASTM4130 normalized steel or equivalent material.**

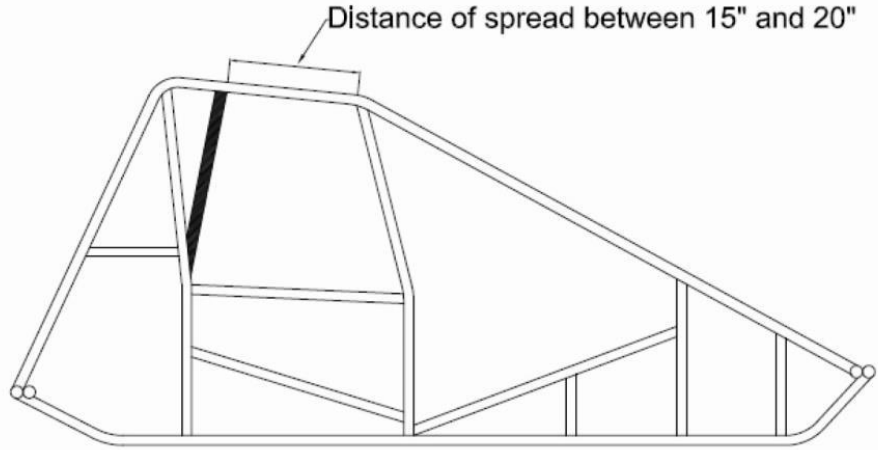
**Left and right-side support bars may be one of two forms a "Curved Support Bar" similar to current "safety bar" used in some chassis' or a "Non-Curved Support Bar" similar to the WoO Sprint Car Series Rules.**

**The Curved Support Bar will attach to the top rail to create a span between 15" and 20" from the front upright to the support bar. This measurement will be made from the rear point of the front upright to the forward point of the support bar. It will attach to the hip rail and have a gusset attached above the curve to the rear upright at the point opposite of the rear brace/shock mount bar. The outer most point of the curve will be between 4" and 7" measured from the outer edge of the uprights.**

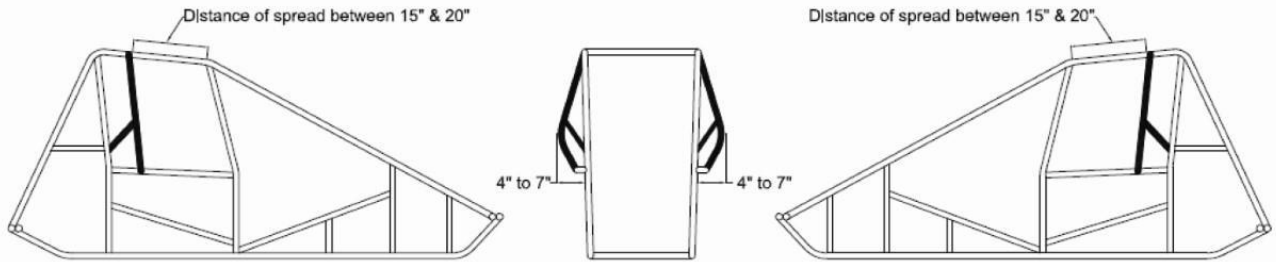
**The Non-Curved Support Bar will be attached to the top rail to create a span between 15" and 20" from the front upright. This measurement will be made from the rear point of the front upright to the forward point of the support bar. The bottom of the Support Bar will attach to the rear upright at the point opposite of the rear brace/shock mount bar.**

**See drawings on next page.**

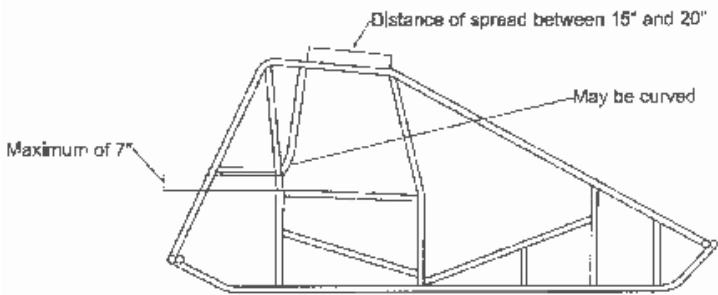
# Support Bar



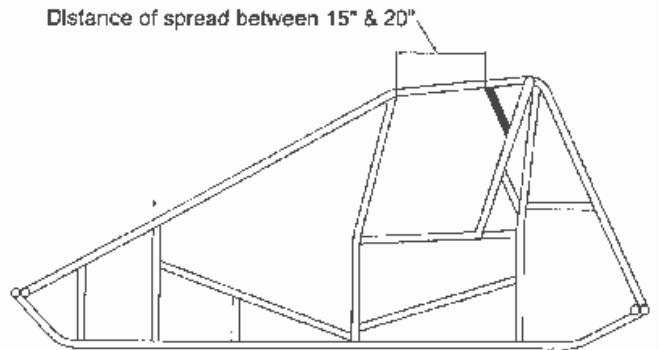
## Curved Support Bar Drawing



## Support Bar Option



## Curved Support Bar Option



1. Slip joints will no longer be allowed in any form. Bolted or clamped slip joints will no longer be allowed. If a current chassis has a slip joint, it will have to be welded the full circumference of the tube to become solid.
2. Front, rear, and side nerfs required at the start of the race. All nerfs and bumpers must be attached with a minimum 3/16" steel fastener. No pop rivets. Wings, bumpers and/or nerf bars must be positively fastened with bolts & nuts, hitch pins and/or roll pins only. For any car to be pushed off at any time the rear bumper must be in place behind the tail tank.
3. Side nerfs not to extend past tires. Must be attached to the chassis at 3 points. Front nerf minimum 12" wide and rear nerf minimum 6" vertical contact area. All nerfs and bumpers must be steel. Minimum 1" O.D. No air deflectors on nerfs or bumpers.
4. Wheelbase minimum of 82". Tread width minimum of 48" center to center.
5. No traction control devices. Violators will be fined and suspended.
6. Coil, power boxes and all electrical components must be on engine side of firewall or in a box non-accessible by the driver.
7. No electrical disconnects in cockpit.
8. Body style and design must look like a standard and normal sprint car. No unusual shaped or added panels to deflect or catch air.
9. No cockpit adjustable Parts except wing slider.
10. Brake rotor material optional for

### **Wings All Classes - FLAT TOP WINGS ONLY**

1. Top wing surface area not to exceed 25 square feet. Foils or rudders will not be permitted anywhere on the top wing.
2. Top wing side panels maximum vertical height is 30".
3. No dual stage wings.
4. No offset or angled shape to the body or side panel design.
5. Side panels mounted at 90 degrees to the main body.
6. Side panel length not to exceed 12" total past the front or rear of body.
7. Wing T-post should be built from 1" X .083" minimum ASTM4130 normalized steel or equivalent material. Parts made from castings must be HRP Heat treated type.
8. Nose wing top surface shall be a maximum of 6 square feet. 2" Wicker bill allowed on nose wings.

### **Weight Rule**

1. 360 class 1525 lbs. (see 360 engine section)
2. Cars found underweight will be disqualified and forfeit money and points for said event.
3. Added weight must be between frame rails and axles, securely fastened TO THE FRAME.
4. All cars weighing will have a crew to push car on & off scales.
5. Top three cars from each heat and main must weigh before returning to pit stall. **CARS THAT DO NOT STOP AND WEIGH MAY BE DISQUALIFIED.** If in doubt, STOP at the scales. Only exception is if no weigh ins are announced by the race director.

### **TIRES**

Hoosier all four corners. Tire rule to be updated APRIL 2024. Pending tire availability.

## **Fire Suppression Systems** MANDATORY

Fire suppression systems meeting the SFI 17.3 specification required.

1. A fire suppression system that meets the SFI 17.3 specification must be installed and functional in all race cars at all times.
2. The fire suppression system must include a thermal trigger and a manual trigger, both mounted in the driver's compartment. The thermal trigger must be in the lower area of the drivers compartment forward of the seat near the area of the fuel pump. The manual trigger must be mounted within reach of the driver on the forward left-hand side of the cockpit. A minimum of one nozzle must be mounted in the lower area of the cockpit forward of the seat.
3. The DOT approved cylinder manufactured of aluminum or steel must be securely mounted to the frame per the manufacturer's instructions. The cylinder must have a minimum capacity of 5 lbs.
4. The system must be fully charged and display a legible and valid SFI 17.3 and manufacture label, easily viewable at any time. Cylinders that are beyond useful certification date must be inspected, serviced, and re-labeled by the manufacturer.
5. If a nozzle is connected to the cylinder with a line, the line must be steel or steel reinforced and must be triggered at the end of the line.

### Approved Manufactures

Lifeline Fire & Safety USA, 540-251-2724

Safety Systems Inc. (Firebottle), Ft Myers, FL, 239-995-6300

Spa Technique Inc. Indianapolis, IN 317-271-7941

Safecraft Safety Equipment, Martinez, CA, 800-400-225

## **Engine Rules**

1. Methanol fuels only. No performance enhancing additives. Including but not limited to Nitromethane and propylene oxide.
2. Normally aspirated, piston driven engines only.
3. Injectors must be individual stack per cylinder design with single round butterfly.

### **360 Sprint Class (Aluminum blocks see Sprint Car Challenge Tour Rules) [www.sprintcarchallenge.com/rules](http://www.sprintcarchallenge.com/rules)**

1. Maximum cubic inch 360.
2. No titanium cranks or rods.
3. Steel Blocks allowed.
4. Aluminum heads are permitted. Stock valve angle, 23 degrees plus or minus 2 degrees OEM, Ford and Chrysler are the exception, no rollover. No overhead cam type motors or multi valves per cylinder heads permitted.
5. Aluminum blocks allowed. Must meet minimum weight of 1525.
6. Injectors: Only one nozzle per cylinder. No down nozzles, no injection nozzles drilled directly into the head and no computerized injection. Injectors to be individual stack per cylinder design and shall not exceed 2-3/16" maximum inside diameter. Larger injectors may be used, but sleeves a minimum of three inches in length must be installed in the stack above the butterflies, and shall not exceed 2-3/16" maximum inside diameter. No relief hole may be drilled above the butterflies on any injector. Throttle body or plenum type injector is not allowed. If Ford or Chrysler engine is used - injectors must be restricted to 2" inside diameter and 3" in length.
7. Oil pan must have a 1" inspection plug on the side.

## **Mufflers**

**Unaltered**, functional mufflers intact at all times.

Large oval Flow Master (#5354510), Large Spin Tech box mufflers (#1555) or Schoenfeld (#14272735 or 14272730). Max dba 95 @ 100'.

**PLEASE DIRECT RULE QUESTIONS TO  
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