



# 2023 LLM RULES

**SAFETY EQUIPMENT:** SNELL-RATED SA2015 OR SA2020 HELMET REQUIRED. SFI-APPROVED FULL FIRE SUIT REQUIRED. FIRE RETARDANT GLOVES, SHOES AND NECK BRACE (OR HEAD AND NECK RESTRAINT) REQUIRED ANYTIME CAR IS ON THE RACING SURFACE. IF YOU DO NOT HAVE REQUIRED EQUIPMENT, YOU WILL NOT BE ALLOWED TO COMPETE. Right and left seat head supports required if using head and neck restraint system. Driver-side window net required, minimum 16 inch by 20 inch ribbon or mesh style, and must be mounted to roll cage so latch is at top front of window. Minimum three inch (two inch 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'.

Fire suppression system recommended. Full containment seat recommended.

**FRAME:** Must be constructed of two inch by two inch square steel tubing, or minimum 1.75 inch round tubing - with minimum 0.083 wall thickness. Minimum wheelbase of 103 inches, maximum 105 inches, both sides.

**ROLL CAGE:** Main roll cage must be at least 1.5 inch O.D. tubing with minimum wall thickness of 0.083 inches. Driver's head must not protrude outside cage with helmet on.

**DOOR BARS:** Minimum three driver door bars must be at least 1.5 inch O.D. tubing with minimum wall thickness of 0.083 inches. Steel door plate, 18 gauge or 0.049 inch minimum thickness, must be securely welded or bolted to driver side door bars. Minimum 16"x26".

**BODY:** (see IMCA body diagram for specific dimensions): No unapproved composite or carbon fiber body panels. Approved composite body panels allowed, including roof rock guard, hood scoop and nose panel. No fins or lips anywhere along length of car. Bodyline must be a smooth even line from front to rear. Front fenders and hood must be level and flat from left side to right side of car and at least as far back as engine plate. Interior must be attached to the top of the doors and quarter panels and must taper gradually towards the center of the car with a **maximum 4 inch drop**. Minimum ground clearance is three inches. Must have IMCA approved stock-appearing nose piece (molded type material) mounted in unaltered approved manner. Headlight decal package required. No part of body can be wider than 90 inches. Maximum 90 inch front track width and maximum 88 inch rear track width, measured outside of tire to outside of tire. Roof must be stock appearing, mounted directly to the roll cage with no more than 1/2 inch spacer, mounted level, parallel to body, centered on car and rounded down in all directions. Roof and hood may be aluminum or fiberglass. Maximum 1.5 inch rolled down rock guard allowed on

roof front. Roof supports and window side panels must extend to edge of body. Window side panels must resemble all aspects of drawing - must have opera window and be same on both sides. Rear spoiler may be maximum eight inches in material height (including hinge) and maximum 72.5 inches wide. Spoiler may have rear stiffener, must be one inch or more down from top. Maximum of three spoiler braces allowed, must be mounted in line, and must resemble all aspects of drawing. Maximum 39 inch deck height, will be measured with maximum 15 inch to top of right front splitter. Right side inner panel permitted. No complete car covers, rear tail cover allowed in personal pit area only. No rear filler panel required. Car number must be minimum four inches thick and 20 inches tall and clearly visible, on both sides, top and back of car, and front, if possible.

**DRIVER COMPARTMENT:** Minimum three windshield bars in front of driver. Lexan or aluminum cowl panel in front of driver allowed, but can be no wider than cockpit and no farther back than steering wheel. Driver must be sealed off from track, driveline, engine, fuel cell, suspension components, battery, coolers, pumps, fuel and oil lines. Aluminum high back seats only, must be bolted in with 0.375 inch bolts. No mirrors. No driver-adjustable devices allowed while car is in competition except brake adjuster and right front brake shut-off.

**FRONT SUSPENSION:** Must be of A-frame or strut configuration. **No suspension/spring stops allowed.**

**STEERING:** Rack and pinion steering allowed.

**SHOCKS:** All cars will run unaltered Integra 4200 series or AFKO 14 series 7 or 9 inch shocks.

Coil over kits allowed. Only one shock per wheel, plus one optional shock on a rear suspension mechanical traction device. Mechanical traction device shock must be an unaltered shock of the same allowed series. No bump stops allowed. If you wish to separate spring from shock on left rear, you may do so only by utilizing a steel coil over eliminator

Any/all shocks are subject to a \$75 per shock claim.

**SPRINGS:** One steel coil spring per wheel only. Exceptions are: left front "take up" spring allowed and one additional spring allowed on pull bar. All coil springs must be maximum 16 inch (or less) free height with 0.5 inch tolerance. No stacked springs or progressive rate springs allowed. No torsion bars, air bags, air springs or inner liners. Spring rubbers are NOT allowed. Leaf springs may be composite or steel.

**REAR SUSPENSION:** No independent rear suspension. Only one mechanical traction device is permitted, pull bar or lift arm. One bird cage attached with two solid radius rods to chassis per side. Birdcage brackets and attachments must be welded or bolted solid to birdcage except pivoting shock bolt. Chassis mounts must be solidly welded or bolted to frame.

**REAR END:** Quick changes allowed. Standard weight aluminum or steel axle tubes only. No open tube or cambered rear ends. All rear axle components must match in material and design left and right. No heavy weight axle or axle tube components or exotic materials allowed.

**BUMPERS:** Must be either capped, or bent forward at ends, no sharp edges. All cars must be equipped with tow hook or similar device front and rear. Complete front nose and side pieces required.

**TIRES/WHEELS:** Hoosier RC4 or D55 tire only. No softening, conditioning, grooving or **aggressive grinding**. Siping allowed on RC4 ONLY. Sanding allowed on tire tread only. Maximum 12 inch wide, aluminum or steel wheels and lug nuts only. Bead locks allowed on right side. External bead lock only, cannot make wheel any wider than 12.75 inches. Foam type or securely bolted plastic or aluminum mud plugs allowed on any wheel.

**BRAKES:** Must be operative and lock up all four wheels during any inspection. Steel brake rotors only. Brake shut-off allowed on right front only (electric or mechanical).

**EXHAUST:** Round tube headers only. Tri-Y headers are not allowed. All primary header tubes must enter directly into one collector, at same point, at end of header. Collector and turn down length maximum nineteen inches total. Painted headers only. No heat wrap. All exhaust must go through collector, two per car, one per header. No pan evac systems, exhaust sensors, merge collectors, crossovers, inserts, cones or balance tubes.

**FUEL SYSTEM:** Racing fuel cell required, maximum 32 gallon capacity (Recommended 12 gallon), must be in minimum 20 gauge steel container. Must be securely mounted behind rear axle, between rear tires, minimum four inches ahead of bumper, minimum 10 inches above ground. Must mount with minimum one inch square tubing or two solid steel straps around entire cell, two inches wide and 0.125 inch thick. All cell mounts must be steel, securely welded to frame/cage. Protective tubing must cover rear and extend past both sides of cell. No part of cell shall be lower than protective tubing. Fuel cell vents, including cap vent, must have check valves. If fuel cell does not have aircraft style positive seal filler neck/cap system - a flapper, spring or ball type filler rollover valve is required. Fuel shut-off recommended. Pickup must be on top or right side of cell. One fuel filter allowed. No cool cans. Air cleaner top/stud cannot direct air into carburetor. No top flow air cleaner housings or cold air boxes. Mechanical OEM type push rod fuel pumps only. Maximum 0.100 inch thick carburetor gaskets on all engines.

**CLAIM ENGINE:** must use unaltered 500 c.f.m. Holley - part no. 0-4412, 0-4412SA, (aluminum casting no. L6R199B only) both may be modified to Holley HP Dorton part no. 0-80583-1 specs only. Float bowl must face forward. Any adapter, maximum one inch thick. No throttle bore adjustable carburetor spacers.  
**GM CRATE ENGINE:** may use any Holley 4-barrel carburetor, all components (float bowls and main body) must be Holley manufactured. Metering blocks and base plate may be billet aluminum non-Holley. No aerosol-style carburetors allowed. If carburetor spacer is used on crate, must use Speedway Motors part #545-64940 or Moroso part #64940 carburetor spacer.

**FUEL:** Gasoline only. Racing fuel allowed. No E85. Recommended: pump grade. No performance enhancing or scented additives. Fuel must pass both dielectric meter and chemical tests. Fuel sample may be taken from any car at any time

**ENGINE LOCATION:** Measured from centerline of upper ball joints to center of number one spark plug hole. Maximum setback is 8 inches.

**GAUGES/ELECTRONICS:** No cell phones, unapproved cameras, transmitting or listening devices (exception is one-way Race Receiver radio by officials), timing retard controls, or digital gauges (including tach). No electronic monitoring computer devices capable of storing or transmitting information except memory recall analog tach. 12 volt ignition system only. Ford/Chrysler may use HEI distributor. No crank triggers.. All engines MUST use unaltered MSD #8727CT rev-control or MSD #6427 ignition control, with maximum 6,200 rpm rev-limiter for crate engine and maximum 6,800 rpm rev-limiter for claim engine. No unapproved or additional ignition accessories allowed. All components must be out of reach of driver, with rev-control easily accessible facing up or out for inspection. All wiring must be visible for inspection. If using the MSD #6427, distributor must have 2 wire weather-pak connector. Only gauges allowed are analog oil pressure, fuel pressure, brake bias, water temperature, water pressure, and tach. OEM type alternator with internal regulator allowed. No electronic traction control devices.

#### **ENGINE OPTIONS AND SPECIFICATIONS:**

**(A) CRATE ENGINE:** Must use unaltered sealed GM 602 crate engine. All GM 602 crate engines with Chevy logo cap seals must have IMCA CableLok seals. Upon inspection, any different, altered or missing GM seal bolts will result in automatic DQ. GM seal bolt exception is IMCA approved and issued Cable-Lok repair system, and oil pan may be replaced with Champ pan #CP57LTRB and Champ pickup #1012SB, or Kevko pan #1090NRHw/ISP or IMCA90 and Kevko pick-up #1003-3/4. All cars utilizing the GM602 crate engine must clearly display on both front roof posts the Chevrolet Performance emblem.

**(B) CLAIM ENGINE:** All engines must be able to be used in conventional passenger car without alterations. External engine casting and threaded holes cannot be altered. **BLOCK:** OEM steel passenger vehicle production block only. No GM Bowtie, Ford SVO or Chrysler W components allowed. GM approved block numbers are: 10105123, 10066034, 3892657, 3914660, 3914678, 3932388, 3932386, 3956618, 3970000, 3970006, 3970010, 3970014, 10066033, 10066036, 10243880, 14010207, 14010209, 14010287, 14016376, 14016379, 10054727, 14088528, 14088548, 14088552, 14093638, 14101148. Stroke must match block. No 400 or larger cubic inch parts allowed. Maximum 361 cubic inches (GM); 363 (Ford); 370 (Chrysler). Violation of cubic inch limit or compression ratio limit will result in disqualification, loss of all track points for the season, \$1,000 fine and a 30-day suspension. Maximum compression ratio is 9.0 to 1, no tolerance. Compression ratio checked using Whistler and cubic inches checked using pump, OR by visual inspection of part and/or casting numbers, pistons, etc. (track option which method is used). Flat top or dished pistons only, no gas-ported pistons. OEM or OEM appearing replacement steel crankshaft only - cannot be lightened. No aerowing, bullnose, knife edge, undercut or drilling of second or third rod throws. OEM or OEM cast appearing replacement steel rods only – GM 5.7 inch, 6 inch or GM Vortec rod part number

10108688 allowed. Cap screw allowed. No splayed main caps. Conventional flat tappet cam and lifters only, cannot alter lifter bores. OEM firing order cannot be changed (GM: 1-8-4-3-6-5-7-2). May use oil restrictors. 'Wet' sump oiling system only. Racing oil pans allowed. Mandatory one inch inspection hole in all pans – no obstructions to crank and rods. Accumulator allowed. CYLINDER HEADS: Steel only. Must be unaltered approved OEM and minimum 76 cc combustion chamber (GM). Only GM OEM approved head numbers are: 14079267, 3986336, 3986339, 3986339X, 3986388, 3932441, 376445, 3928454, 3932454, 3876487, 3973487, 3973487X, 3973493, 3951598, 468642, 330862, 333882, 3998920, 3998991, 3998993, 3998997, 3970126. Maximum size valves on these heads are 2.02 inch intake and 1.60 inch exhaust. May use Stock Replacement (SR) cylinder heads: Engine Quest (EQ) part number CH350I, DART Speedway Motors part number 91624360, (EQ) Chrysler part number CH318B, World Products Ford part number 53030 - 1.250 inch ( $\pm .015$  tolerance) maximum O.D. valve springs. All SR heads must remain as produced, seat angles and valve sizes can not be changed: three angle valve job only (absolutely no casting removal in valve pocket of EQ, DART or World Products head, for any reason); Ford - no SVO heads; Chrysler - no W-2 heads, 360 cubic inch heads only. No porting, polishing or unapproved alterations allowed to any cylinder head or intake, disqualification and \$250 fine if illegal. Guide plates, screw-in shouldered studs (GM 0.375-inch max) and polylocks allowed. No stud girdles. Steel roller tip rocker arms allowed. GM - 1.250 inch ( $\pm .015$  tolerance) maximum O.D. valve springs with magnetic steel retainer and maximum 5/16 inch pushrods, no beehive valve springs allowed. INTAKE: Unaltered, aftermarket aluminum intakes allowed are: Weiland GM #7547, #7547-1; Ford #7515, #8023 or #7516; Chrysler #8022; Edelbrock GM #2701; Ford #7121, #7181, #7183; Chrysler #2176. Cooling lines allowed. Unaltered OEM type harmonic balancer only. OEM type steel or aluminum water pumps only.

**TRANSMISSION:** Must have at least two forward gears and one reverse, plus a neutral position. With engine running and car in still position, must be able to engage car in gear and move forward, then backward. All belt drive pumps must be mounted on front of engine. Flywheel/flexplate must bolt to engine between clutch assembly and crankshaft and all driveline components within bellhousing must rotate while car is in any gear.

Transmission must be one of the following designs:

- OEM Manual: Must have a standard OEM case and working disc-type clutch or approved cone or disc-type coupler inside an explosion-proof steel bellhousing. One flywheel only, minimum 8.5 inch diameter. Diameter of clutch disc must be a minimum of 5.5 inches. Clutch assembly must be steel, except housing, which must be steel and/ or aluminum. Bellhousing can have only a hole for throwout bearing lever or hose, must be 270 degrees around top of clutch and flywheel area. Standard or reverse mount starter allowed, must directly engage flywheel.
- Automatic: Must remain in OEM or OEM replacement case, with a functioning OEM appearing pump. Aluminum OEM bellhousing may be replaced with aftermarket explosion-proof steel or aluminum bellhousing. Original OEM bellhousing must have

approved scattershield constructed of minimum 0.125 inch by three inch steel, (1) 270 degrees around flexplate.

- **Aftermarket Manual: ALLOWED**

**DRIVE SHAFT:** Minimum two inch diameter drive shaft and must be painted white. 360-degree drive shaft loop required and must be constructed of at least 0.25 inch by two inch steel, or one inch tubing, mounted six inches back from front U-joint.

**BATTERY/STARTER:** 12 VOLT BATTERY ONLY Battery must be securely mounted to chassis, protected by tubing, and positive terminal must be covered. Starter must be in working order. Car must start under its own power

**WEIGHT:** Must weigh minimum 2,300 pounds after race with driver. Weights must be painted white with car number on them. Must be securely fastened with minimum two 0.5 inch steel bolts, inside body panels, not on rear bumper. Standard axle tubes only. No bolt on wheel weights. Filling hubs with lead or other weights not allowed on rear axle. No weights and/or loose objects in driver's compartment. Only carbon fiber components allowed are rock guard and hood scoop.

**CLAIM ENGINE PROTEST PROCEDURES:** Within 5 minutes after race, any driver starting and finishing the feature on the lead lap may, for \$500, protest (in writing) any engine. Protest and money must be taken directly to tech official. \$100 of the protest fee goes to the track and will not be refunded, regardless of protest outcome. Driver may only make one protest per event, may not protest another driver finishing in a position behind them and may not protest same driver more than once per calendar year. One protest allowed per event, draw determines multiple protests. Under this protest, following **MUST** be inspected: intake manifold, cylinder head (removal required), bore and stroke, and visual inspection in oil pan. \$400 will be returned to protestor if engine is found illegal. If engine being protested is found legal, \$400 protest fee will be paid to driver being protested. If parts are found illegal, or if driver refuses to submit to protest, automatic disqualification and no track points. **During engine protest, only people allowed in the immediate tech area will be driver being protested along with one crew member, protesting driver, tech inspector(s) and the race director. Race director and tech officials' decisions are final.**