



## 2019 LLM RULES

Updated: 1/25/2019

- 1. SAFETY EQUIPMENT: SNELL-RATED SA2005, SA2010, OR SA2015 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.*
- 2. 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.
- 3. 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.
- 4. 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.
- 5. BODY:** Body must meet minimum IMCA late model specs. All body panels and bumpers must be present at the beginning of the event. No composite body panels allowed except roof rock guard and hood scoop. No fins or lips anywhere along length of car. Maximum body width at bottom of doors is 82 inches. Minimum ground clearance is three inches. No part of body can be wider than 90 inches. Roof must be stock appearing, mounted level, parallel to body, centered on car and rounded down in all directions. Maximum 1.5 inch rolled down rock guard allowed on roof front. Roof supports and window side panels must be present and must extend to edge of body. Rear spoiler may be maximum eight inches in material height and maximum 72 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. No inner panels. 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.
- 6. 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.

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

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

**9. SHOCKS:** Must be constructed of steel. Coil over kits allowed. No Gas shocks.

Only one shock and one spring per wheel. No stacked springs, no bump stops allowed. If you wish to separate spring from shock on LR, you may do so only by utilizing a steel coil over eliminator. No “dummy shocks” allowed. Lift arm shock must be a steel shock of the same allowed series.

All cars will run any of the following shocks:

Integra Shocks: 7”=ITG310421735, ITG3104274, ITG31042753, ITG3104275 9”=ITG310421935, ITG31042194, ITG31042195 ITG310421963.

All shocks are subject to a \$75 claim at anytime.

**10. SPRINGS:** Coil springs must be steel. Leaf springs may be composite or steel. Only one spring allowed per wheel with exception of 1(one) standard flat coil “take up” spring allowed per shock, all take up springs must be able to be compressed by hand by tech inspector . 1 (one) additional (two total) springs allowed on lift arm. No Stacked springs, no progressive springs, no spring rubbers allowed.

**11. REAR SUSPENSION:** No independent rear suspension, any other configuration allowed. Limiter chain allowed on LR and lift arm only. No other suspension stops allowed

**12. REAR END:** Quick changes allowed (Aluminum or steel tube). No open tube or cambered rear ends. No rear end coolers. All rear axle components must match in material and design left and right. No heavy weight axle or axle tube components or exotic materials. Standard axle tubes only. No bolt on wheel weights. Filling hubs with lead or other weights not allowed on rear axle.

**13. 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.

**14. TIRES/Wheels:** Hoosier Super Chainlink (SCL) .29 x 11 x 15 allowed. 28 or 27.5 x 11 x 15 stagger tires’ allowed on left rear only. No softening, conditioning, or grooving. Grinding and siping allowed on tire tread only. 12 (twelve) inch wide, aluminum or steel wheels and lug nuts only. Bead locks allowed on right side only. External bead lock only, cannot make wheel any narrower than 12 inches and no wider than 12.75 inches. Foam, plastic, or aluminum mud plugs allowed on any wheel.

**15. 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).

**16 .EXHAUST:** Round tube headers only. All primary header tubes must enter directly into one collector, at same point, at end of header. No merge collectors, no tri-v’s

**17. FUEL SYSTEM:** Racing fuel cell required, maximum 32 gallon capacity, must be in minimum 20 gauge steel container. Must mount with minimum two solid steel straps around entire cell, two inches wide and 0.125 inch thick. Cell must be mounted between frame rails, behind rear end, bottom of cell can be no lower than center section. Fuel cell vents, including cap vent, must have check valves, and bladders are highly recommended. 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 cell guard must come to bottom of fuel cell and be minimum 1.5 inch O.D. tubing.

**CLAIM ENGINE:** must use unaltered 500 c.f.m. Holley - part no. 0-4412, 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. May use Speedway Motors part #545-64940 or Moroso part #64940 carburetor spacer on crate. All carburetors, may be exchanged, style for style only, following same procedure as engine claim. No air dams or devices allowed to increase air flow to carburetor outside of air cleaner. Maximum two inch tall spacer between carburetor and air cleaner base. No cold air boxes, air cleaner duct work, or fuel cooling devices. No electric or belt drive fuel pumps

**18. FUEL:** Gasoline only. No E85 allowed. No performance enhancing additives or pressurized fuel systems. Fuel sample may be taken from any car at any time.

**19. 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.

**20. 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.

**21. GAUGES/ELECTRONICS:** No 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 and OEM HEI distributor only. Ford/Chrysler may use HEI distributor. No billet distributors or crank triggers. Ignition rotor, cap, coil and module must remain OEM appearing. Crate engine MUST use MSD #8728 or #8727CT rev-control and 6,500 rpm chip. Claim engine MAY use MSD #8728 rev-control with any rpm chip. No unapproved or additional ignition accessories allowed. All components must be out of reach of driver, but with rev-control easily accessible facing up or out for inspection. All wiring must be visible for inspection. Only gauges allowed are analog oil pressure, fuel pressure, brake bias, water temperature and tach. OEM type alternator with internal regulator allowed. No electronic traction control devices

## **22. TRANSMISSION/DRIVESHAFT:**

Must have at least two gears forward and one gear reverse, plus a neutral position. Must be able to put in and out of gear with car sitting still and engine running. All transmissions must bolt directly to back of bellhousing that bolts directly to engine block. Bert, Brinn, Falcon allowed. No reverse mount bell housings allowed. Transmissions with internal clutches may use stock aluminum bellhousing. (Bert, Brinn Falcon) *(rear transmission support highly recommended when using stock aluminum bellhousing)*

**Automatic:** Must be unaltered, two or three speed, OEM production case with a functioning OEM appearing pump. Aluminum OEM bellhousing may be replaced with aftermarket explosion-proof aluminum bellhousing. Original OEM bellhousing must have approved scatter shield constructed of minimum 0.125 inch by three inch steel, 270 degrees around flexplate. Only external lines allowed are for transmission cooler. Splined drive flange coupler or torque converter (10 inch minimum) only. No bump starts allowed.

**Manual:** Must be unaltered, three or four speed, OEM production case and have a working 7.25 inch minimum diameter, steel and/or aluminum, single or multi-disc clutch and pressure plate bolted directly to

flywheel/flexplate. These components must rotate, consistent with engine rpm, while car is in any gear. Must use explosion-proof steel bellhousing with one hole for throw out bearing lever or hose, must be 270 degrees around top of clutch and flywheel/ flexplate area. Hydraulic clutch pedal allowed.

**Driveshaft: May be of either aluminum, carbon fiber or steel,** Minimum two inch diameter. 360-degree drive shaft loop required, minimum 0.25 inch by two inch steel strap, or one inch tubing, mounted six inches back from front U-joint.

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

#### **24. ENGINE RULES:**

**(A) CRATE ENGINE:** Must use unaltered sealed GM #88958602 or #19258602 crate engine. Upon inspection, any different, altered or missing GM seal bolts will result in disqualification, loss of all points, GM seal bolt exception is IMCA approved and issued Cable-Lok repair system, and oil pan may be replaced by IMCA certified repair center with Champ pan #CP57LTRBand Champ pick-up #1012SB, or Kevko pan#1090NRHw/ISP and Kevko pick-up #1003-3/4.

**(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 must be verified by removal of head and will result in disqualification, loss of all points. 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 gasported 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 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. No belt drive oil pumps. Steel oil pans only. **Racing oil pans allowed. Mandatory inspection hole in all pans – no obstructions to crank and rods. If tech inspector is unable to see what he needs to, oil pan may need to be removed.** 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) GM part number CH350I, (EQ) Chrysler part number CH318B, World Products Ford part number 53030 - 1.250 inch (± .015 tolerance) maximum O.D. valve springs. All SR heads must remain as produced, seat angles and valve sizes cannot be changed: three angle valve job only (absolutely no casting removal in valve pocket of EQ 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 tipped stock type ball fulcrum rocker arm allowed. No bearing fulcrum rocker arm of any type roller or otherwise.** GM - 1.250 inch (± .015 tolerance) maximum O.D. valve springs, no beehive valve springs allowed.

**INTAKE:** Unaltered, approved OEM cast iron low rise, two- or four-barrel. Only unaltered (no porting or polishing) aftermarket aluminum intakes allowed are: Weiand GM #7547, #7547-1; Ford #7515, #8023 or #7516; Chrysler #8022; Edelbrock GM #2701; Ford #7121, #7181, #7183; Chrysler #2176. Cooling lines allowed on aluminum intakes. Unaltered OEM type harmonic balancer only. OEM type steel or aluminum water pumps only.

**25.ENGINE PROTEST PROCEDURES:** Within 5 minutes after race, any driver starting feature may, for \$300, 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. \$200 will be returned to protestor if engine is found illegal. If engine being protested is found legal, \$200 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.**