

# **2020 Limited Modified Technical Rules**

Questions? Contact:

Head Tech Official DOC Division Representative

 Jeff Munro
 Frank Jordan
 Nick Lyons

 916-276-6982
 916-997-6080
 916-257-1786

americanracerwest@gmail.com fjordan@bmrnapa.com lyonspro@yahoo.com

All American Speedway reserves the right to alter or amend these rules and regulations in the interest of safety, cost control and / or fair competition. Any changes will be posted as an "addendum" to the rules.

It is the responsibility of each competitor to read and understand the contents of this rule book. In the event of a disagreement or dispute regarding the interpretation or application of the rules written herein, the decision of the speedway manager shall prevail.

Illegal components may be confiscated by All American Speedway and become property of the speedway.

All deficient safety issues must be corrected before the car is allowed to compete. All non-safety rules infractions will be addressed by the All American Speedway technical staff and, if deemed to have a performance advantage, may require the competitor to repair before being allowed to compete, or, if deemed acceptable, may require a weight penalty be added for that nights event and the repair to be made before the next event can be participated in.

**O.O Driver Eligibility** Drivers in this division must be at least **14** years old. A NASCAR license DIV II is required for this division. All drivers, owners and crew members must hold a current NASCAR member license in good standing.

**<u>0.1</u>** Any driver competing for rookie of the year points or who has competed in fewer than 5 races must display an obvious yellow stripe on the rear bumper of his or her vehicle while competing.

#### 1.0 Competing models

**1.1** Open to any Grand American, IMCA, or NASCAR type, traditional modified that meets the requirements, measurements and dimensions spelled out in these rules.

### 2.0 General Body Rules

- **2.1** Must use a traditionally fabricated and industry accepted modified body configuration. Must meet measurement requirements spelled out in the body spec diagram. (See page 8 and 9). Body panels may be constructed of either .040 aluminum sheet, 22 gauge steel or fiberglass. (NO carbon fiber panels allowed). The top of the deck must be even with the top of the door and quarter panels. No drop decks or channeled decks allowed.
- **2.2** Roof may be aluminum, steel or fiberglass and may have a maximum rake of 3" measured from the highest point to 2" back from the front of the roof in the center. Any roof wickers or rails may be no more than 1" tall and must run parallel with the body.
- **2.3** Body width shall be maximum 68" minimum is 54". Body width may not exceed the width of the tires. All side panels must be mounted parallel (the same width) front to back.
- **2.4** Maximum body rake is 6" from the front cowl to the rear deck at the base of the spoiler over the length of the main body. If the front deck is level from the dash area to just behind the driver, then only 3" of rake



are allowed from the point just behind the driver to the base of the spoiler.

- **2.5** Front edge of door to centerline of rear axle must be 72" (even with the back of the engine block) Rear overhang from centerline of rear axle to farthest most part of the body (not the bumper) may be 48" max.
- 2.6 Side window openings must be at least 12" tall and 18" wide on both sides.
- **2.7** Side sail panels must extend from the roof down to the top of the rear quarter panels and may not extend past the end of the body at the base of the spoiler. The rear most part of the sail panel may be minimum of 2" tall, maximum of 4" tall. Must have R & L front "A" pillar pieces extending from the roof to the deck at the front cowl.
- **2.8** Hood must mount flush with the dash area and be no wider than the body. Rear of hood must be sealed. No rear hood scoop opening on cars without a full windshield. Maximum hood rake is 3" front to rear. Hood sides may have a maximum of a 4" drop. No other side panels allowed in the engine compartment.
- **2.9** Nose may be a maximum of 45" wide and may extend a maximum of 33" forward from the forward face of the front tire at spindle height. Nose may be Aluminum, Fiberglass or formed plastic. Any side wings, splitters or wickers may only extend max 1" from surface or sides of the nose.
- **2.10** Rear spoiler must be clear polycarbonate a maximum of 8" tall and maximum 66" wide. No part of spoiler may extend out wider the rear quarter panels. Base of the spoiler must be mounted directly to the rear most part of the rear deck. The top of the spoiler may extend a maximum of 2" past the rear deck to allow for spoiler angle. Forward spoiler braces may be no taller than the spoiler and extend a maximum of 2" forward and must be no taller than 2" at the front where it meets the deck.
- **2.11** All interior must be either 22 gauge sheet metal or.040 aluminum. Must seal driver's compartment completely from engine compartment and fuel cell area. Driver's compartment must have a complete floor (min 1/8" steel) and crush panels that seal the driver's compartment from the track.
- **2.12** Rear of body must have a full width panel at least 8" high running across the rear and mounted flush to the bottom of the rear deck (no gaps).
- **2.13** No additional wings, spoilers, ground effects or air deflecting devices will be allowed.
- **2.14** Bumpers required front and rear. Front bumpers shall be max. 1 ¾" min. 1 ¼" tubular steel (no aluminum tube) A maximum width of 2" wider than the outside of the front frame horns is allowed. Front bumper shall be a two tube design with at least a 6" center to center measurement. Front bumper should have a centerline height of min. 15" max. 18" measured from the ground at ride height. Rear bumper may be tubular steel or aluminum "I" beam and may not extend past the rear quarter panels (not including nerf extensions). Rear bumper centerline must also be min. 15" to max 18" high measured at ride height. Rear bumper may have a lower fuel cell guard no wider than the rear frame. R and L side and rear quarter nerf bars shall be made of tubular steel and be smooth with no sharp edges, open ends must be capped. Nerf bars shall not extend past the outside sidewall of the right or left side tires.

#### 3.0 Appearance

- **3.1** Race cars must be painted and maintained in an attractive professional manner. All American Speedway reserves the right to require repair of badly damaged body panels for either safety or cosmetic reasons. No open nose front ends in this division. All race vehicles must run a hood at all times. **Exception**; A vehicle that is damaged during an event may remove damaged body parts for safety and continue to compete in that nights events.
- 3.2 Car numbers shall be non-reflective, high contrast, easily distinguishable decals or painted a minimum 18 inch tall. Placement shall be on each R and L door (or rear quarter) and on the roof, easily readable from the grandstand and scoring tower. A 4" car number is required to be displayed on the left rear filler panel. All American Speedway reserves the right to determine legibility of car numbers and may require competitors to replace or repair numbers to make them more recognizable.
- 3.3 All American Speedway reserves the right to approve all commercial or editorial messages placed on





competing cars. Cars with unapproved or inappropriate messages will not be allowed to compete if competitor refuses to comply.

### 4.0 Weight

- **4.1** Vehicles shall be weighed prior to qualifying and the main events. The driver is required to be sitting upright in the seat with his or her helmet and neck restraint device on or in their lap. **Must** have both hands on the steering wheel with it in place while being weighed.
- 4.2 Engine package "A" 2600 lbs. with driver in the car ready to race.

Engine package "A" with aluminum heads 2650 lbs. (See 9.2 for placement of additional weight) Engine package "A" with a roller cam 2650 lbs. (Alum. head roller cam 2700 lbs.) Engine package "B" 2500 lbs.

- **4.3** Maximum left side weight allowed is 58% of the weight of the car.
- **4.4** Any weight added to the car must be bolted securely with (2) ½" bolts minimum. Must be lead or steel block in minimum 5 lb. pieces. All weight must be painted white and marked with the car number clearly visible. Any lead or weight that falls from a vehicle or becomes dislodged due to improper mounting procedures is subject to a fine being imposed on that car.
- **4.5** No weight shifting devices permitted. All weight must be securely fastened and immoveable while car is competing.

## 5.0 Chassis

- **5.1** Must use stock OEM front clip from any 1964 or newer American made passenger car. No truck, suv, corvette, Jeep or 4 wheel drive frames allowed. No tubular or box tubing fabricated front clips allowed.
- <u>5.2</u> Frames may not be widened or narrowed. Right side frame rail must extend back at least 36" from rear end centerline. Left side frame rail must have the OEM "dog leg" but may have left side rail removed from the foot box back. Chassis must have a 2x2 or 2x3 .095 box tubing frame rail in place of the stock side rail that the main cage must attach to. Driver's seat may not mount any further left than if the stock frame rail was in place. Left outer seat side must not extend past where the outside of the original frame would be.
- <u>5.3</u> Front cross member may be notched for radiator mounting. Front frame horns may be removed to just ahead of steering box mounting location. All lower control arm, steering box and idler arm mounting locations and holes must remain in place.
- **5.4** Upper A-frame mounts may be fabricated and relocated. Upper front spring buckets may be cut out for spring access. Upper adjustable wedge bolts mounts may be installed.
- **5.5** Rear chassis may be fabricated using box or round tube steel. May use leaf or coil spring suspension.
- **5.6** Chassis dimensions shall be a minimum 108" wheelbase + or  $-\frac{1}{2}"$  for castor. The rear end housing centerline shall be at least 72" back from the rear of the engine block.
- **5.7** A Minimum ride height of 4" is required when measured at the underside of the dog leg of the front frame. Will be measured on the designated tech pad at the scales with the driver in the car with helmet and all other safety gear, ready to race. Teams will be allowed to have 1 crew member make one "lift" on the car prior to being measured. No jacks or other tools will be allowed for this process.
- **5.8** Maximum front track width allowed will be 78" measured outside edge of tread to outside edge of tread at the top of the tires.

## **6.0 Suspension and Steering**

**6.1** All front steering pieces must be steel OEM style replacement parts. Must use stock OEM type equal length lower control arms (Ford or Chevy but must be equal length). No aftermarket tubular lower A-arms allowed. Must use OEM style steel steering box. Pitman arm, idler arm and center link must be steel OEM type replacement parts. No aftermarket billet or adjustable center links or idler arms allowed. May use tubular swedge tube type tie rods and steel heim joint ends. (No aluminum heims) After-market low friction or rebuildable ball joints are allowed. After market upper control arms and mounting brackets are







allowed.

- 6.2 Must use stock OEM or OEM style replacement steel GM, Ford or Pinto spindles. Pinto may use steel brake caliper adapter brackets.
- **6.3** Must use OEM style steel 1 piece front sway bar mounted under the front frame horns
- 6.4 All front and rear springs (1 per wheel) must be magnetic steel and must be a minimum outside diameter of 4 ¾". Front springs must mount in stock lower control arm pocket. Rear springs may mount ahead or behind the rear end or staggered. Coil over eliminators are allowed.
- **6.5** All rear trailing arm, pan hard bar and third link tubes, heims and mounts must be steel.
- **Exception**; Adjustable pan hard mount may be aluminum. All Trailing arm, pan hard bars and 3<sup>rd</sup> links must be solid links. No spring loaded or rubber biscuit type links.
- 6.6 Shocks. One shock per wheel. Must be all steel twin tube, non-adjustable. No gas charged or pressurized shocks, No canisters or remote reservoirs. No Bump stops (internal or external) allowed. AAS reserves the right to confiscate any shock for further internal inspection.

## 7.0 Brakes

- 7.1 Front brakes must be stock OEM style steel brakes. No 2 piece front hub and rotors allowed. Must use stock OEM "type" steel single piston front and rear calipers. Rotors may be re-drilled for 5/8 studs and 5 on 5 bolt pattern. No drilling, grinding or lightening of calipers and rotors.
- **7.2** Aftermarket racing brake pads are allowed.
- **7.3** Aftermarket master cylinders and pedal assembly with brake bias adjuster is allowed.
- 7.4 Front and rear hubs and rotors must use a minimum of 5/8 wheel studs. A maximum of 1" steel or aluminum wheel spacers or adapters may be used. Wheel studs must be long enough so that wheel stud threads are visible when lug nuts are tight. If there are no threads showing it is considered a safety issue and must be repaired before the vehicle is allowed on the track.

#### 8.0 Roll cage

- 8.1 A minimum 8 point cage is required. Main cage and door bars must be constructed of 1 3/4" .095 steel tubing. Cage must have professional quality welds and construction. All welds must be 360 deg. around all tubes. AAS technical staff retains the right to require any unsatisfactory welds or construction to be repaired.
- 8.2 Main roll cage shall consist of 4 up rights, a rear hoop, a roof halo and at least 1 front spreader bar at dash height and 1 rear spreader bar at shoulder height. An additional diagonal spreader bar in the rear hoop running from the lower leg on one side to the top of the roof halo on the other is required. The roof halo shall have a center spreader bar running front to back or diagonally. Top of roll cage shall be tall enough that no part of the drivers head with a helmet on may extend past the bottom of the tubing. Top of main roll cage must be at least 38" from the bottom of the frame to the top of the roof halo. Driver's door shall have at least 3 horizontal door bars with at least 2 spreader bars evenly spaced in each door bar. Door bars shall be in a configuration of being bowed out against the point of impact. Right side may be constructed with an "X" with a top horizontal bar as the third bar. 2 diagonal bars running from the top of the cage down to the rear frame rails is required. A front frame hoop is required and should be tied into the main cage and front frame. No part of the front hoop shall extend above the hood. Front hoop may not be wider than front frame rails.
- **8.3** All roll bars are required to be padded at the point of possible driver contact. (Fire retardant padding recommended)
- 8.4 An 1/8" steel or 1/4" aluminum plate is required to cover at least 2/3 of the outside of the driver's door bars for additional driver protection.

#### 9.0 Engine



**9.1** Traction control of any kind is not allowed. Penalty shall be loss of all points and a 1 year suspension from date of discovery.

## 9.2 Engine package "A"

Any American cast iron, cam in block, engine may be used (no aluminum blocks). All engines used must be standard production style blocks. Must be a wet sump oil pump system only. No dry sump or external oil pump motors allowed. May use any bore and stroke combination. Engines with roller cams will have a 50lb. weight penalty. Engines with aluminum heads must run 2 - 25 lb. weight blocks, one on either side of the engine, bolted to the main front frame rail even with the engine block.

May run Holley 4412 gauge legal 2 bbl. or any 4 bbl. carburetor with an AAS approved 1/8"restrictor plate installed between the carb. spacer and the manifold. No tapered spacers allowed. Carburetors may have choke and choke horn removed. A maximum 1.125" between the manifold mount surface and the bottom of the carb base is allowed. All air must enter the engine through the carburetor venturis. May run aftermarket (MSD/Crane) type ignition system (No crank fired type ignitions). Must run a digital rev. control unit mounted out of reach of the driver, set at 6400 RPM max or run a 6400 RPM chip style box. Must be easily accessible and readable by AAS technical staff.

## 9.3 Engine package "B"

Track approved factory sealed GM602 crate engine (PN19258602 or PN88969602). Crate engines must be run as delivered from Chevrolet with all factory seals in place. Must meet all GM yellow book specs. May run any 4bbl. carb (no restrictor plate) Must run the factory OEM HEI distributor that comes with the engine. Must run an MSD 8727ct digital rev control unit set to 6400 RPM max. Rev control unit must be mounted in the engine compartment with easy visual access to AAS tech staff. Valve springs must be OEM style replacement springs with equal rating and spring pressures as the factory springs.

- **9.4** Must run an air cleaner and air filter. A K&N type flow control and filter is allowed.
- **9.5** Carburetor must have a throttle stop and 2 return springs.
- **9.6** Engine shall be mounted so that the rear bell housing mount flange on the block is at least 72" forward of the centerline of the rear axle. Crankshaft centerline shall be at least 10" from the ground. (Measured at ride height with driver in the car) and no more than 2" offset from centerline of front clip.

### 10.0 Exhaust

- **10.1** Headers must be magnetic steel, no stainless headers. No tri-y type headers. No 4 into 1 merge collectors.
- **10.2** Mufflers, single or dual are mandatory and shall be sufficient enough to meet all sound requirements of the speedway at all times. No side exit exhaust. All exhaust shall exit under the car. All mufflers must have a turn down that exit's the exhaust at the ground. Due to our strict sound restrictions and the effect that weather condition variables have on sound generation. It is highly recommended that additional sound adjustability be built in to your exhaust system in the event your vehicle does not meet the sound levels required. Any vehicle that does not meet the required sound level and cannot make the necessary repair will not be allowed to compete in that nights events. All mufflers and exhaust shall be securely fastened. Any vehicle that loses its muffler or any part of the exhaust system will be black flagged in the interest of complying with sound requirements.
- **10.3** Sound; All vehicles in this division competing, practicing or testing at All American Speedway are required to comply with the mandated maximum sound output restriction. All race vehicles are required meet a maximum decibel output of **90 DBA** or less as measured from the viewing pad area above turn four. No exceptions. Any vehicles found to be exceeding the allowable levels will be black flagged from the race track and required to make necessary repairs before being allowed back on the race track.

#### 11.0 Fuel and fuel system



- **11.1 Sunoco** 110 leaded (purple) race fuel, Sunoco race E-85 or pump E-85 may be used. No Methanol. No fuel may be blended with ethers or oxygenates. No propylene oxide, nitro propane or other nitro compounds or performance enhancing additives of any kind may be used.
- **11.2** A "made for racing" SFI rated fuel cell is required (bladder style recommended) must be a top feed type and must have an approved roll over vent and a ground strap to the filler neck. Fuel cell shall be mounted securely in the rear frame area behind the rear end completely sealed off from the driver's compartment. Mounts for the fuel cell shall be welded directly to the frame. A minimum of 2 1" x 1/8" steel straps shall be used across the top of the fuel cell to secure it to the fuel cell cage. A box tubing fuel cell cage is highly recommended. The fuel cell must be enclosed in a 16 gauge steel can painted red. Fuel cell should have a maximum capacity of 32 gallons. Fuel cell should be mounted at least 8" off the ground. A lower fuel cell guard hoop is required. May be no wider than the rear frame. An 1/8" steel or ¼" aluminum plate the width and height of the fuel cell must be mounted to the rear of the fuel cell for extra protection.
- **11.3** A stock mount plunger type or belt driven fuel pump may be used (no electric pumps). Fuel or return lines must not run directly through the driver's compartment.

## 12.0 Cooling and Electrical

- **12.1** A single battery shall be allowed and must be mounted outside of the driver's compartment. Must be secured with steel or aluminum straps. No nylon tie straps will be allowed.
- **12.2** A master kill switch clearly marked for location and "on" and "off" that is easily accessible by both the driver and the safety screw is mandatory.
- **12.3** An operational starter is required. Reverse mount is allowed. Vehicle must be self-starting.
- **12.4** A single radiator mounted securely in front of the engine is required. Radiator shall have a catch can or vent tube to direct overflow away from the track surface. Any vehicle discharging fluid may be black flagged from the event.
- **12.5** Antifreeze shall not be allowed. Competitors found to be using antifreeze are subject to a \$100 fine. Water wetter or Pro blend 40 below or other similar water cooling enhancers are allowed.

#### **Drive Train**

- **13.1** A steel Ford 9 inch rear end housing is allowed. 9" rear end third member must be steel or cast iron. Gun drilled axels are allowed. Must be magnetic steel, no titanium axels allowed. Must use floater style hubs. Must run a spool only. No lockers or limited slip type third members allowed. No quick change rear ends allowed.
- **13.2** Only a magnetic steel drive shaft may be used. Must be painted white.
- **13.3** Two drive line safety loops are required. Must be installed no further than 6" back from the front u-joint and at the rear of the driveshaft in such a way as to prevent the driveline from coming loose if it should fail.
- **13.4** Automatic transmissions may use a direct drive coupler. Transmission shall have at least one forward and one operational reverse gear. An SFI certified flex plate is mandatory. An SFI rated steel plate type scatter shield over the flywheel area or SFI aluminum aftermarket bell housing (Ultra Bell) is required. All transmission coolers and lines must not be in or run through the driver's compartment.
- **13.5** Any external clutch manual transmission is allowed. Must have at least 1 working forward gear and a working reverse gear. An SFI rated bell housing is required on all manual transmissions.
- **13.6** An internal clutch Brinn, Bert or Falcon type transmission is allowed. Must have at least 1 working forward gear and a working reverse gear.
- **13.7** Aftermarket hydraulic throw out bearing, slave cylinder, pedal and clutch master cylinder may be used. **13.8** Any multi disc clutch with a minimum 5 ½" outside diameter and SFI rated flywheel and flex plate is allowed. No stock type or diaphragm type clutches and flywheels allowed.



## 14.0 Wheels and Tires

<u>14.1</u> Must run AAS track approved American Racer 970 JFTXD/JFTX4 8" grooved racing tires. You must run your main event on the tires you qualify on. All American Speedway Officials will mark tires prior to qualifying. Damaged tires may only be replaced upon inspection and approval by AAS officials.

<u>14.2</u> No tire treating, softening or soaking will be allowed. All race tires will be subject to durometer testing and inspection. A \$500 fine 4 race suspension and loss of all accumulated points for the first offense. A \$1000 fine, full season suspension and loss of all accumulated points for the second offense.

14.3 Only 8" steel racing wheels are allowed. May run offset wheels as long as track width and left side

weight % requirements are met. No bead lock, wide 5, aluminum or composite wheels allowed.

### **15.0 Safety Requirements**

- **15.1** A professional grade aluminum made for racing seat is required. Shoulder, head, and leg supports are strongly recommended on all seats. **Absolutely no plastic or fiberglass seats of any kind will be allowed**. The seat must be securely mounted to a steel frame and brackets welded to the main roll cage. Seat shall be bolted to the mounts with minimum 3/8" grade 8 bolts and large washers to prevent pull through.
- **15.2** SFI certified racing seat belts and harness are required. A minimum 3" wide strap 6 point harness with individual double shoulder belts shall be required (no "Y" type). Seat belts should include an anti-sub belt to prevent the racer from sliding forward under the lap belts. **Seat belt sets may not be more than 5 years old per the SFI tag.** Belts with missing or unreadable SFI tags will be required to be replaced. Seat belts will be securely fastened to the main roll cage with welded tabs and minimum ½" bolts. Seat belts bolted directly to the floor pan will not be allowed. Shoulder belts should be anchored 6" below the shoulder line by either bolting or securing around the spreader bar with the proper hardware.
- **15.2** Snell approved SA2010 or newer full face racing helmet with polycarbonate shield or goggles is required. A missing or un-readable Snell or SFI label will require recertification or replacement of helmet. SFI head sock is strongly recommended.
- **15.3** A Hahns, Hutchins, Zamp or other SFI approved head and neck restraint is required to be warn at all times while on the track.
- **15.5** SFI certified racing suit is required for all drivers at all times on the track. Damaged drivers suits with holes or tears will be required to be replaced. SFI rated gloves, shoes and long underwear are required.
- **15.6** An on board fire suppression system is mandatory. System shall have a minimum of a 5 lb. halon extinguisher in an approved secure mounting bracket. Must be mounted inside the driver's compartment either under or behind the driver's seat. System must have a minimum of 3 operational nozzles, 1 at the rear of the engine, 1 over the fuel cell and one in the driver's compartment facing the driver from just under the dash area. A quick pull activation cable should be in easy reach of the driver and outside safety crew. A marked pull handle mounted at the base of the "A" pillar upright on the top left door bar is recommended.
- **15.7** A ribbon style window net is required on the driver's side window. Mesh window nets are not allowed. Must be securely fastened to the top door bar, at the bottom and have a quick release latch at the top that is easily accessible to both the driver and safety crew.
- **15.8** Two-way radios are mandatory. Spotter and crew must be able to communicate with driver by radio at all times while on the track. A designated spotter is mandatory and will be required to be present in the spotters stand at all times during the event. The spotter must be clearly identified to the designated AAS spotter's official. Spotters must relay information to the driver as requested by AAS official. Any race car on the track without a spotter in the designated area shall be black flagged from the event.
- $\underline{\textbf{15.9}}$  Transponders are required and must be mounted 13 ft. (156") back from forward most point on the car and no higher than 24" off the ground.



# **2020 Modified body Dimensions** (See pg. 9 mod body diagram)

**A.** 108" minimum

**B.** 28" min. - 38" max.

**C.** 34" min - 48" max.

**D.** 106" min - 120" max.

**E.** 72" (even with the rear of the engine block)

**F.** 22" min. - 27" max.

**G.** 42" min - 52" max.

H. min. 12" opening x 18" wide

I. 54" min. - 68" max. must be the same (parallel) front to back

<u>J. </u>44" min. - 50" max. <u>K. </u>41" min. - 56" max.

**L.** Left rear tire must be even with or protrude from body and nerf bar.

**M.** Polycarbonate windshield (full or partial), screen or vertical uprights for driver protection.

**N.** Min. 8" full width rear panel.

**O.** 15" min. - 18" max. front and rear

<u>P.</u>

**Q.** min. 3 ½"

R.

**S.** Front bumper and nose may be max. 2" wider than the outside of the front frame horns.

T. 46" max. Maximum 8" spoiler ht. measured from the base of the rear deck. Not to exceed max ht. of T.

**U.** Rear bumper width must be inside of rear body. Not including nerf bars

X. 2" min. - 4" max.

**Z.** Maximum interior slope of 6" is allowed front to back. See **2.4** pg.1

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