

# MO-KAN TRACKS ASSOCIATION E-MOD 2019-2020-2021 RULES

LAKESIDE SPEEDWAY-CENTRAL MISSOURI SPEEDWAY – US-36 SPEEDWAY – BETHANY & VALLEY SPEEDWAY

**As of 12-20-2019**

*This is an Entry Level Class. Anyone can compete in this class but must follow the rules as written. These rules were written by officials and are interpreted by the officials. These rules tell what you can and cannot do. If the rules don't say you can do something then you can't. Before you do something not mentioned in these rules call and ask the head tech official first and he will tell you yes or no. **Changes, additions, and edits since the last edition (2018), are annotated in bold red and underlined.***

**COMMUNICATIONS:** All competitors must have a **RACECEIVER.**

## **1) FRAMES:**

- 1) Factory production complete full American passenger frames only.
- 2) Frame rails must extend to a point beyond the base of driver's seat.
- 3) Rear clip may be fabricated out of tubing.
- 4) Front and rear pick-up loop required; otherwise bumpers or other pick-up point will be used.
- 5) Minimum right front frame height is **4 inches** and will be measured at the right frame rail where it turns toward the rear at the outer frame rail.
- 6) Frames cannot be altered.

## **2) BODIES:**

- 1) See IMCA NORTHERN SPORT MODS or USRA B-MOD body rules for all body rules and rear sail panel rules.
- 2) No rear filler panels.
- 3) MD3 nose **not** allowed
- 4) Window opening must be a min. of at least 12 inches on all 4 corners.
- 5) Body may extend 1" past the outside edge tire on both sides.
- 6) 5" spoiler max. from the deck with 3 braces max.
- 7) Max. deck height 39 inches
- 8) No reverse hood rake.
- 9) Wheel openings cannot be smaller than the outside diameter of the tire. Example: (a 29-inch-tall tire will require a minimum 30-inch wheel opening).
- 10) All other body rules apply.

## **3) WHEEL BASE:**

- 1) 108 inches. Minimum, 112 inches maximum both sides.

## **4) ROLL CAGE:**

- 1) Must consist of continuous hoops not less than one and one-half inches outside diameter and must have a wall thickness of at least .095 inch.
- 2) Must be frame mounted in at least six (6) places.
- 3) Body mounted roll cages not acceptable.
- 4) Must consist of configuration of front and rear hoops connected by tubing on sides or side hoops in a manner deemed acceptable by the inspector.
- 5) Driver's head must not protrude above cage with helmet on while strapped in driver's seat.
- 6) Must have at least three (3) horizontal bars at driver's door welded to front and rear of roll cage members.
- 7) Driver's door must be plated.

## **5) WEIGHT:**

- 1) Minimum weight is 2500 pounds with driver after race, No tolerance.
- 2) All lead weight must be mounted securely, with 2 weight clamps & 1/2-inch bolts.
- 3) Lead must be painted white & have your car number on the lead.
- 4) Lead can only be mounted to the chassis.

5) No weight can be mounted to any suspension part or to the rear end.

**6) WHEELS & TIRES:**

1) American Racer G-60-15 KK704 or Hoosier G-60 –15 IMCA stamped is the only tires used.

2) Grooving, sipping and grinding allowed.

3) No doping or softening of tires.

4) No Aluminum wheels.

5) NO extra weight of any kind can be added inside or outside the wheels. Example (lead added or glued inside of the wheel).

6) Wheel width must not exceed eight (8) inches.

7) Any foam or plastic type mud cover mounted on right side wheels.

8) Inner mud plug on L.R. only.

9) Bead locks allowed on right front and right rear only.

10) Tire must durometer 55, no tolerance.

11) Widest part of the car can be 78 inches. This includes outside to outside of front tires

**7) BRAKES:**

1) Disc or drum brakes may be used front and rear.

2) No aluminum disc or brake calipers allowed.

3) Brakes must be operational on all four (4) wheels and must lock up all four wheels during inspection.

4) Front to rear Bias only, no left to right bias.

5) Calipers must be the same left and right.

6) Brake pads cannot be altered.

7) No heavy or solid brake rotors allowed.

8) No right front brake shut offs.

**8) BUMPERS:**

1) Bumpers must be used front and rear.

2) Front bumper must be mounted on frame end and be of a semicircle configuration with the bottom loop parallel to the ground.

3) Front bumper must be ten (10) inches high from bottom bar to top of top bar.

4) Material must be one and one-quarter inch minimum, two-inch maximum O.D. steel pipe.

5) Rear bumpers may be constructed of pipe, square tubing, but must not have sharp edges.

6) Rear bumpers and nerf bars must not extend beyond width of rear tire.

7) Bumpers must be able to support car when lifted by wrecker.

**9) SEAT AND SEAT BELTS:**

1) Racing seat mandatory.

2) All cars must be equipped with an approved quick release type seat belt and shoulder harness securely fastened to frame and roll cage.

3) Seat belt material should be at least two (2) inches wide **AND CANNOT BE OLDER THAN 3 YEARS** and must be a 4, 5 or 6 point belt system.

4) Sub belts are required.

5) Seat and steering wheel may be located to suit driver's taste, but must be kept on left side of car.

6) No center steer.

7) Seat belts cannot be mounted to the tube that goes to the rear section of the car, they must be mounted to the bar the crosses left to right behind the seat.

**10) ENGINE LOCATION:**

1) Rear of engine (bellhousing flange) must be at least 72 inches forward from the centerline of the rear axle.

2) The center of the crankshaft must be within two and one-half (2 1/2) inches of centerline of the ball joints.

### **11) Engine:**

- 1) All engines parts must be Ford to Ford, Chrysler to Chrysler, GM to GM (no mix or match).
- 2) MAXIMUM Size of engine block: 350 gm .060 max. 351 Windsor ford .060 max. 360 chry. .060 max.
- 3) Smaller engine allowed.
- 4) No stroker engines allowed!!!!!!!!!!
- 5) OEM firing orders cannot be changed.
- 6) No B Hive or high-performance valve springs allowed.
- 7) 9 to 1 compression max.
- 8) The 602 crate engine block and crankshaft can be used.
- 9) NO 400 blocks or parts will be allowed.

### **12) Heads:**

- 1) 76 c.c. min., stock
- 2) No performance heads.
- 3) No double humps.
- 4) No 292, 041 castings.
- 5) No LT1
- 6) No bowtie.
- 7) No center bolt valve cover.
- 8) No vortec or aftermarket allowed.
- 9) No porting or polishing.
- 10) 3/8-ths shouldered screw in studs allowed.
- 11) Guide plates allowed.
- 12) GM maximum valve size 1.94 intake and 1.60 exhaust valve maximum.
- 13) **NO** 202/160 allowed.
- 14) 305 heads on 305 only.
- 15) Ford maximum valve size: 1.84 intake and 1.60 exhaust.
- 16) No angle milling of cylinder heads.
- 17) **No** GT 40 or GT 40p head castings.
- 18) No aluminum heads.
- 19) No high performance and no boss heads.
- 20) No titanium parts of any kind.
- 21) GM approved castings: 14079267, 3986336, 3986339, 3986339x, 3986388, 3932441, 376445, 3928454, 3932454, 393493, 3876487, 3973487, 3973487x, 3973493, 3951598, 468642, 330862, 333882, 3998920, 3998991, 3998993, 3998997, and 3970126.

### **13) Camshaft:**

- 1) Hydraulic camshafts only. **No pump-up lifters. Must run 0 value lash and rocker nuts must back off ¼ turn before 0 value lash.**
- 2) GM-455 maximum lift at valve, stock 1.5 ratio rockers only no tolerance.
- 3) Springs... 1.260 OD max, open pressure 275-lbs @ 1.250.
- 4) No roller cams.

### **14) Crankshaft & Rods:**

- 1) Stock OEM crankshafts.
- 2) Aftermarket Crankshaft may have holes in the front and rear rod throws only.
- 3) The two center rod throws must be solid, there can be no holes in the two center rod throws.
- 4) No light weight crankshafts.
- 5) Rear flange on the crank must look like an OEM crankshaft.
- 6) No h-beam rods or lightened rods of any kind are allowed.
- 7) Stroke must match block. 3.48 for GM, 3.50 for Ford, 3.31 or 3.58 for Chrysler.

8) Minimum weight on crankshaft is **50** pounds.

**15) Pistons:**

- 1) Any flat top, 4 value, 2 value, unibrow, or dish piston allowed.
- 2) NOT allowed: domed pistons of any kind, lightweight pistons, or gas ported pistons.
- 3) Press fit rods only. No floating rods, 5.7 rod on G.M. max. **Must be compliant by 2020.**

**16) BALANCER:**

- 1) No Modifying of Harmonic Balancer.
- 2) Harmonic balancer on G.M. min-6 3/4" dia 1 inch thick.
- 3) TRACK HAS OPTION TO ENFORCE THESE RESTRICTIONS WITH A CUBIC INCH PUMP GAUGE OR BY VISIBLY CHECKING PARTS AND PART NUMBERS.

**17) OIL PANS:**

- 1) Extra capacity oil pans are permitted.
- 2) No dry sumps allowed.
- 3) Oil pump must mount in stock position.
- 4) MUST HAVE 1 INCH INSPECTOIN HOLE ABOVE OIL LEVELFOR INSPECTION.
- 5) Inspection Hole needs to be installed in a manner were tech official can see crankshaft & rods for proper inspection. If not pan will be removed for inspection.
- 6) Track will not replace gaskets or seals if no 1" inspection hole.

**18) CARBURETOR:**

- 1) 4412 HOLLEY ONLY. **No HP Carbs.**
- 2) NO MODIFACTIONS EXCEPT JETS AND BUTTRFLY CAN BE REMOVED.
- 3) NO ELECTRIC FUEL PUMPS / MANUEL ONLY.
- 4) A 1 inch spacer plate is allowed.
- 5) Spacer plate holes must go straight through and cannot be tapered on the bottom side of spacer.
- 6) No flow design, HVH or Wilson type spacers allowed.
- 7) Spacer can be aluminum or phenolic.

**8) No cold air boxes.**

**19) INTAKES:**

- 1) Only intakes allowed:
  - a. GM 2101, STAR PERFORMANCE 9101 OR RENEGADE 72001.
  - b. FORD 2121 or 2181.
  - c. CHRYSLER 2176 or 3776 / intake must be unaltered.
- 2) 2 barrel cast low rise unaltered intake allowed.
- 3) EDELBROCK 2701 IS NOT ALLOWED.
- 4) You may also use a Billet or Phenolic adapter, all adapters must remain unaltered with straight through holes, no machining, no tapered.
- 5) Total maximum thickness of the spacer and gaskets cannot exceed, 1 and 3.16 inches.

**20) FUEL SYSTEMS:**

- 1) **Pump Gasoline only.**
- 2) No E-85, or E-98 allowed
- 3) No oxygen bearing additives.
- 4) No racing fuels.
- 5) No pressurized fuel systems.
- 6) Fuel cells mandatory.
- 7) Fuel max capacity of 22 gallons.
- 8) Must have rollover flapper in cell.
- 9) Fuel cell vents including cap vent must have check values.
- 10) Fuel cells must be encased in an approved metal container of no less than 20-gauge steel or 1/8-inch aluminum.

- 11) Fuel cells must be mounted between frame rails as far forward as possible and using four, two (2) inch by 1/8-inch metal straps, two in each direction.
- 12) Bumper must be equipped with a drag loop extending below bottom of the cell.
- 13) No electric fuel pumps.
- 14) A Fuel test reading of "0" will be used, any fuel with a positive test number will be a DQ.
- 15) All fuel test numbers must stay a negative reading/number.
- 16) **Non-Ethanol gas is highly recommended.**

**21) EXHAUST/HEADERS:**

- 1) Any collector type header allowed.
- 2) Exhaust must be directed away from areas of possible fuel spillage.
- 3) No zoomies.
- 4) No 180-degree headers.
- 5) No step down or y type headers.
- 6) No cones or any devices to help Exhaust performance.

**7) NO EVAC SYSTEMS ALLOWED**

**Valley Speedway:** Mufflers are mandatory for all Valley Speedway Cars: Shoenfeld 112535 short muffler, IMCA 609 insert, or Custom Craft are approved mufflers, others may be considered if they lower db 810 points. Car must be under 95 db. at 100 ft at 4,000 rpm.

**22) TRANSMISSION:**

- 1) OEM three or four speed and automatic production-types are permitted.
  - A. GM Option 1:
    1. Unaltered 3 or 4 speed in OEM production case.
    2. No 5 or more speed transmissions.
  - B. GM Option 2:
    1. Unaltered 3 speed automatic.
    2. No TCI, CNR ect... Torque Converters. Must have a working stock Torque Converter. Torque Converter must measure 10.5 inches, No dummy converters. A heat gun will be used to check converters.
    3. No 2 Speed Power Glides.
- 2) Driver must be able to engage racecar in gear and then move forward and then backward at time of inspection.
- 3) All gears must work.
- 4) No lightening of transmission.
- 5) Clutch must be inside of bell housing and min of 10.4 inches, clutch disk can be solid and cannot be ceramic or a paddle type disc.
- 6) Must have full-sized steel bell housing.
- 7) Flywheel must bolt to crankshaft. Minimum weight of flywheel must weigh 15 lbs.
- 8) Clutch must bolt to flywheel.
- 9) Clutch assembly must weight 15 lbs.
- 10) *Automatic transmissions must have a guard two-hundred seventy (270) degrees around flex plate and must be constructed of at least one-quarter (0.25) inch steel or SFI approved.*

**23) DRIVE SHAFT:**

- 1) *Minimum two-inch diameter, white, steel drive shaft.*
- 2) *Steel slip-yokes only.*
- 3) *360-degree drive shaft loop required and must be constructed of at least .25-inch by two-inch steel, or one-inch tubing, mounted six inches back from front U-joint.*

#### **24) SHOCKS:**

- 1) **Shocks Allowed are:** Pro-SB or WB..... Afco Series 12, 14, 15 only.
- 2) One steel, nonadjustable, unaltered shock per wheel only.
- 3) NO Take Apart Shocks.
- 4) No external gas ports of any kind.
- 5) All shock mounts, including screw jack type, must be welded.
- 6) No external or internal bumpers or stops.
- 7) No shaft extensions.
- 8) No coil over, air, or remote reservoir shocks.
- 9) No Schrader valves, bladder type valve or internal gas bags allowed.
- 10) Front half of any shock may be shielded.
- 11) One or all shocks may be claimed per event for \$75 each.

#### **25) FRONT SUSPENSION/SHOCKS:**

- 1) Front suspension must match frame and be in stock location.
- 2) Parts must be replaceable from stock OEM type parts from same type suspension upper A-arm and A-arm mount.
- 3) Tube type upper A-arm may be used.
- 4) Fabricated A-arm mount may be used.
- 5) Lower after market A-arms can be used but must match OEM.
- 6) No tubular lower A-arms.
- 7) No fabricated spindles.
- 8) Three-piece spindles are allowed but must use **SPEEDWAY PART NUMBERS #91034511, #91034501 ONLY.**
- 9) No coil over shocks allowed either front or rear.
- 10) One shock per wheel.
- 11) Steering box must be stock OEM type and be in stock location.
- 12) No rack and pinion steering.
- 13) No center steering.
- 14) No limit chains of any type on front end.

#### **26) REAR SUSPENSION:**

TWO OPTIONS:

- A) Aftermarket three link design or multi-leaf spring design.
  - 1) All components must be steel.
  - 2) All mounts and brackets must be welded or bolted solid.
  - 3) You **MAY NOT** run a dampening shock above the rear end.

##### a) **THREE LINK DESIGN REQUIREMENTS:**

- 1) Left lower bar must use minimum 16 inch center to center of heims. **Lower right bar minimum 16-inch center to center of heims.**
- 2) Left lower link bar on three link cannot be more than 15 degrees up in the front setting at ride height with driver in the car.
- 3) No swing arms.
- 4) Solid pull bars are required.
- 5) No spring bars, rubber bushings or any type of torque devise.
- 6) Pull bar must be mounted solid (No rubber or any type of cushion in the mounting bracket).
- 7) Must be located at top center of rear end housing and remain centered on housing over drive shaft (1 inch tolerance left to right of the center line of the drive shaft).
- 8) May use minimum 23-inch long Panhard bar located behind rear end housing or minimum 19-inch-long J-bar mounted to a steel pinion bracket.
- 9) Measurements are from center of heim joint to center of heim joint.
- 10) Must mount rear spring directly over center of axle housing.

- 11) A 4 ½ inch min outside diameter spring must be used and a max height of 13 inches on either sides.
- 12) No birdcages or floating mounts allowed.
- 13) Must use steel upper weight jack if spring are mounted over axle housing.
- 14) All adjustable shock mount brackets must be welded.
- 15) Limit chain allowed but rear springs must remain loose left and right with car raised.
- 16) No added weight of any kind is allowed to be bolted on the rear end.
- 17) Rear springs may have a tolerance of 5 degrees from vertical measured with straight edge on spring and a digital angle gauge.

**26) REAR END:**

- 1) Any steel approved OEM passenger car or truck non-cambered rear end allowed.
- 2) Must be centered in chassis.
- 3) All components must be steel, except lowering blocks, axle cap, and drive flange.
- 4) Safety hubs (floater) allowed.
- 5) No quick-change devices.
- 6) Inspection hole in housing required.
- 7) Mini-spools or **Full Spools allowed.**
- 8) No Aluminum Spools.
- 9) Ring gear, center section and yoke cannot be lightened.
- 10) Solid steel axles and one-piece drive flanges only.
- 11) No heavy axle tubes allowed.
- 12) Left and right axle tube thickness must match.

**27) KILL SWITCH:**

- 1) A kill switch is required within easy reach of the driver.
- 2) This switch must be clearly marked OFF and ON.

**28) BATTERY:**

- 1) 12 volts only.
- 2) All batteries must be mounted in a safe manner.
- 3) Top of battery must be covered.
- 4) No voltage enhancing devices, 12 volt alternator allowed.

**28) STARTER:**

- 1) Stock location only.
- 2) Engine must have working starter and must be capable of starting car on demand.

**29) GAUGES/ELECTRONICS:**

- 1) Mandatory MSD part #8727CT rev control box is **REQUIRED** with unaltered wiring harness (max rpm setting must be 6,200). **The plug cannot be removed and box must have its own ground.**
- 2) 12-volt ignition system only.
- 3) HEI distributor only.
- 4) OEM firing order cannot be changed.
- 5) Ignition rotor, cap, coil and module must remain STOCK OEM appearing.
- 6) No ignition boxes, remote coil or accessories.
- 7) All wiring must be visible for inspection.
- 8) Only gauges allowed are analog oil pressure and water temperature and analog tachometer (memory recall allowed).
- 9) No electronic traction control ALLOWED.
- 10) No electronics that store information allowed....example (tach).
- 11) Fuel pressure gauge allowed.

**30) ENGINE TEAR DOWN RULE:**

- 1) The track reserves the right to tear down and inspect any engine at any given time.

- 2) There is no set number of wins before an engine may be torn down and inspected.
- 3) Any car that wins a race **“will”** be subject to a bumper to bumper inspection. Including but not limited to removal of intake, head, lifters, transmission, oil pan and gear.
- 4) \$50.00 **“will”** be added to tear down participation purse if found to be illegal.
- 5) Any failure **“will”** result in disqualification for the night with **No Pay**.
- 6) It will also result in loss of points for the night.
- 7) These rules are written & interpreted by the Race Track & the Tech Officials **not** the Driver.
- 8) **IN THESE RULES IF IT DOES NOT SAY YOU CAN DO SOMETHING THEN YOU CAN NOT.**
- 9) The assigned Technical Inspector has the final say in rules clarification.

Call the track or tech official if you have any questions.

**Do not read between the lines, if something is not in this rule book, do not assume you can make things up on your own, ask questions clarification if you are unsure of anything.**