



2023

NARC Sprint Car Series

410 Sprint Car

TECHNICAL RULES

Updated 1/15/2023.

THIS BOOK IS EFFECTIVE JANUARY 1, 2023,
AND SUPERCEDES ALL PREVIOUS VERSIONS

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*Please note that any updates to these rules will be posted at www.NARC410.com
and will supersede this document.*

Interpretation of these rules or amendment to these rules may be made at any time. 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 registrants are deemed to have complied with these rules. No express or implied warranty of safety shall result from publications of, or compliance with these 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 participants.

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 EXPRESS OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM PUBLICATION OF OR COMPLIANCE WITH THESE RULES AND/OR REGULATIONS. They are intended as a guide for the conduct of the sport and are in no way a guarantee against injury or death to a participant, spectator or official. The race director shall be empowered to permit minor deviations from any of the specifications herein or impose any further restrictions that do not alter the minimum acceptable requirements. NO EXPRESSED 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. Referee's decision is final.

Sprint car racing is a very emotional sport; therefore, good sportsmanship is the cornerstone on any competitive racing program. This must include respect for all participants - drivers, owners, pit crews, and officials. For our part we will try to be consistent with our rules no matter what or who is involved. We will treat all participants with respect and expect similar treatment in return. A racer's Pit area is his castle - therefore please stay out of other racer's pit area.

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SECTION 1

Chassis

- A. Open to any sprint car chassis 1984 to present.
- B. Wheelbase minimum of eighty-three inches. Maximum wheelbase is 90".
- C. Motor, body, seat, and fuel tank must be mounted to the centerline of the chassis.
- D. Rear-engine cars will not be permitted, no offset allowed.
- E. Chassis should be provided with a minimum of four mounting points to securely mount the seat as specified by seat and chassis manufactory.
- F. No champ dirt cars. No elliptical (oval shaped) tubing used on or as part of the main structure.
- G. It is required to install additional bars to support and decrease the span between the front and rear cage uprights. The support bars must be in addition to front and rear uprights.

Body General Appearance/Aerodynamics Devices

- A. Body/chassis must be well maintained. All cars should have at least one number on both sides of tail tank and on the outsides of both top wing side panels. It is suggested to have a number on the center of the top wing foil. Minimum size of number 18" tall 2" wide and contrasting color of car. Number must be legible and LARGE ENOUGH TO BE EASILY READ FROM THE SCORING BOOTH, NO EXCEPTIONS.
- B. All cars will be required to run a full sprint appearing hood. Hood must extend to the front torsion tubes or a similar location on Coil over cars. While the hood may be a multiple piece design, it must appear to be one continuous piece.
- C. Only standard type Sprint Car bodies, tails, and hoods will be permitted.
 - a. Any new body designs including, but not limited to side body panels, hood design, nose pieces and/or any other part of the exterior body must be approved by the KWS-NARC officials prior to being introduced into competition.
- D. No side foils, rudders, or panels are to extend beyond rear cage support bars on any side.
- E. No body pieces to extend beyond or underneath front torsion tube except for the hood.
- F. ½ inch Gurney lips or turnouts are permitted on any body panels. No wedges or foils underneath race car.
- G. Sunshields cannot restrict driver vision.
- H. The driver's right-side opening must be a minimum 10-inch vertical opening at any point and a minimum 21-inch horizontal opening at any point.
- I. Frames identical to the maxim "Big Max" frame may be fully paneled.
- J. Firewall to be a solid material and fit between the engine and the driver. Access holes may be drilled for wiring and linkage.
- K. Safety bar(s) and or arm guard paneling that protrude outward from the frame rail for the purpose of creating room for the driver will be permitted. The guards and or paneling will be permitted to extend a maximum of 7"-inches as measured from the outside edge of the middle frame rails and must remain above the middle frame rail. The sole purpose of the area is creating elbow room for the driver. The elbow room must remain above the upper "middle" frame rail and may not extend rearward of the leading edge of the rear axle.
- L. Floor pan must extend from the firewall to the front of the driver's seat. Constructed of steel or aluminum.
- M. Mirrors or two-way radios between driver and other team members are not allowed.
- N. A kill switch is required within easy reach of the driver and Safety Crews. It must be clearly **LABELED "ON" and "OFF."**

SECTION 2

Top Wing = Flat Top (ONLY) – NARC Wing Rule

- A. Center Foil maximum size of 25 square feet with a maximum width and length of 60 inches. Center Foil must be square or rectangular in shape with all 4 corners set at 90° angles with no variance =allowed. Center foil top is to be flat from front to back and side to side. The center foil top must start being flat within 6" from the center foil's front leading edge.
- B. Center Foil shall be fully sheathed in aluminum. Vent holes, dimples, ridges and/or any other type of fabricated modification will not be permitted anywhere on the wing.
- C. A removable wicker bill, maximum height of 2 inches, may be mounted on the rear edge of the top wing center foil. Wicker bill must be 90 degrees to the top of the center foil. Built-in wicker bills or gurney lips will not be permitted. The maximum dimension of the wicker bill may change periodically at the discretion of NARC-King of the West Officials. Any such changes will be issued in writing prior to the event in which the change will be made.
- D. The top wing may be adjustable in the cockpit by the driver. Other than the slider mechanism-moving parts will not be permitted on or in the foil structure.
- E. Only one slider mechanism will be permitted on the top wing, which only permits forward and backward adjustment.
- F. The maximum center foil thickness is 9 inches. Underneath the side of center foil must appear to be a continuous smooth arc with no recesses, concaves, or protrusions. Center Foil must be one-piece construction. Split or bi-wings will not be permitted. Only wings fabricated of metal alloys will be permitted. Fiberglass, carbon fiber and/or other similar material(s) will not be permitted in the basic framework of the wings. The top wing must not extend beyond the outside of rear tires.
- G. Foils or rudders will not be permitted anywhere on the top wing.
- H. Wing T-Post will be built from 1" X .083" minimum ASTM4130 normalized steel or equivalent material. Wing attachment designs will be subject to approval. The only cast pieces approved will be HRP Part #HRP8811-A75-HD. If new T-Post designs are developed, they must be submitted for approval before being used in competition.

Side Board Panels Top Wing

- A. All braces or supports shall be oriented thin edge to face the air stream. Only rectangular, round or oval metal braces not exceeding 1-inch in width will be permitted. Adjustable bracing will not be permitted.
- B. Aero elliptical brace material will not be permitted.
- C. Brace or support shall not resemble a wicker bill or a split wing. Side boards must be mounted square to the center foil and parallel to each other. Any kick-out will not be permitted.
- I. Front
 - 1. The Front side boards will have a maximum 12-inches tall and 26 inches long with an overhang not exceeding 1-inch from the center foil front edge to the side board front edge.
 - 2. Side boards may have a maximum ½"-inch front, back, top, and bottom turnout(s) (flange).

II. Top

1. The Top wing side board's maximum size will be 72 inches long and 30 inches tall. The top 2/3's of each top wing side panel shall consist of only 2 corners. Each corner shall be set at a 90° angle with no variance. This portion of the side panel's leading edge may not be behind the center foils leading edge.
2. Panels must be of one-piece construction.
3. Panels must be fabricated flat. Turnouts on all edges of the wing must not exceed 1-1/4" x 1-1/4" and must be orientated at a 90° angle to the flat portion of the side panel.

Front Wing

- A. Center Foil maximum size of six square feet with a maximum width of 36 inches. Center Foil must be square or rectangular in shape with all four corners set at 90-degree angles. A maximum of 2" wickerbill is allowed.
- B. Center Foil shall be fully sheathed in aluminum. Vent holes, dimples, ridges, etc. are prohibited anywhere on the wing.
- C. Maximum distance from the Center Foil front edge to the front edge of the front axle may not exceed 20".
- D. The Center Foil front edge must remain at least one inch behind the front edge of the front bumper. Center Foil top surface from side to side must remain flat.
- E. Center Foil must be one piece. No split or bi-wings will be permitted.
- F. Wings must be fabricated of metal alloys only. No fiberglass, carbon fiber, or other similar material may be used in the basic framework of the wings.
- G. The Front Wing must not extend beyond outside of front tires. The Front Wing may not be cockpit or driver adjustable while the car is stationary or in motion.
- H. No moving parts permitted on or in foil structure. Rudders or fins are not allowed.
- I. The 5" section located at the rear of the front foil must not have a belly/curl arc that is out of proportion with the rest of the front foil. As measured on a 5" straight edge, the belly at 2 1/2" from the rear of the foil may not be deeper than 3/8". There is zero tolerance on this 3/8" depth. It is suggested that the wing blueprint specify 1 1/32" depth, so that if any deflection or movement of the wing occurs, the depth will not exceed the 3/8" specification (This 3/8" measurement ensures that the belly/curl arc is gradual).
- J. The belly/curl arc must span the entire length of the front foil and appear to be a gradual arc with the deepest point, no further back than 12" from the leading edge. The belly/curl arc must start at the front foils leading edge and shall not exceed a depth of two inches. Front foil thickness cannot exceed 3.6 inches.

Side Board Panels Front Wing

- A. Front side boards maximum 12 inches tall and 26 inches long with no more than one inch overhang from the center foil front edge to the sideboard front edge.
- B. Side boards may have front, back, top, and bottom turnouts of no more than 1/2 inch.

SECTION 3

Roll Cage

- A. Roll bars shall be of the full cage type, see rule 4E for material measurements.
- B. All "T" intersection must be gusseted and welded on both sides.
- C. Cage to be above driver's helmet by two inches.
- D. The maximum width that is permitted for the opening at the top of the roll cage is 27 inches. No bracing that would prevent the driver's ability to exit through the opening or

inhibit safety/ rescue crew's ability to extract the driver will be permitted in the center of the top cage.

- E. The following measurements are minimums. Only those areas indicated will be subject to technical inspections.

Suggested Material: 4130 normalized TOP RAILS: 1 ½" x .095"

BOTTOM RAILS: 1 3/8" x .095" OR 1 ½" x .083" ROLL CAGE UPRIGHTS: 1 3/8" x .083"

ROLL CAGE TOP CROSS MEMBERS: 1 ½" x .095" UPPER RAILS: 1 3/8" x .083"

REAR END SAFETY BAR (mandatory): 1" x .083" BRACE: 1 ¼" x .065

- F. You may be asked to present your car for ultrasound of chassis.
- G. All roll cage top horizontal bars, rear vertical bars, and side horizontal bars from the top to shoulder height shall be padded with the minimum of ½" thickness etha-foam #220 or equivalent for driver/safety crew safety.
- H. The technical official or race committee must approve all roll cages.

I. Rock Screens are REQUIRED!

Suspension and Steering Components

- A. Front axles must be steel only. Minimum sizes 2" x .156 or 2 ¼" x .120 or 2 3/8" x .095 or 2 ½" x .095.
- B. Straight front axle only. Aluminum or Titanium front axles are not permitted.
- C. Any conventional torsion bar or coil-over suspension is allowed. Combining the two is allowed.
- D. Independent rear suspension is not allowed.
- E. Front anti-roll torsion bar assemblies (sway bar) are not permitted.
- F. One shock per wheel. No cockpit adjustable shocks.
- G. Quick release steering wheel mandatory.
- H. The only device adjustable from the driver's cockpit or driver's reach will be one top-wing slider mechanism. Said slider is to be one dimensional and allow for forward and backward movement only.
- I. Drag links must be tethered to the frame with nylon webbing of at least one inch width.
- J. Steel Tie Rods and Drag Links with Steel Heims must be made of 4130 steel a minimum of one inch in diameter and a minimum material thickness of .058 inches. Only magnetic steel tie rods and heim joints (rod ends) will be permitted. Swedging of the tubing will not be permitted.
- K. Hollow and/or drilled bolts, fasteners, and/or heim joints (rod ends) will not be permitted.
- L. Torsion arm stops retaining system 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 stop design.

The following Torsion Arm Stop(s) have been approved for competition:

Moose Block 1200 Retainer Kit

All Star Performance All Star 10730 Retainer CBT Wedge Bolt (expanding mandrel) Butlerbuilt Mandrel

KKR grove and clip Kaeding Clip

DMI – T-REX (Torsion Restraint Express System)

- M. Left front radius rods must be constructed of 4130 steel with steel rod ends.
- N. Axle tethers and king pin tethers are mandatory.

The approved Torsion Arm Stop retaining system may be revised from time-to-time with additional approvals and/or other changes to the approved list.

SECTION 4

Weight

- A. Minimum weight **1425 lbs.** with the driver fully suited in the car at any time, before, during, or after the racing event.
- B. Additional bolt-on weight will be permitted but must be mounted and fastened to the frame and/or chassis in a secure manner. All additional bolt-on weight must be mounted and fastened in the area between the bottom frame rails and torsion tubes but mounted no higher than upper rails. At the discretion of KWS-NARC Official's additional bolt-on weight may be mounted and/or fastened forward of the front axle, but not past the torsion bar.
- C. Weight cannot be added, moved, or replaced during yellow or red flag conditions.
- D. Any car weighing light after the heats or main will be scored and paid for last place.
- E. Except for extenuating circumstances drivers must remain seated and inside the frame rails until weighing is completed. Violation may result in disqualification from the racing event for which the car is being weighed.
- F. Please *DO NOT DRIVE* on scales. All cars weighing will have a crew to push car on and off scales.

Weight Rule Procedure

- A. At the beginning of each event, KWS-NARC officials will determine whether track scales or KWS-NARC scales will be used as the official scales for event. Car and driver are weighed as one unit, with driver seated inside the car. Car and driver cannot weigh less than 1,425 (with or without mufflers) pounds when weighed as follows:
- B. Mandatory weigh-in for everyone immediately after car exits the track following qualification.
- C. Top Four (4) cars that finish A-main must weigh-in immediately following the event as you exit the track.
- D. Random weigh-in is possible at any time during program, including after feature finish.
- E. Cars may cross scales no more than twice to determine weight.
- F. Scales available at any time for checking weight before program begins, with opportunity to add weight.
- G. It is your responsibility to remove mud before any weigh-in.
- H. If your car crashes during hot laps or qualifying before weighing, car will be weighed after heat race or first race run.
- I. Weights, if added, must be bolted to main frame, and have car # visibly marked on the weight.
- J. If weight is lost during a race, the car will be black-flagged.

Weight Rule Penalties

- A. Cars must weigh a minimum of 1425 pounds WITH driver at any time before, during or after the racing event.
- B. Cars found to be under weight of 1425 lbs. after their original qualifying attempt will be given a chance to bring the car up to the minimum weight and receive one lap at the end of qualify. Penalized car cannot start better than seventh in the Main event behind the Dash Cars.
- C. Once you are re-weighed and pronounced legal, your car starts heats in the requalified order.
- D. If your car is found too light after a heat race, you will be disqualified from that race, and you will be given an opportunity to bring your car up to the required weight for the C-main or B-main.

- E. If your car is found too light after C-main or B-main, you will be disqualified for the night and lose all points and money for the night. Show-up points are still awarded.

SECTION 5

Engine

- A. Maximum engine capacity of 410 cubic inches. No tolerance.
- B. No rollover, no overhead cam type motors or multi valves per cylinder heads permitted.
- C. All engine cylinders must be machined from iron/steel alloy only. Only two valves and onespark plug permitted per cylinder.
- D. Only normally aspirated motors are permitted. No turbo, superchargers, or forced induction of any description are permitted.
- E. No titanium cranks or rods.
- F. Engine connecting rods must be 100% steel. There must be an inspection plug in the oil pan, either a #12AN fitting or a 1-inch pipe plug. If a car is to be inspected and there is no inspection plug in the oil pan it will be required to pull oil pan for inspection.
- G. No twin **DOWN** nozzles.
- H. Engine may be checked at any time during an event or torn down after an event at KWS- NARC discretion. If a KWS-NARC official finds the motor to be illegal, you will be given the opportunity to pull the head if you think your motor is legal. You will have a time limit of one hour after the feature ends to do so. Anyone who refuses to comply with this rule, destroys KWS-NARC property, or verbally abuses KWS-NARC officials over technical matters, *will be disqualified, and will draw a penalty and driver and car will be suspended for the next three KWS-NARC races.*

Rods

- A. Steel rods only.

Injectors

- A. Maximum throttle bore as measured at the butterfly may not exceed 3.000 inches diameter.
- B. No electric computers or computerized injection.
- C. A minimum of two throttle return springs must be used to close the throttle.
- D. Must have toe strap on throttle pedal.

Ignition

- A. Cars must have a clearly marked ON/OFF ignition switch within reach of the driver and visible to rescue workers.
- B. **Traction control devices are strictly prohibited.**

Fuel

Methanol Only

- A. No additives, except KWS-NARC approved top oil, which must pass KWS-NARC fuel test. Nonitrous oxide, no turbo chargers, or blowers. Fuel bladders are mandatory. KWS-NARC officials may check fuel with *a hydrometer at any time on selected cars during an event.* If fuel is found to be illegal, driver and car will be disqualified, and all points and money will be forfeited for that event. Owner may be requested to pay lab

- cost for fuel test.
- B. Specific gravity is not to exceed .82 or within (plus or minus) .10 of standard track fuel sample.

Fuel Shut-off

- A. Fuel systems must have shut off device within reach of the driver marked in large bold block letters and painted "Day Glow-Red" color for easy identification. A Waterman Shut-off system is recommended for additional safety.
- B. All fuel lines and filters will be securely and safely mounted to the satisfaction of the officials or race committee. NO EXCEPTIONS.

Fuel Cell

- A. FT3 fuel cells are recommended. An approval fuel cell with bladder is to be used.
- B. Suggested fuel cell capable of Green and Yellow Flag Laps determined by track length. Will be informed of number of laps at the Pit Meeting.
- C. Fuel tanks may not be mounted to the chassis utilizing any portion of the access plate or thenut plates bonded into the fuel bladder.
- D. Mounting fuel tank to chassis: All mounting points must have inner and outer plates attached to the shell or use mounts molded into tank. The plates must be of adequate size to ensure the tank being secure to the chassis. All tanks will have four different mounts to the cage.
- E. Tank vent MUST have check valve.
- F. Manual or automatic fuel shut offs at tank are highly suggested.
- G. Fuel cell used to qualify MUST BE used in all events.
- H. All fuel cell mounts subject to safety inspector's or race committee approval.
- I. Any car leaking or spilling fuel will be *BLACK - flagged*.

Radiator

- A. Must be in front of engine.
- B. ANTI-FREEZE is NOT ALLOWED.

Driveline

- A. All drive trains must have a driveline or rear end coupler system (to disengage rear end from engine). Torque arm drivelines are not allowed. All drivelines must be enclosed and have no more than 1 u-joint and that u-joint must be at the front of the driveline. U-joint blankets are highly recommended.
- B. 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. Metal hoop restraints must react positive to magnet testing. The rear cross member used for mounting the steel drive-line hoop must be constructed of .083-inch steel.
- C. A drive line containment system is mandatory; either a steel torque ball housing made of a minimum .120 wall thickness magnetic steel attached to the firewall with steel and/or titanium bolts and/or a torque ball u-joint containment blanket is recommended to shield revolving parts within the cockpit.

Rear End

- A. Any conventional quick change rear end is allowed with a maximum 2" offset.

Bumpers

- A. Bumpers and nerf bars must be sprint car type bars and securely bolted to the chassis with minimum 3/16" or 10/32" threads bolts. Bumpers and nerf bars will be constructed of no less than 1" O.D. and .065 wall thickness. Side nerf bars **must** have triangular or 4-point configuration and may not extend outside rear tires.
- B. The front bumper may not extend more than eight inches from the frame and 23 ½ inches from the center of front axle to front of front bumper or at the discretion of KWS-NARC officials.
- C. All body parts, bumpers and nerf bars must be securely attached. Cotter pins and wire ties are not permitted.

Exhaust

- A. Mufflers are mandatory unless announced by racetrack promoter prior to the event. Only Flowmaster mufflers are required to have turn downs, outlet not to exceed 3.125 inches.
- B. OCEAN SPEEDWAY: Flowmaster 53545-10 IS THE ONLY MUFFLER ALLOWED.
- C. CALISTOGA SPEEDWAY, CHICO SILVER DOLLAR SPEEDWAY, PLACERVILLE SPEEDWAY AND PETALUMA SPEEDWAY: Competitors can run either the Flowmaster 53545-10 or the SpinTech 1545 big box muffler.
- D. *At all other tracks not mentioned above – including those in Oregon and Washington, competitors must run one of the following: Flowmaster, SpinTech, Schoenfeld 14272735-78 or Extreme mufflers only.*
- E. Any other muffler or product application must be pre-approved by NARC officials in advance.
- F. Mufflers are subject to Boris Scope inspection at any time.
If it is found that you have tampered with the FLOWMASTER Muffler you will be subject to one race suspension and \$250 fine.
- G. Mufflers are to be securely fastened. Mufflers and headers must remain attached. All muffler and header components must remain intact and operating. Failure to comply with this provision will result in automatic disqualification (Black Flag).
- H. We will make every effort to inform you if your car is running loud during hot laps, but it is your responsibility to check with the Pit Stewart to make sure you were not loud during qualifying. To make sure you receive as much time as possible to repair sound problems during qualifying, each car should have a crew member check with the steward after their qualifying run. Any car exceeding the tracks legal sound requirements will have the opportunity to correct the muffler system and re-qualify at the end of the qualifying order. If second, one lap, attempt produces a legal sound reading, the car will post that qualifying time for heat line-ups but cannot start better than seventh in the Main Event after the Dash cars.
- I. Track DBA requirements must be met. THIS NOISE REQUIREMENT WILL BE ENFORCED.

Traction Control Devices

- A. Traction control devices of any type are NOT permitted at any time, during any event.
- B. Any team found with a traction control device in any pre and/or post-race inspection will be disqualified from that event and face the following penalties:
 - \$10,000 car owner fine.
 - \$10,000 driver fine.
 - Loss of all NARC championship points and winnings.
 - Banned/suspended for a minimum of one calendar year.
 - From time-to-time random inspections will occur and various components may be

impounded for further analysis and inspection including, but not limited to ignition systems, ignition boxes, wiring looms, and or tachometers.

Electronics, Gauges and Dashes

- A. Two-way communication devices in or attached to the race vehicle or on the driver's person are not permitted.
- B. Cellular, satellite and/or Wi-Fi devices in or attached to the race vehicle or the driver's person will not be permitted (including cell phones or smart watches).
- C. Antennas will not be permitted in or attached to the race vehicle or carried by the driver.
- D. All forms of a vehicle position system (GPS) will not be permitted.
- E. Only approved lap timing and or lap time recording devices (transponders) will be permitted.
- F. All Electric gauges whether analog or digital, except tachometers, will only be permitted to have one (1) input from the respective gauge sensor. Outputs from the gauges are not permitted. Tachometers will be permitted to record engine RPM for recall.
- G. Electronic Dash Modules will not be allowed.
- H. All additional wiring harnesses related to electronic dash modules, or any other type of data acquisition must be completely removed from the race vehicle during an event.

SECTION 6

Tires

- A. Hoosier tires are required for competition on all four (4) corners of the racecar at all NARC Sprint Car Series Events.
 - Right Rear: Hoosier H15 (Secondary choice: Medium)
 - Left Rear: H12

NEW: Beginning in February, Hoosier Racing Tires will begin rolling out their new national right rear drive for sprint car racing. The new tire will be offered in two compounds and will be designated as a D15A and MEDIUM. The D15A will replace the current H15 and features a slightly firmer tread compound.

The new left rear tire will be designated as a D12A.

Once the new tires become available, Hoosier will no longer manufacture the H15 & H12 and the transition will begin to the new national tires. This is expected to last until the end of the 2023 season.

HTW tires are no longer allowed.

NOTE: Any team caught leaving used tires at the racetrack will be fined \$200 per tire.

- B. The altering of any tire compound, by any means is not permitted. Chemical alteration of the tread carcass and/or tread compound, such as tire 'soaking' and or the introduction of tread 'softener' and/or the physical defacement (removal, altering, and/or covering) of tire sidewall markings in any manner will not be permitted. If any competitor is found to have altered their tires, any penalty deemed appropriate by KWS-NARC Officials may be issued. Another competitor may protest the rear drive tires.
 - 1.) Any tire may be inspected and/or analyzed for alteration at any time. This will

consist of a process as determined by the independent laboratory that performs the analysis. A "Chain of Custody" process will be outlined with the competitor upon inspection of the tires.

- 2.) The analysis process will require shipment of the tire to the selected laboratory. Additional race event(s) may be completed before a determination is made. If a penalty is issued, the event(s) that fell into the analysis time while the tire(s) were being analyzed will be considered as part of the penalty time.

Wheels

- A. Any aluminum, steel six-pin or spline wheel are OK. Any wheel offset is allowed.
- B. Maximum wheel width: Left Rear 15", Right Rear 18", Maximum wheel diameter 15-inches.
- C. Bead locks on all wheels recommended.
- D. Plastic, Titanium, or Carbon fiber wheels are not allowed.
- E. Wheel covers: It is mandatory that wheel covers have a minimum of five mounting points. However, both 5 and 3 mounting point wheel covers will be allowed for competition under the following conditions: Wheel covers having a minimum of five attachment points may continue to use dzus fasteners. Said dzus fasteners must be made of steel or titanium only. Wheel covers having only three attachment points must be bolted-on at all three points utilizing a minimum 5/16", flanged steel or titanium bolt and an approved fastening (nut assembly) system.

Brakes

- A. Minimum left front and left inboard rear brake system. Front and rear brakes must work at start of event. Rear brakes must always work. Additional rear brake OK.
- B. Steel, cast iron, aluminum, or titanium rotors only. Carbon fiber rotors are not allowed.
- C. No copper or plastic brake lines.

SECTION 7

Seats

- A. Aluminum and/or carbon fiber-type seats will be permitted. It is **recommended** that aluminum seats have an FIA and/or SFI rating, any carbon-fiber-type, composite seats must meet the SFI Rating 39.2. All seats must be mounted to the frame as required by the seat and chassis manufacturer.
- B. High-back Aluminum (stockcar style) seats should be securely mounted to the frame as recommended/required by seat manufacturer and chassis manufacturer. Sprint car suitable FIA manufacturer approved composite seats are permitted.
- C. Head rest (behind the head) should include padding.
- D. Seat should be mounted in four places to the chassis with minimum 5/16" steel bolt and nut.
- E. Mounting hole in seat must have a 2" diameter mounting plate with a minimum .060".
- F. Positively No Homemade Aluminum, Plastic, or Fiberglass seats will be allowed.
- G. A right head net or support is highly suggested. Head nets must be equipped with quick release mechanisms.
- H. Full containment seats are highly recommended.
- I. Suggested driver's left side head rest / helmet surround, must extend at least four-inches forward from the back of the headrest (where the helmet contacts the back of the headrest). All areas surrounding the head should have padding.
- J. An approved driver's cockpit net is suggested for the left side if the Helmet head rest /

helmet surround is less than 7"-inches forward from the back of the seat. The net must be a minimum of three (3) ribbons and meet the SFI 37.1 specifications, installed per the manufacturer's specifications.

Safety Belt Requirement

- A. Each competitor is solely responsible for the effectiveness of personal safety equipment used during an event. Each competitor is expected to investigate and educate themselves with the effectiveness and availability of personal safety equipment.
- B. Seat Belts: Each car should be equipped with an SFI 16.5 or SFI 16.1 approved seat belt restraint system until the date expiration two years from the date of manufacturer or stamped date of expiration. Seat belts restraint systems shall be installed in accordance with the directions and application of the system supplier or manufacturer. (A quick release 2" seat belt and shoulder harnesses no less than 2" wide and submarine belt (crotch) are mandatory 2" wide shoulder harness for Hans device ok).
- C. Seat belt webbing that comes into contact with any sharp or metal edge should be protected from that edge by means of push on grip vinyl trim. Seat manufacturers supply the seat with trim protecting the webbing from abrasion or cutting under impact conditions and should be used to their specifications.
- D. It is the responsibility of the driver, not the Track, Officials, or the Promoter to ensure that his/her seat belt restraint system and all components are SFI approved, correctly installed, maintained, and safely used.
- E. All belts must be mounted per manufacturer directions to the roll cage separately from the seat.
- F. 7-point class belt system highly recommended.
- G. Belts must come from behind driver. The mounting position is important! Shoulder belt should be mounted approximately 4" below the shoulders. The lap belts mounting should be the same width of the driver.
- H. Harness/belts must be always worn when the car is on the track.
- I. **Two (2)** years old on belts maximum. The date stamp must be readable, and belts must not be worn (frayed) or they will have to be replaced for your safety.

SECTION 8

Safety

- A. All drivers will be required to wear a full-face helmet, with a minimum safety rating of FIA 8860-2010, Snell SA 2015, Snell SA 2010, Snell SAH 2010 and or SFI 31.1/2005 label at all times on the track or when car is fired.
- B. It is strongly recommended that helmets should have the Eject™ helmet removal system installed as per the manufacture instructions.
- C. The driver should wear the helmet in accordance with the directions provided by the helmet manufacturer and/or supplier.
- D. At all times during an event including practice, qualifying and competition excluding starting the car for engine warm-up drivers should wear an SFI-approved head and neck restraint device/system that is properly mounted and connected per the manufacturer's instructions. The device should meet SFI 38.1 specifications and display a valid SFI 38.1 label.
- E. Helmet and face shield must be always worn while operating a car on the racetrack. No goggles permitted.
- F. Each driver should wear a fire-resistant uniform meeting the SFI 3.2A/5 specification and display a valid SFI 3.2A/5 label.

- G. Each driver should also wear fire resistant accessories that effectively cover the remaining parts of the body. Shoes and gloves should meet the SFI 3.3 specification and display a valid SFI.3 label. Nomex-type or equivalent fire-resistant uniforms (suit), gloves, neck brace, and shoes are mandatory.
- H. Nomex-type or equivalent hood socks or skirts are mandatory.
- I. Nomex-type or equivalent socks, underwear is highly suggested.
- J. Right Side window Net suggested. Window nets must be equipped with quick release mechanisms.
- K. Quick release steering wheel mandatory.
- L. Arm restraints are recommended.
- M. Flame retardant roll bar padding, knee, and steering pads or padding required.
- N. Other SAFETY ITEMS:
 - a. No sharp or protruding edges in or around the cockpit, which would impede the driver's rapid exit from the car.
 - b. Rock screens with a minimum of .090-inch screens must be securely fastened.
 - c. A marked electrical kill switch in rear of driver.
 - d. A marked fuel shut off valve in reach of driver.
 - e. Flame retardant seat padding is suggested.
 - f. Drive line u-joint scatter shields is mandatory.

Fire Suppression Systems

A fire suppression system that meets the SFI 17.3 specification must be installed and functional in all race cars at all times when competing at Northern Auto Racing Club events after May 1, 2022.

- A. The fire suppression system must include a thermal trigger and a manual trigger. Both triggers must be mounted in the driver's compartment. The thermal trigger must be in the lower area of the driver's 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.
- B. 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 five-pounds.
- C. The system must be fully charged and display a legible and valid SFI 17.3 and manufacturer label, easily viewable at any time by NARC and/or racetrack officials. Cylinders that are beyond useful certification date must be inspected, serviced and re-labeled by the manufacturer.
- D. 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.

(NOTE: SFI is a certification that demonstrates that the manufacturer certifies the racing equipment has been laboratory tested to meet or exceed SFI safety specifications. This gives consumers and sanctioning bodies a way to differentiate a certified product from one that is untested.)

General Safety Requirements

- A. A medical examination of any driver may be required as needed by officials for safety.
- B. All wrecked cars must be inspected by a safety official before re-entering competition.

- A racecar may be inspected by officials at the time.
- C. Any car found to be illegal will be disqualified from competition.
- D. Seat belts will be always used.

Fire Control

- A. It is recommended that teams have in the rear of their transporter an easily accessible **fire extinguisher** of at least 2.5 gal FFF or equivalent.

SECTION 9

Roll-over Regulations

- A. Any car/driver rolling over may be subject to approval to participate in any event that night, unless cleared through the track official. Any official may make comments regarding the condition of the car and/or driver. **ANY CAR, TEAM, OR DRIVER NOT MEETING SPEEDWAYSPECIFICATIONS, OR STANDARD RACING SAFETY PROCEDURES AND EQUIPMENT, ISSUBJECT TO AUTOMATIC DISQUALIFICATIONS AND/OR PENALTIES.**

Protests

- A. Participating car owners and drivers ONLY may protest another car's compliance with the rules. Car must be still running competitively at end of feature. The protest must be filed IN WRITING and HAND DELIVERED to the Director of Competition or Technical/Pit Steward within 15 minutes of posted finish of last event and must be accompanied by \$200 cash. All disputes will be settled the night of the event.
- B. DO NOT ABUSE THIS RULE!
Decisions of KWS-NARC Official(s) are final and binding without exception. PROMOTERRESERVES THE RIGHT TO ADD OR DELETE EVENTS AS DEEMED NECESSARY. ALL DECISIONS WILL BE FINAL AT THE PROMOTORS DISCRETION

AMB Transponders

Transponders are mandatory on all cars; must be mounted to right front down tube between frame rails. They can be purchased through www.amb-it.com

Personal TranX260 Direct Powered Transponder By far the most popular with drivers, the Direct Powered Transponder (DP) needs a quick two-wire connection to the car's battery to operate. Once mounted to the car using zip-ties or rivets, the DP Transponder requires no maintenance or upkeep. **Personal TranX260 Rechargeable Transponder** Ideal for cars that have a limited electrical system on-board or cars whose electrical system is an older 6-volt type, the Rechargeable Transponder offers drivers increased flexibility in operation. For example, the transponder can be easily switched from car to car where a driver races two cars during a weekend. Though the transponder does need recharging after 5 days of operation, its special charging cradle is designed to prolong the battery life when not in use.

Raceceivers

Raceceivers are mandatory on all cars; they can be purchased through www.raceceiver.com
 FD1600 Fusion Driver Raceceiver

If you are out of position, the competitor will be asked twice (2) to get into proper spot. If he/she does not, they will be penalized two spots for every position that you are out, on the next yellow or at the end of the race, whichever comes first.

EIRI

(Except in rare instances) Decisions of officials are final and binding without exception. Any rule changes or clarifications during the year will be amended at www.narc410.com and will be considered as an official part of these rules.

CALIFORNIA STATE RULES ALLOWS NO LIQUID OR TIRE DUMPING FACILITIES AT THEIR FAIRGROUNDS.

Each race car that enters the fairgrounds pit area MUST have an empty container(s) approved by the management of the SPEEDWAY that will hold at least two gallons of used oil (fluids) for collecting anything that may be drained out of the race car or tow vehicle at each event. These containers must be removed with the race car after every race and disposed of at an approved facility at the owner's expense.

