

## 2023- MODIFIED Rules

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All drivers are required to have a one-way radio. The one-way radio must be working and active prior to any 'on-track' activity. Two-way radios, crew-member to driver and/or any other means of electronic communication, other than the one-way radio, will not be permitted.

MyLaps transponders are required on all cars. Rental units are available from the speedway.

### 1) Engine

- A. Any American made push-rod type engine will be permitted as long as the rear of the engine bell housing flange is mounted at least 72" forward from the center of the rear axle. The engine offset must remain within 2" of the centerline from the cross member. The minimum engine height when measured from the ground to the center of the crankshaft is 11". Other engines of the pushrod type that meet these criteria may be approved for competition.
- B. All engines used in competition must be able to be used in a conventional passenger car without alteration. Alteration of motor mounts will not be permitted. Alteration of the castings and/or fittings will not be permitted. Any machine work on the outside of the engine or machine work on the front or rear of the crankshaft will not be permitted. Lightening of the engine block will not be permitted. If engine block has been lightened, 20lb. of weight will be added in front of the motor plate.
- C. Aluminum blocks will not be permitted.
- D. Magnetos will not be permitted.
- E. Wet sump oiling systems must be operative. Overall dry sump systems will not be permitted.
- F. Alteration to the cooling system will be permitted. If alterations to the cooling system are made the stock-appearing hood line must be maintained.
- G. The battery must be securely mounted and shielded. The battery must not be mounted inside the driver's cockpit.
- H. The exhaust system(s) must be mounted with the exhaust directed away from the vehicle and away from the ground. The exhaust system(s) must remain completely below the interior deck of the car. The entire exhaust system (including the exhaust pipe and/or header exits) must be inside all parts of the body. The only breach of any interior or exterior body panel that will be permitted is for routing the left side header or exhaust pipe on the left side of the car. When routing the left side header or exhaust pipe through the left side firewall a maximum of 1/2" clearance around the header or exhaust pipe will be permitted.
- I. One two or four-barrel carburetor is required.
- J. The engine must be a normally aspirated configuration.
- K. Fuel injection systems or electric fuel pumps will not be permitted.

### DC 18 Engine Option:

As an option to the current DIRTcar, UMP Modified engine rules, an approved DC18 Chevrolet Performance CT525 Engine will be permitted for use in competition in modified events providing ALL the following requirements are strictly adhered to. An approved DC18 Chevrolet CT525 Engine is defined as follows:

- A. Chevrolet Performance Engine, Part number GMP-19331563DC18 or GMP-19331563DC18K
- B. The engine assembly MUST be obtained from the DIRTcar approved vendor.
- C. Engine must have complete unaltered Chevrolet Performance engine seals installed at the time of manufacture assembly.

- D. Engine must have complete unaltered secondary DIRTcar seals installed by the approved vendor prior to delivery of the engine.
- E. Engine must have approved vendor seals and inventory numbers.
- F. Ignition system must be controlled by an approved, pre-programmed MSD 6014CT control unit with the correct corresponding identification number for the engine being used.
- G. All Engines, seals, and applicable components will be entered into a master database and must correspond to the engine being used.
- H. The engine and engine components, engine seals, engine identification numbers and the likes must be used as received by the DIRTcar UMP approved vendor without modification, and/or alteration of any kind.
- I. All DC18 engines must use gasoline or gasoline/ethanol blends. Methanol is not approved for use with the DC18 engine.

## **2) Transmission & Driveline**

- A. The drive shaft must be made from magnetic steel or approved carbon fiber. Aluminum or fiberglass driveshafts will not be permitted. The driveshaft must be painted white.
- B. A 1/2" x 2" 18-gauge steel drive shaft hoop is mandatory. The drive shaft hoop must be at least 6" behind the universal-joint. Two hoops are strongly recommended. A single 1/8" plate on the right side of the drive shaft tunnel is recommended.
- C. All competitors are encouraged to perform systematic checks on their drive-train.
- D. Direct drives and/or any type devices will not be permitted.
- E. The transmission must be bolted to the engine. All cars must have forward and working reverse gears and be able to shift to forward or reverse with engine running. BERT-type transmissions will be permitted.
- F. Clutch-type transmissions must be equipped with explosion-proof steel bell housing. In lieu of an explosion-proof bell housing or if one is not available for your engine, a shield of at least 1/2" x 6" covering the clutch area 360 degrees securely fastened in place and fabricated from magnetic steel will be permitted.

**3. FUEL SYSTEM:** One naturally aspirated two- or four-barrel carburetor only. No type of fuel injection allowed. Two carburetor throttle return springs are required. Mechanical or belt driven fuel pump only. Racing fuel cell required, maximum 32 gallon capacity, must be mounted by at least two steel straps, no less than 2" wide x 1/8" thick all the way around the cell. The use of 1"x1"x.065 wall sq. tubing is recommended. Using a minimum of two bars around the top, bottom, and sides of the fuel cell. All fuel cells must be mounted securely to the frame. No part of the fuel cell should be lower than the protective tubing. Protective tubing should be no wider than 6" on both sides of cell. Cells must have check valves, and bladders are highly recommended. Fuel cells with fuel pickup located in the top of cell ARE MANDATORY. Fuel cells with bottom feed pickups are not permitted. Retrofitting a bottom feed cell will be permissible, but bottom feed opening must be plugged. A cap on the exposed bottom fitting will not be acceptable as plugging.

B. Gasoline or alcohol. Racing fuel allowed. NO performance-enhancing additives. Upper cylinder lube allowed with alcohol only. Fuel sample may be taken from any car at any time.

## **4) ELECTRONICS:**

A. The following ignition boxes will not be permitted for use:

1. MSD Red 6 Box – Part Number: 6530
2. MSD Black 6 Box – Part Number: 65303
3. MSD Gold 7 Box – Part Number: 7531
4. Fast Ignition – Part Number: 307222

B. Any device that changes or has the ability to change the ignition advance is not permitted.

C. All electronic and/or computerized wheel spin and/or acceleration retardation traction control devices will not be permitted. Controlled timing devices attached to or controlling accelerator or

rotation of wheel will not be permitted. GPS and/or any other type of electronic tracking and/or locating device will not be permitted.

D. All traction control devices utilizing wheel sensors and/or any means of measuring ground speed to control wheel spin will not be permitted.

E. Adjustable ping control devices, dial a chip controls, timing controls or automated throttle controls will not be permitted in cockpit or driver accessible areas.

F. Adjustable restrictor plates will not be permitted.

G. Any remotely controlled components inside or outside the cockpit of any competitor's racecar will not be permitted.

H. Radios or devices for transmitting voice or data will not be permitted, either in the racecar or on anyone connected with the car.

## **5) Chassis & Frame**

A. Only factory production full 1965 or newer parallel American passenger car frames will be permitted. The frame must be complete in front of firewall. Cutting of the frame in any way in front of firewall will not be permitted.

B. The frame must remain unaltered and must meet the requirements of the attached drawing.

C. The Right-side frame rail may not be altered and/or raised and/or moved from the stock OEM location in any manner and must measure a maximum of 6" from the ground to the bottom or lowest edge of the frame rail.

D. The front cross member may be notched to allow clearance for the radiator only. **3" minimum for notching is required.** The cross members must be plated to retain complete box configuration.

E. Jeep, Bronco, 4-wheel drive, front wheel drive or sports car frames will not be permitted.

F. The minimum wheelbase permitted will be 108". The maximum wheelbase permitted will be 112". No tolerance – measurements are as posted

G. Fiberglass lift bars and/or rear torsion bars will not be permitted.

H. Any frame may not be widened or narrowed and must be able to support the roll cage on both sides and must be full and complete on both sides.

I. The minimum frame and body height from ground is 4".

J. The front bumper must be mounted to the ends of the frame with the bottom loop parallel to the ground.

K. A minimum of 1" diameter tubing and/or pipe is required to for towing of the vehicle.

L. The rear bumpers must be constructed of tubing and/or flat stock. All rear bumpers and/or tubing utilized in the fabrication of the rear bumper assembly must have an end cap. The rear bumpers must protect the fuel cell.

M. The bumper(s) (front and rear) when measure from their center(s) must have a minimum of 25" of ground clearance. There will be a 2" tolerance, plus or minus regarding this dimension. The rear bumper and/or the nerf bars must not extend beyond the width of rear tires. All bumpers must have round edges. Sharp edges on any bumper and/or bumper surface will not be permitted.

N. The brace bars forward of the roll cage must not extend higher than stock hood height.

O. The rear push bars must not extend beyond 6" of the rear quarter panel(s).

P. All side bars and bumpers must be capped on ends.

Q. The maximum overall width of the car, front and/or rear, shall not exceed 78" when measured from the outside of the tire tread on both sides of the vehicle. A maximum 1" spacer between the hub and wheel will be permitted. Steel and/or aluminum spacers will be permitted, provided the overall tread width of the vehicle does not exceed 78".

## **6) Roll Cage**

A. All cars must have a roll cage. The roll cage must be approved prior to competition and it must be welded to the frame. The driver's head must not protrude above the top of the roll cage with the driver's helmet on.

- B. The top of the roll cage must extend above the top of the driver's helmet by a minimum of 1". The entire roll cage and all roll bar pieces must be fabricated from magnetic steel a minimum of .095" in thickness.
- C. The driver and right-side door bars must be parallel to the ground and located perpendicular to the driver. There must be right side door bars. The side bars must be welded to the front and rear of the roll cage. No brazing or soldering is permitted. The door bars must have a minimum thickness of .095" and must have a minimum of 1-1/2" diameter. On the driver's side, there will be a minimum of 3 door bars.
- D. Foot protection is mandatory. One piece of magnetic steel tubing, a minimum .095" in thickness, must be fastened and/or welded across the back of the engine with vertical tubing a minimum of .095" thick.
- E. The door side roll bars are mandatory and must extend into the door panels.
- F. The roll cage must consist of continuous hoops that are no less than 1-1/2" in diameter and must a minimum thickness of .095".
- G. The roll cage must be mounted securely (welded) to the frame in a minimum of 6 (six) places.
- H. The roll cage must consist of a configuration of front and rear hoops connected by tubing on the sides and/or side hoops. Roll cage must be securely supported and braced. Gussets to brace any portion of the roll cage will be permitted

**7) WEIGHT:** Minimum weight limit of 2,400 pounds, no tolerance, after race with driver in car. No weights and/or loose objects in driver compartment, above interior deck or outside body. Weights must be securely mounted to frame or roll cage and painted white with car number on it. Must be attached with at least two 0.5 inch bolts.

## **8) BODY:**

### **1. General Body**

1. All bodies must follow dimension(s) and the appearance as shown in the diagram. The body shall be the fabricated modified body from approved vendors. The body must be symmetrical, including but not limited to doors, nose, sail panels, spoiler supports, etc.
2. The front windshield and rear window support must be stock appearing. The front window support(s) may have a clear Lexan support of no more than 16" including the roof post at the bottom and going straight to the roof. The support must be securely fastened in a positive manner.
3. The sides of the engine compartment must remain open. Any side panels in the engine compartment area will not be permitted. A 5" maximum drop of the hood on either side of the hood will be permitted and it must be enclosed at the rear of the hood.
4. A maximum of one stone deflector, mounted only on the right side of the car, for rear mounted oil pumps, oil filters, and for the main oil tank will be permitted. The deflector may be made of steel, aluminum, or heavy gauge wire. The cover may only be mounted near the unit and is designed to protect with a maximum size of 18" square and mounted only from the upper right frame rail to the lower right frame rail.
5. All cars must have a car number on both sides and the roof that are at least 18" in height and 14" in width.
6. The driver's last name must be displayed under the car number in a legible font that is a minimum of 8" high letters.
7. A minimum of 2" of tire clearance from the body is required.
8. The minimum ground clearance will be 4".
9. The maximum body width at the body's widest part will be 72". The minimum of width at the body's narrowest part will be 53". The top of the doors may have a maximum width of 67". The bottom of the doors may have a maximum width of 68". On the left side, the rear of the door may flare out 6" for tire clearance.
10. The bottom of the flare must be curved and rounded not pointed in any fashion.
11. The maximum rear width of the car must be 67" at the widest point.

## 2. Nose

1. A maximum of 1" flange on the outside edges (left and right side vertically) for the purpose of strengthening only will be permitted on the front nose only. Side fins and/or flanges of any kind along the length of the entire car (hood, front, and/or roof) will not be permitted.
2. The nose piece must not exceed 45" in width, centered between the frame rails and must not extend past the leading edge of the front bumper. The nose piece must have a minimum of 6" from the ground to the bottom edge of the nose piece.
3. The MD3 D3 Modified Aero Valance is approved.

## 3. Roof, Roof Posts, Roof Supports and Window Side Panels

1. All roofs must be full size. Half-moon roofs will not be permitted. The rear edge of the roof may not be mounted more than 12" past the rear axle. The roof must be symmetrical.
2. Wings, roof spoilers or ground effects of any kind will not be permitted.
3. A maximum of 5 fasteners on the rear of the roof will be permitted.
4. All flat type roofs will be allowed a maximum 3" difference in height between the front of the roof and the rear of the roof. This measurement may be taken from the interior and/or the ground. The rear of the roof must maintain the same height from side to-side.
5. All curved type roofs will be allowed a maximum of 5" in the front and 2" in the rear. The break in the roof must be within 6" from the center of the roof.
6. Wedge roofs will not be permitted.
7. Dished roofs will not be permitted. Roofs must be rounded side-to-side. Bead rolls will be permitted. The roof must be level from side to side with a 1" wide x 1/8 inch thick stiffener in the center.
8. The rear roof post must begin where it meets the back edge of the roof. The rear roof supports may not extend past the front side of the rear upright of the roll cage.
9. The side vents on the front roof posts may extend rearward from the lowest point, a maximum of 16", then at a 90-degree angle to roof for one configuration, side vents must meet the outside of the car.
10. The roof side (sail) panel window size must be 10"x 15" and must match drawing number - 2- side view. The roof side (sail) panels must be the same design, length (top and bottom) on both sides of the car.
11. Sail panels must be a straight line from top to bottom on the front edge. Outward bowing of the sail panel will not be permitted.
12. When using the long roof side (sail) panels, they must be mounted in the same way as described above.
13. If the long roof side (sail) panel is being used a 3" radius will be permitted.
14. Any sun shield must be on hinge for easy exiting, taping will not be permitted. The window opening must remain at a minimum of 12".
15. All race cars in competition must meet the measurements illustrated in the DIRTcar drawing.
16. The roof should be single thickness of material. The roll bar hoops must be exposed for inspection.
17. If the roof is curved then a level will be placed on the top of the car and if the roof is 5" or less in the front and 2" or less in the rear and the break is in the middle then the roof will be permitted.
18. The roofs must be stock appearing. The roof must maintain the same height on both sides. If a track official determines the roof does not meet the requirements as stated above then a penalty as determined by the official may be determined prior to competition, additional weight and/or other penalties, unless the roof can be returned to within the parameter as stated above prior to competition in the event that the roof was inspected for.
19. The minimum roof height is 42" with a maximum height of 52".
20. The maximum roof width will be 50" with a minimum of 44". The roof must be level from side to side with a 1" wide x 1/8" thick stiffener in the center.
21. The maximum roof length will be 56" with a minimum roof length of 41". A maximum of 5 fasteners on the rear of the roof will be permitted.

22. The front roof post must be in a straight line from top to bottom. They must be the same on both sides.

23. The maximum height on the rear roof post/sail panel vertical is 3".

#### **4. Doors**

1. The top of the doors must remain in line with the rear engine plate. The bottom of the doors may extend a maximum of 8" past the motor plate toward the front of the vehicle. Any material that exceeds 8" forward of the engine plate will not be permitted.

2. Right panel from top of door to bottom of door may not be no more than 3" and must be mounted straight inside the bottom.

#### **5. Deck**

1. The minimum deck height is 28" with a maximum height of 39".

2. The deck height should measure within 1" from side-to-side.

3. The measurement from the center of the hub to the rear top of deck will be a minimum of 34" and a maximum of 48".

4. Interior decks must be flat from side to side.

5. Option 1 - Interior decks must be flat from side to side. Interior decks may have up to a total of 6" of "rake" from the most forward part of the deck to the most rearward part of the deck as described below. Interior deck from the rear of the seat forward may be flat or have up to 3" of rake. The interior deck from the rear of the seat to the rear of the car cannot exceed 3" of rake regardless of how much rake the front portion measures. The rake of the rear portion of the interior deck must be in a straight flat line from the rear of the seat to the rear of the car. If using this option you will not be allowed a spoiler.

6. Option 2 - Interior decks may have up to a total of 3" of rake from front to back and must be flat side to side. If you are using this deck option then you will be allowed a 3" spoiler.

1. The spoiler shall be a maximum of 3" tall. Any spoiler angle will be permitted. Three spoiler supports may be used; this includes side spoilers. The spoiler supports and side spoilers shall be 3" tall in the back and 2" tall in the front with a maximum total length of 6 12" at the bottom. The spoiler may be fabricated from lexan or aluminum.

#### **6. Interior and Driver Compartment**

1. All windows must have a minimum 11" vertical opening. The entire interior must have a minimum of 11" of clearance from the interior deck to the roof and all sections of the roll cage. The interior deck sheet metal to the right side of the driver from the back of the seat forward should be fabricated on an angle from the driveshaft tunnel to the right-side window to promote ease of exit for the driver through the right side and or front window opening.

2. Hydraulic and/or pneumatic weight jacks, trackers, or similar adjustable components of any type will not be permitted.

3. Mirrors of any type will not be permitted.

4. The drivers compartment must be sealed from the engine and the race track. The rear bubble of the hood should be closed and sealed from the driver.

5. Any car in competition must have the right side door bars as part of the roll cage.

#### **7) Brakes, Brake Components, Wheel Hub**

1. All cars must be equipped with a working braking system on all four wheels and all four wheels must be able to stop/brake at all times.

2. Front brakes must utilize a one piece O.E.M. or aftermarket O.E.M., magnetic steel hub and vented rotor assembly. Rear brakes must utilize magnetic steel vented rotors. Carbon fiber, aluminum, and solid disc rotors will not be permitted. Drilling, lightening and/or any alteration to the brake rotors or calipers

will not be permitted. Brake rotors of excessive size or weight when compared to an O.E.M. brake rotor will not be permitted.

3. Only stock O.E.M. and/or DIRTcar approved aftermarket calipers will be permitted. The following calipers have been approved for competition:

- a. Wilwood: Part # 120-7197
- b. Wilwood: Part # 120-13900
- c. Wilwood: Part # 120-13899
- d. AFCO: Part # 663031
- e. AFCO: Part # 6630310.

4. Front calipers must mount solid to the front spindle. Rear calipers may be a solid mount type or a floating type design. Both solid and floating type rear caliper mounts must be mounted to the rear axle housing. When using a floating rear brake caliper, it must be completely separate from the rear axle housing (birdcage) mount. The floating rear caliper mount must pivot independently and be supported by one radius rod to the frame only.

5. Brake proportioning (bias) valves and a right front shut off valve are permitted

## **8. TIRES/WHEELS:**

A. Only tires approved for competition are the Hoosier: M-30S and M-60 compounds in the DIRTcar plated tire 26.5/8.0/15 or 27.5/8.0/15, OR the American Racer: AR Hard or AR Xtra Hard.

Maximum width of the tire will be 9".

B. NO GROOVING allowed, siping permitted.

C. Recapping of an approved tire is not permitted.

D. Track can confiscate any tire at any time during an event to be evaluated and analyzed including verification using a tire durometer. Tires may also be submitted for further chemical analysis.

E. Defacing or altering any of the manufacturer's identification markings, letters, words, numbers, on any tire will not be permitted.

F. Tire softeners and/or chemicals designed to alter the chemical characteristics of the tire and/or the tire surface will not be permitted.

G. Bead locks will be permitted on the right side only.

H. Wheel discs shall be fastened to the wheel using a minimum of three 5/16" or three ¼ inch diameter magnetic steel hex head bolts. The use of wheel discs with any other type of fastener will not be permitted.

I. Wheel covers must not exceed 1" in thickness. Wheel covers must not exceed a 6 ½" outside diameter. Foam type or plastic outer mud cover allowed on all wheels. Must be securely mounted.

## **9) - Suspension, Suspension Components, Springs, Shocks, Steering and Steering Components**

### **1. General**

1. Suspension/Steering designs and applications are constantly evolving. Although the intent of the suspension/steering rules are an attempt to accommodate the majority of suspension/steering and suspension/steering component designs and applications currently being used in competition, the rules cannot be absolute.

2. Any and all new designs or modifications to an existing suspension/steering and/or suspension/steering component must be communicated to and approved before being used in competition.

3. Unless otherwise specified, suspension/steering components must be manufactured using magnetic steel only. This includes but is not limited to, shocks, hubs, all control arms (A-frames), axle tubes, tie rods, etc.

### **2. Steering Components**

1. An O.E.M. steering system applicable to the O.E.M. frame assembly must be used. The steering system must consist of one reciprocating steering gear assembly, one pitman arm, one idler arm, one center steering link (drag link), two inner tie rod ends or spherical rod ends, two adjusting sleeves, and two outer tie rod ends or spherical rod ends. Additional components, braces, rods, etc. will not be permitted.

2. O.E.M. or exact fit aftermarket replacement center steering (drag) link, pitman arm, idler arm available at auto part replacement venues will be permitted. Aftermarket components must match O.E.M. for all specifications, dimensions and design. Only single point round tapered mounting holes and O.E.M. tapered ball studs will be permitted.
3. Fabricated center (drag) links, braces, etc. will no longer be permitted.
4. Steel spherical rod ends (heim joints) and fabricated magnetic steel tie rod adjusting sleeves will be permitted. 5/8" or larger spherical rod ends and fasteners must be used. The inner rod end must connect to the center steering link using a stud that is tapered to fit the center steering link on one end with a straight 5/8" stud on the opposite end, or the center steering link may be drilled to accept a 5/8" bolt. The outer rod end may use a 5/8" grade 8 bolt with a bump steer spacer to connect to the steering arm. The O.E.M. steering arm may be drilled to accept a 5/8" bolt. Tie rod adjusting sleeves must be magnetic steel tubing.
5. The steering shaft and interior mountings may be fabricated. The steering wheel must remain on the left side of the vehicle. The steering shaft must have at least one universal type joint to allow the shaft to "fold" under impact.
6. All steering wheels must connect to the steering shaft with an approved quick release coupler. SFI certified steering wheel couplers are highly recommended.

### **3. Front Suspension**

1. All front suspension and steering components (except the upper control arm mounts) must utilize the original O.E.M. suspension and steering component mounting holes. All mounting holes must remain a single round hole as produced by the O.E.M. Adjustable mounts and/or "slugs" will not be permitted.
2. Weight jacking bolts (wedge bolts) may be added to O.E.M. frame but, must be located within 1" of the original centerline of the O.E.M. front spring location.
3. Unless otherwise specified, the front suspension components must be O.E.M. serviceable parts and originate from the same O.E.M. frame manufacturer for that application.
4. Unless otherwise approved, only O.E.M. and/or O.E.M. replacement type passenger car spindles will be permitted. Spindle O.E.M. manufacturer and model is optional. Fabricated spindles will not be permitted. Spindles must not be altered. O.E.M. spindles utilizing a removable steering arm must use the same O.E.M. steering arm originally supplied with the type and model of spindle being used or a fabricated steering arm that is an exact match (length, mounting holes, etc.). If a fabricated steering arm is used, competitors must be prepared to supply an O.E.M. steering arm for an inspection comparison.
5. One side lower control arm must maintain the OEM dimensions. The opposite side lower control arm must maintain the OEM dimensions +/- 1". All fabricated lower control arms must fit the DIRTcar/UMP lower control arm fixture(s) with the exception of the length as described above on one side. The maximum outside to outside tread width measurement must not exceed 78"
6. The following approved multiple piece aftermarket spindles may be used for competition:
  1. Speedway Motors: 91034313, 91034501/2, 91034511
  2. Afco: 1063435L/R
  3. Argo manufacturing: RP-929 (AMC), Mustang II
7. Alterations and/or relocation of the lower control arm mounts will not be permitted. Lower control arms may be O.E.M. lower control arms for the frame being used or DIRTcar approved fabricated lower control arms, which are mounted in the O.E.M. location and maintain the O.E.M. dimensions. Lower control arms must be the same length when compared to O.E.M. right and left. The lower coil spring seat must be an integral welded component of the lower control arm. If using spherical rod ends (heim joints) as lower control arm mounts, spherical rod ends (heim joints) must be welded to the lower control arm to prevent adjustment. Competitors must be prepared to supply an O.E.M. lower control arm for an inspection comparison. All fabricated lower control arms must fit the DIRTcar/UMP lower control arm fixture(s).
8. Tubular-type upper A-frames will be permitted. The upper A-frame mounting locations may be relocated. Aluminum cross shafts will be permitted.



#### **4. Axle Housing, Rear Differential**

1. The axle housing must be of the "closed tube" design utilizing "full floating" magnetic steel hubs and axle shafts. "Live axle"-type rear ends will not be permitted.
2. Quick change rear ends will be permitted.
3. The center section of the axle housing must be manufactured of either aluminum or magnesium.
4. Axle tubes must be one piece and manufactured of magnetic steel only. Axle tube internal inserts or external sleeves will not be permitted.
5. The axle tube must not exceed 3" O.D. (outside diameter) at any point from center section to hub.
6. Rear differentials in all cars must be locked. Both rear wheels must always rotate in the same direction and never free wheel or turn at a different speed through the differential. Differentials may be locked by using a steel or aluminum spool, a steel or aluminum mini spool, or welding. Open, limited slip, traction sensitive, Detroit lockers or any other device that allows independent wheel rotation will not be permitted.

#### **5. Rear Suspension Frame Mounts**

1. Rear suspension configuration used on current and new chassis(s) must be the design commonly known as four link. Older cars currently competing with other rear suspension designs will be allowed to compete until further notification at the discretion of the Series Director.
2. The frame/roll cage structure must have integral welded mounting brackets for the attachment of rear suspension components. Frame suspension mounts may be welded or bolted securely (without any movement) to the frame/roll cage structure.
3. The only material used to fabricate frame suspension mounts that will be permitted is magnetic steel.
4. Axle Housing Mounts:
  1. Aluminum bird cages will not be permitted.
  2. Axle housing mounts may be a solid (welded) type or a floating type (birdcage) design.
  3. Only one axle housing mount per side will be permitted.
5. The final assembled axle housing mount must be a one piece mount. When a floating type mount (birdcage) is fabricated using two pieces, the two pieces must create a common one piece pivot (barrel). The two pieces must be fastened or welded together to prevent independent movement of the two pieces. The axle housing mount must attach directly to the axle tube with clearance only to permit rotation of the entire mount. Fore, aft or vertical movement of the mount or the axle housing within the mount will not be permitted.
6. Only two radius rods per side will be permitted to be connected from the axle housing mounts (birdcages) to the frame. Radius rods must be magnetic steel. Spring rods or any type of radius rods that change length dynamically are not permitted.
7. Radius rods must attach to the frame brackets and to the birdcages using metal spherical rod ends or mono ball type bearings. Non-metallic bearings and or bushings will not be permitted. All mounting holes for attaching radius rods must be round and properly fit the fastener being used to prevent movement.
8. Independent rear suspensions will not be permitted.
9. In regard to swing arm and/or Z-Link suspension, these suspension types are permitted. The shock on a swing arm or z-link rear suspension may mount to the bird cage or bottom radius rod. Top and bottom solid links must be mounted on hiems and run in the opposite direction of the bird cage.

#### **6. Springs**

1. One (and only one) coil or leaf spring per wheel must be used. Coil springs must be manufactured from magnetic steel. Rear leaf springs (if used) may be either magnetic steel or an approved composite material. All coil springs must be a minimum of 5" in diameter. Coil springs must be wound with all coils being the same O.D., I.D. from the top to the bottom of the spring. The coil spring wire diameter must be the same from the top to the bottom of the spring. Coil spacing must be equal. Round coil spring wire must be used. Coil springs with linear spring rates are the only coil springs permitted. Air springs are not permitted.
2. Front coil springs:

1. The top of the front coil spring must be closed end and ground flat.
2. The upper front coil spring mount must be flat and support the top of the spring 360 degrees.
3. The lower end of the front coil spring must be an open end with a maximum gap of ¼” between the "tail" of the spring and the next coil.
4. The lower front coil spring mount may have a single step to prevent spring rotation and accommodate the open end of the spring. The step of the lower front coil spring mount must not exceed 1” in height. The lower coil spring mount must be a welded integral component of the lower control arm. When installed the lower end of the front coil spring must be supported 360 degrees.

### 3. Rear Coil Springs:

1. The top and bottom of the rear coil spring must be closed end and ground flat.
2. The upper and lower rear coil spring mounts must support the spring for 360 degrees.
3. Rear steel coil-over eliminators and/or steel/aluminum coil-over kits will be permitted. The coil-over eliminators and/or coil-over kits must conform to the shock and spring rules.
4. Only one coil spring per wheel will be permitted.<sup>10</sup>
5. All rear springs must have a tethered and/or cable system in place to securely fasten them in position in the car.
6. One and ONLY ONE coil spring will be permitted on the lift bar and/or brake spring. Lift bar and/or brake springs must be a minimum of 5” in diameter. Progressive springs will be allowed on the lift bar and pull bar.

## 7. Shocks

1. Only magnetic steel body, mono tube shocks with approved external adjustments will be permitted. Approved external adjustments are adjustments that can only be made with the shock absorber removed from the car. Remote adjusters of any type will not be permitted. Shocks must be conventional oil emulsion design. Shocks may be gas pressurized providing a gas reservoir is an integral component of the shock body. Gas must be separated from the oil by a divider piston with a positive stop. The external portion of the shock shaft must remain exposed at all times. The lower shock "bearing" inside diameter and the shock shaft must not exceed 5/8" in diameter. Pneumatic (AIR) shocks, remote adjustable shocks, and remote gas reservoirs will not be permitted.
2. Coils over shocks of any type on the front of the car will not be permitted.
3. Only one shock per wheel will be permitted. Lay down shocks less than 12” away from the brake rotor will not be permitted

## 10) Electronics, Gauges and Dash Modules

1. Two-way communication devices in and/or attached to the race vehicle or on the driver’s person will not be permitted.
2. Cellular, satellite, and wi-fi, devices in and/or attached to the race vehicle or on the driver’s person will not be permitted (Including cell phones and/or smart watches).
3. Antennas will not be permitted in and/or attached to the race vehicle or carried by the driver.
4. All forms of vehicle position systems will not be permitted. (GPS)
5. Only approved lap timing and or lap time recording devices (transponders) will be permitted.

## 11) SAFETY EQUIPMENT:

Snell-rated SA2005 or SA2000 helmet required. Roll bar padding required in driver compartment. Recommended: Fire retardant padding. SFI-approved full fire suit required. Fire retardant gloves, shoes and neck brace (or head and neck restraint) required. Right and left seat head supports required if using head and neck restraint system. Recommended: Fire retardant head sock and underwear, collapsible steering shaft. Minimum 3” (2” with head restraint system) wide SFI approved five point safety belt assembly required, must be mounted securely to main roll cage. Recommended: Safety belts no more than two years old. Kill switch required within easy reach of driver and must be clearly marked ‘OFF’ and ‘ON’.

## **12. TECHNICAL PROCEDURES**

- A. Any competing car must be presented to the tech man or tech area upon request. Only the driver or some competent official may accompany the car during the procedure.
- B. No feature will be declared official until the tech man is satisfied.
- C. All technical protests must be made with the tech official within ten minutes of the completion of the race. The winner is the only car who may be protested- In order to make a protest against the winner; the protesting car must have finished in the top five and on the lead lap.
- D. Any protests must be made to the proper official in an orderly and dignified manner. Protests of the winner will be allowed only if presented coherently and as the tech team sees fit. In the event of multiple protests we will determine the order of importance and select which if any we choose to omit.
- E. Fees: Protesting car must put up a \$200 nonrefundable supervisory fee, additional items include \$200 to pump engine, \$250 per part protested, \$500 to remove head, \$1500 for complete tear down.
- F. Any other violation found during the inspection that was not part of the protest will still result in disqualification.

**13. PENALTIES** The technical rules contained here have been assembled with great concern toward maximizing competition and minimizing costs. Rule violations will not be tolerated. Major violations will result in disqualification, loss of points, and prize money earned. Depending on the severity and the intent of the violation, there could be a suspension from future racing activity at the speedway. Minor violations will be considered major if they are not corrected in the grace period allowed by the tech team. Any car must be presented for the scrutiny of the tech man at our request, and results will not be considered official until we are satisfied. Any claiming must be done in an orderly manner, in cash, and under the conditions previously specified. If at any time the conduct of any team member, driver or associate becomes a discredit to the speedway, the sport, or himself, they will be removed from all racing activity at the track. Owners/ drivers are responsible for the behavior of all individuals associated with the car and may suffer similarly. These rules have been designed to facilitate the orderly conduct of and establish minimum or maximum requirements for the events. No express or implied warranty of safety shall result from publication or compliance with these regulations.

**Management is empowered to, at their discretion, deviate from specifications described herein. Management reserves the right to update these regulations at their discretion, in the interest of cost, safety, or fairness. Management's interpretation of these regulations will always be considered final.**