

## Section 15 – Pepsi Crate Cars

### 15.1 DESIGN AND CONSTRUCTION

15.1.1 All phases of design and construction are subject to the approval of the Race Director and/or Tech Official. The Promoter and/or Race Director may exclude any car, design or construction, which they deem unsafe or not meeting the specifications, the spirit and/or the intentions of the rules contained herein.

15.1.2 Any component used in the construction or assembly of the chassis and/or accessories must be approved by Tech or addressed in the following rules.

15.1.3 May use direct couple u-joint with any SFI rated ring gear or flywheel in lieu of transmission/clutch. Must have rear end disconnect. Must be able to self start. Flywheel must be completely covered.

15.1.4 **MINIMUM WEIGHT:** 1750 lbs and no more than 60.00% left side weight with driver in driving position. All weights will be measured post feature or post qualifying.

15.1.5 **Transmission:** Manual transmission or big bell in-out box may be used. A non-shifting custom design may be used. If second gear is used as main drive gear, a minimum 3/16" thick scatter shield must cover the transmission in a manner to protect driver. NO automatic transmissions or fluid couplers allowed. The revolving part of the drive shaft must be completely enclosed by a tubing w/.125" minimum thickness. The tube may move up and down with the rear end. Torque tube hoop or safety strap is required.

15.1.6 Jointed rear driveline is allowed, must meet tech approval..

15.1.7 **Brakes:** All four corners must be hydraulic foot operated and in good working order.

### 15.2 FUEL SYSTEM:

15.2.1 **Approved fuel cell or bladder is mandatory.** Metal housing for fuel cell is optional.

15.2.2 **No** aluminum fuel tanks. 10 gals or less recommended. Locking type threaded caps only. **No stock caps.** Cell must be strapped with metal straps or securely mounted to chassis. Left side nerf fuel cell must include steel braided fuel line to chassis, locking aircraft type fuel cap, minimum 1" O.D .095 tubing specially designed to protect top and side impact, metal can/housing for fuel cell. One-way check valve must be installed on all fuel cells.

#### CARBURATOR

15.2.3 Stock 2 barrel 500 cfm Holley #4412 with a factory choke horn is the "class carb". Choke plate must be removed for technical inspection. Must retain stock metering plate, May change jets and power valves for tuning.

15.2.4 Maximum allowed space between the top of the intake manifold surface to the bottom of the carb surface will be no more than 1.5" including gaskets and spacers.

15.2.5 Pump fuel only.

15.2.6 Fuel pump may be electric or mechanical. Electric fuel pump **must** have oil pressure cut off switch.

15.2.7 Fuel line must have a ¼ turn shut off valve within easy reach of the driver, accessible from outside of the racecar is mandatory. **No** plastic or glass fuel filters. Fuel filters and fuel lines must be securely mounted. **No** ridged fuel lines.

### 15.3 CHASSIS AND BODY

15.3.1 All main roll cage and frame rails must be constructed of chrome moly steel tubing of at least 1 3/8" O.D. with a minimum wall thickness of .095", any other sizes must be equivalent in strength. Cage must extend at least 2" above driver's head. A halo bar may be required to meet dimensions. Diagonal braces in the balance of the cage must be of the same type of material but not the same O.D. The frame must be constructed so that the main, frame rails are inside the wheels. No lead weight filled tubing anywhere on car. The engine block must be inside the frame rails. All areas around driver **must** be padded; conventional steering boxes **must** have knee guards.

15.3.2 All cars must have floorboards and/or belly pans extending from the front firewall to the rear firewall and from frame rail to frame rail. No floor boards under the fuel tank. The firewall must be made of metal at least .032 "thick.

15.3.3 **Minimum wheelbase is 85 inches.** The minimum tread width is 48" to the center of the tire. The maximum width is 85" outside to outside of wheels. All wheels will use all available lugs to secure the wheel. Only aluminum or steel wheels allowed.

15.3.4 Nose, hoods, tailpieces and side panels are mandatory. Bodies must not extend more than 2" outside the frame rail. NO side foils, rudders or panels are to extend beyond the roll cage on any side. NO wedges or foils under

the racecar. NO pieces may be added to the frame so as to resemble, imitate or be specifically designed to deflect, trap or from a windbreak of any kind, except those to cool/protect the motor and braking system. Nosepieces may be removed for cooling reasons.

15.3.5 **Side nerfs must be within 1" of normal width of tires.** No nerf bars with added weight allowed. Fuel cell, battery or approved weight ballast must bolt to the frame only with 5/16" minimum bolts. Front and rear bumpers must have a contact point of 18-20" above the ground with rear bumper contact point 6" in height and must not extend more than 4" past the frame width. NO part or attachment of the car can be wider than the outside of the nerf irons or extend past the rear bumper. No large gussets on bumpers.

15.3.6 No independent suspensions. Any coil over, torsion bar, leaf spring or combinations are allowed. Quick changes are allowed. **Adjustable shocks are allowed.** No cockpit adjustment, external reservoir type shocks allowed.

15.3.7 The centerline of the engine block cannot be behind the center of the wheelbase. A maximum of 8 1/2 " of offset measured from the crankshaft centerline to the center of each rear wheel is permitted.

15.3.8 Numbers must be on the nose and tailpieces. They must contrast with the body colors and be large enough for scoring to see.

15.3.9 No rear-view mirrors. No cockpit adjustable suspension allowed. **Must** have a quick release steering wheel.

15.3.10 All ignition switches shall be of a toggle design and mounted in plain sight on the dash on either side of the steering wheel.

15.3.11 Ignition, fuel pump and fuel shut off must be labeled and marked in florescent orange or red. **No** switches under the steering wheel.

15.3.12 **Battery:** Securely mounted, dry cell, spiral cell or other non-liquid type battery only.

15.3.11 All cars must have burp tank of 1-gallon capacity. Overflow tube into the exhaust collector is **not recommended.**

## 15.4 SAFETY

15.4.1 See SECTION 3 MINIMUM SPECIFICATIONS.

15.4.2 All drivers can wear a minimum single layer Nomex uniform with Nomex underwear. May use double/triple layer suit w/no underwear. Nomex gloves, shoes, arm and helmet restraints are required.

15.4.3 **Drivers Seat:** Only aluminum or steel allowed. Must be bolted in to the chassis in 4 places\*minimum., 2 on the bottom and 2 on the back near shoulder level. Each mounting hole in the seat must have a minimum 2" Dia/.060 thick reinforcement plate/washer. ALL subject to tech approval.

15.4.4 All throttle pedals must have toe return straps.

15.4.5 During any race or practice, any car that is the instigator of being three wide on the track will be penalized and/or black flagged for the racing event.

## 15.5 ENGINE GM CT 350 - CRATE # 88958602

(all rules subject to Section 5 Protest Procedures)

**MS SEAL FEE, \$8.00 per seal used (minimum 1, maximum 2) payable at time of re-seal.**

15.5.1 Unaltered and complete General Motors factory sealed crate engine # 88958602. Or track MS CT350 (602 crate) as prepared and available by Meridian Speedway. Unusable 602 crate motors may be submitted to the speedway for core credit.

15.5.2 Approved GM or MS head seals must be in place to be legal crate motor, any MS crate motors provided to competitors will be fitted with a tamperproof head seal. (If it broke, sell the parts or submit for a core credit and get a new one)

15.5.3 All new or used engines with **factory 602 seals** must be also-sealed by Meridian Speedway.(drill two head bolts for wire seal installation at speedway)

## 15.5.4

Engine Specifications on Crate Motor and Supplement for Engine Rebuild GRANDFATHERED 2012 engines only		All internal components and specifications must remain stock as supplied by GM with the following exceptions: Any exceptions must be approved by MS technical
ITEM	FACTORY SEALED CRATE 88958602 (untouchee and sealed)	Supplemental (Sealed by MS tech inspector)
Block Type	Cast Iron	Cast Iron
Casting #	10243880 or 14093638	10243880 or 14093638
Deck Height	9.025" +/- .001	9.015" +/- .001
Crankshaft	Cast Iron 14082586	Cast Iron 14082586
Crankshaft Weight	55.30 lbs	55.30 lbs
Maximum / Minimum Crank Stroke	3.48"	3.48
Crankshaft Balancing	Factory External	Rear External / Front Internal to #602 spec.
Off-Set Grinding of Crank	NONE	NONE
Crank Grind	NONE	.010 .020 .030 with tech PRE approval
Piston Type	Cast Aluminum #123611371	#123611371 or
Diameter	3.996" - 3.997"	.005" GM # clean-up kit
Valve Relief Type	4 reliefs	4 reliefs
Piston Crown	Dished	Dished
Piston Weight	594 grams	594 grams
Piston Rings	GM# 88894219 / 12507985	GM# 88894219 / 12507985 or GM .005
Connecting Rod	GM# 1010868 5.7"	or Scat #2-ICR5700p 5.7" (untouched)
Connection Rod Weight +/- 10.0 grams	604 grams	min. 604 grams
Minimum Crank or Rod Bearing Size	#602 spec.	.010", .020" or .030" under with pre tech approval (any brand w/no coating)
Camshaft Type	Hyd GM# 24502476	Hyd GM# 24502476
Camshaft Lift (int / exh measured @ valve)	.435" / .460"	.435" / .460"
Camshaft lobe lift (int / exh)	.290" / .306"	.290" / .306"
Duration @ .050" (int / exh)	212 / 222	212 / 222
Camshaft Lobe Centerline	112.5 degrees	112.5 degrees
Camshaft Timing	not a tech issue	not a tech issue
Rocker Arm Kit	GM# 12495490	GM# 12495490
Rocker Arm Type / Ratio	stamped steel 1.5	stamped steel 1.5
Timing Set	#602 Spec	not a tech issue
Head Gasket Type	GM #10105117 .028"	or Fel Pro #1003
Cylinder Head Type	Cast Iron / GM# 12558062	Cast Iron / GM# 12558062
Valve Size	1.94" / 1.50"	1.94" / 1.50"
Combustion Chamber CC's (+/- 2cc)	64	64
Intake Port CC's (+/- 2cc)	170	170
Exhaust Port CC's (+/- 2cc)	60	60
Maximum Deck Surfacing of Head	.005 to Square	Flat cut only must maintain 64cc
all other gaskets	GM #	optional
Rocker Studs, retainers, valve covers	#602 spec.	not a tech issue
Modifications to Crank Rod or Piston	NONE	NONE unless previously specified
Distributor	as supplied with #602 no alterations	as Supplied with #602 no alterations
Distributor Module	optional (factory appearing)	optional (factory appearing)

**15.5.5 Removal of any MS seal or any GM factory intake or head seal shall make that engine ineligible for competition and otherwise illegal for future competition.**

15.5.6 Maximum engine roll will be 5 degrees from vertical

15.5.7 No engine modifications will be allowed.

15.5.8 Valve springs, retainers and keepers must remain OEM and their size and installation specifications must remain within OEM spec and may be changed by competitor.

15.5.9 Castings and fittings cannot be changed

15.5.10 No machine work on outside of engine.

15.5.11 No aftermarket engine parts allowed. OEM ONLY (unless otherwise specified).

15.5.12 Sprint car headers with mufflers only. Must meet DB rule in Section 3 this includes spec muffler- Minimum Specifications.

15.5.13 Sprintcar timing cover, water pump and power steering pump may be used if desired.

15.5.14 GM Factory distributor as installed and delivered with 602 crate engine will be required and shall be unaltered with the exception of cap, wires and module.

## **15.6 TIRES / WHEELS**

15.6.1 Class tires must be purchased through Meridian Speedway.

15.6.2 Steel or aluminum wheels are approved.

15.6.3 Race day tires shall be stamped and logged prior to the final practice of the day and/or prior to time trials at the discretion of the tire tech.

Stamped tires must be run in all events including the Trophy dash and 2 practice sessions.

RF & LR & RR tires may be replaced no sooner than (w/ exception of destruction thereof) every four (4) consecutive races. LF tire is a non tech, non stamp item.

A "race" is considered only when you compete in all racing activities on that race date.

15.6.4 All tires purchased must be branded/stamped to be legal to race.

15.6.5 No tire softening or sipping allowed.

15.6.6 Practice tires may be purchased for practice only.

15.6.7 If any competitor in the top 5 in the current points, destroys a tire during an incident on the track and needs to purchase a replacement, he/she may do so at the discretion of the promoter. If the promoter deems that the replacement tire will give an unfair advantage, the promoter may then approve the whole class to take the option to purchase a new tire for that corner(s) of the car. The new tire will then need to be stamped and run at 4 consecutive races prior to being replaced again.

15.6.8 Tire Sizes Allowed:

15.6.8.1 Right front tire: AR ~ 24.0/11.0 -15 or 25.0/ 11-15 if made available and approved

15.6.8.2 Left front tire: AR ~ 23.5/10.0 -15 or 24.0/11 -15 if made available and approved

15.6.8.3 Left rear tire: AR ~ 25.5/13.5 -15

15.6.8.4 Right rear tire: AR ~ 27.5/17-15)

15.6.9 All tires and tire rotations will stay with the car/owner. If there is a driver change, tires stay with the car.

15.6.10 RF, LR and RR tires must be used/stamped at a minimum of four (4) race events before a new replacement is approved for competition. LF will not require any stamping or monitoring

15.6.11 no rubber or tire softening agents allowed

**15.7 QUALIFYING** - For racing events, scratch will be determined by 1 second off quickest time in qualifying. 1 second of the 2nd quickest time in qualifying may be used if deemed necessary.

**15.8 ISRL Rule Book** – Any car may that meets the ISRL Rules may participate in non ISRL sanctioned Pepsi Crate Events. All technical inspections will be based off of the most current ISRL rules.