

## **DOE RUN RACEWAY INDOOR GENERAL INFORMATION & RULES**

**All karts** must be approved by race director prior to competition.

**Pit Stalls;** must have a tarp covering your pit area. This also applies to the concrete pit stalls. If you stake your tarp down you need to remove all stakes when done.

**Tires** must be kart type tire and approved by series official. Not to exceed 6" diameter

**Transponders** must be installed and in working order. If your transponder does not work you will not be scored.

Transponders must be mounted on the steering shaft support bar directly in front of the seat closest to the floor pan or. (If mounted in the incorrect spot and a close finish is scored you will be put behind the other finisher)

### **Weight:**

All karts must meet the designated minimum weight in their perspective class.

**Weights must be doubles nutted.** And must be painted white and have # of cart marked on them. If you have a weight in a race that come off you be **DQ** for that race. And be **FINED A \$25** for a safety violation for weight in that race! It is YOUR responsibility to make sure your kart meets the minimum weight each week per track scales.

The winner in each heat race will weigh and the top 4 in the features must weigh after the event.

If your kart is deemed to light after the heat race/qualifying you will have to start at the tail of the field in the next on track event. If your kart is deemed too light at the conclusion of the feature you will be DQ and lose points for that night of racing. (Additional penalties or assessments may occur at the discretion of track officials).

### **Safety:**

YOU ARE RESPONSIBLE FOR THE SAFETY OF YOU AND YOUR KART.

Brakes must be in good working order at all times.

Kill Switches are recommended in all classes! Karts must also have a 6" nylon tie attached to the spark plug wire.

Approved neck braces or neck restraints are mandatory.

Helmets must be DOT or SNELL approved, and must fit the drivers head correctly. Track officials have the right to determine if a driver's helmet is safe enough for competition.

Racing suits are highly recommended. No shorts or cut off pants allowed.

Chain Guards, designed to protect the driver in the event of a chain failure are Mandatory.

Helmets and all safety gear must be worn at all times

Safety is DOE RUN RACEWAY INDOOR number 1 concern. So please make it your number 1 concern as well. Be Smart!!

### **Race Procedures:**

The race will begin as soon as the racing surface is clear and the karts in in the proper starting position.

Any driver/team who purposely try to hold up the start of the race will start from the rear of the field or will be parked.

HOT PIT is between turn 3 and 4 at track entrance. During the hot pit A main ONLY drivers will be allowed 90 seconds in the hot pit 1 time only. IF you do not roll off the hot pit before the leader takes the 1 to go signal you will not be allowed to enter the speedway until the next yellow flag.

Any driver to visit the "Hot Pit" at any time during the event, even before the race begins after they were on the racing surface they will go to the tail of the field

Only the caution cars will be given 90 seconds under that particular caution. Teams can pit during that time but will not be guaranteed time unless they were the cause of the caution."

All starts and restarts will take place at a consistent speed. Both front row karts are responsible for an even and clean start. Consistent speed will be at the discretion of track officials.

Initial starts will be in turn 4. The flag man starts the initial start and it will be at this point.

Restarts will be between the orange cone in turn 3 and the orange cone in turn 4. The leader will dictate where they want to start from in this designated area.

The field must remain single file on restarts. If someone jumps the leader on the restart the caution will come out and they will be docked 1 position. If the same kart jumps the start again they will be put to the rear of the field. Tower will radio to give the spot back and if you do not you will be penalized.

If the race is not properly started the leader/front row will be docked a position/row. 2 attempts. This is at the track official's discretion. If the driver does not comply he will be put to the rear or parked.

Under no circumstances is any crew member, family member etc. allowed on the track during an event unless directed so by a track official. Result will either be a DQ or that said kart will restart at the tail of the field. This includes, Green flag, Yellow flag, or even Red Flag conditions.

If your kart is broke or stopped on the track DO NOT exit the kart until safety workers arrive (unless kart is on fire). If you exit the kart and approach a moving kart you will be parked and suspended. (This goes for crew members as well)

Only when the karts come to a complete stop after the races are over will anyone be allowed on the racing surface for victory lane celebrations etc. Failure to comply will result in a DQ.

In the result of a Red Flag, karts will be stopped on the track. Once the incident is cleared, 1 crew member per kart will be allowed to enter the racing surface to start their kart. (Only when/IF directed to by series officials.) If any adjustments to the kart are seen that kart will go to the rear of the field.

During Green flag conditions no one is allowed to stand in the "Hot Pit" area or on the entrance or exit of the track. There will be designated areas to stand in during on track action.

Wrecking driving will not be permitted. If you intentionally cause a wreck or wreck someone else under green or yellow you will be parked. Multiple offences will result in loss of points and suspension.

### **Flags:**

**Green Flag.** When the green flag is displayed the track is open for racing. The Green flag signifies the start of any race or qualifying session. Passing is not permitted before the green flag is displayed at the designated point. a. Double File Starts. The two lead karts must stay side by side, at Medium speed, until

reaching the start area where the green flag is displayed. All starts are at the discretion of track officials and their call is final.

**Single File Re Starts.** Restarts will be single file and the lead car can start the race between the striped cone in turn 3 and the striped tire in turn 4. Must remain single file until the cone at the start/finish line and must go to the outside of the cone.

**Yellow Flag. CAUTION.** When the Yellow flag comes out SLOW DOWN. We do NOT race back to the start/finish line. Stay in single file formation. Track officials will sort out the lineup via Race receiver. If you do not cooperate you will be put to the rear of the field.

**Red Flag.** Stop as soon as safely possible. Do not drive through the accident scene. Failure to observe the Red will result in driver being parked. **a. NO ONE** is allowed on the racetrack at this time! If a crew member, family member, or pit crew, comes on the racetrack, your kart will be sent to the rear of the field.

Only 4 wheelers are allowed onto the track when called for assistance.

Once the Red Flag is withdrawn Track Officials will ask for people to come start their karts. Only 1 person per kart may come out. If any more than that your kart will go to the rear.

If you get the curled black flag pointed at you this is a warning for rough driving and we will be watching you. Play Nice!!

**Black Flag.** Proceed to pit area. Your kart is no longer being scored. This flag is a result of rough driving, loose or broken parts, etc... If your muffler falls off and we see it you will be black flagged. (Box Stock and Beginner ONLY).

**Blue with Yellow Stripe.** Hold your line. The leaders are coming to lap you. Please be courteous to them.

**White Flag.** One more lap to the finish.

**Checkered Flag.** The race is officially complete.

**Caution/Red Flag –** Drivers who are involved in the cause of the caution/red will be put to the rear of the field. If you stop or your kart spins or faces the wrong way, or if you need assistance you will be put to rear. At track official's discretion. (Kids class lap 1 exception. See Class section for details.)

There will be a 3 spin rule. If you **cause** 3 cautions in any event, you will be parked. Official count is at the race director's discretion.

No refunds

### **Tech Area:**

After the races are over only the driver and one crew member may be in the tech area to assist with their kart getting through the scales and tech area.

If an engine is in the shed being checked, only that person and 2 crew members of that kart will be allowed in the building. NO ONE ELSE IS ALLOWED IN THE TECH AREA AT THIS TIME.

The top 4 karts must remain in the tech area until cleared by tech official ONLY. If your kart leaves this area you will be DQ.

**Protest:** For any protest the team must finish inside the top 4 to protest. No finisher outside the top 4 will be allowed to protest. Each team is only allowed 2 protest per season. Protest fee will be \$250. \$200 goes to the team that wins the protest. \$50 goes to the tech man. A team can only protest the finisher directly in front of them. For example, 4<sup>th</sup> can only protest 3<sup>rd</sup> . and 3<sup>rd</sup> can only protest 2<sup>nd</sup> just like that. There will be no BACK protest. To You will need to name the 2 things you are protesting to the tech official. With in 3min after the checkered flag.

### **Body/Numbers/Number Panels:**

Each entry shall have 4 numbers on the kart at all times. One on each side panel, one on front of kart and one visible from the rear of the kart. Numbers are limited to four digits. One letter may be used but will count against the four digits and must accompany at least one number.

Numbers must be contrasting (or easily read) by the track scorer. The track scorer has sole discretion as to whether or not your numbers are acceptable.

### **Unsportsmanlike Conduct:**

Fighting at Doe Run Raceway Indoor & Rockin' A Arena will result in suspension and removed from grounds.

Any display of unsportsmanlike conduct (on or off the track) will result in a Fine, Suspension, and Immediate Removal from grounds, Point Penalties, or All of the above.

Rough driving will result in docked positions, fine or black flag. Drivers and Crew members observed verbally or physically abusing other drivers and/or officials will result in loss of points, fines and/or suspension. NO EXCEPTIONS!

Any violation of technical rules or equipment shall result in the driver being disqualified. No points will be awarded.

Only Performance enhancing infractions will result in a 0. Safety or other DQ's will be subject to track official discretion. And/or 2nd time offences will be subject to a 0.

## **2024 -2025 CLASS RULES:**

### **Juice Box Division Rules**

Ages 5 and under

Stock Radio Flyer ultimate go kart 24v only!

Must be original equipment from the manufacturer! NO MODIFICATIONS! (this is a performance base rule, this does not include bodies, fairings steering wheels, seats or decals) plastic tires from manufacturer only Helmets Required! (bike helmet is sufficient, race helmet is encouraged)

Closed toed shoes Required!

1 Parent on track infield only to set drive up!

Please change the stock number with a 7" number of your favorite number. This helps each kid stand out and makes it easier to score.

Radio Flyer Ultimate Go karts can be purchased on Amazon, Walmart and the Radio Fyle website!

This division is for the kids that are still standing on the fence in the grandstands or pits to have a chance hit the track during the day. Lets keep it fun and safe for them!

Awards Presented

### **212 cc Predator Classes Rules:**

Flat kart only no cages

JR Class SLICKS age 7-15 weight 300lb

JR Class TREAD age 6-12 weight 260lb

ADULT SLICKS age 15-up weight 375lb

ADULT TREAD age 13-up weight 375lb

Engine; Stock 212cc Harbor Freight engine ONLY.

NO GHOST PREDATOR ENGINE.

NO Ducar 212 motors.

NO BOX STOCK Project motors.

Stock cams.

10.8 Green or RED Stripped springs allowed

Stock air box. Must run stock air filter, you may add extra foam to air filter. NO MODIFICATIONS TO THE AIR BOX. ALL extra holes must be plugged.

Fuel cap may be drilled holes in top to be vented

Unleaded pump gasoline only no race fuels or E 85, Alcohol

Valve cover vent must go to the air box. No catch cans. Hemi motors must run thick head gaskets.

.031 no go on main jet is no tech.

Removal of governor is ok.

Low oil sensor can be disconnected or removed and hole plugged. No interchanging parts from non-hemi motors to hemi motors.

Fuel tank: You can run stock or remove tank and run top plate with fuel pump

exhaust or weenie pipe with muffler. WEENIE PIPE AND MUFFLER MUST BE STOCK.NO MODIFICATIONS.

Motor is to remain stock as from the factory and will be teched based off a stock 212cc harbor freight predator motor.

If it doesn't say you can do it in the rules, it isn't allowed.

Weights must be double nipped. And must be painted white and have # of cart marked on them. If you have a weight in a race that come off you be DQ for that race. And be FINED A **\$25** for a safety violation for weight in that race!

These are the engine rules. To claim a motor must finish in top 5 and on lead lap. Claim is \$150. If motor is claimed, all added accessories will be removed from claimed motor. Any Owner/Driver that refuses a claim may not return for two consecutive scheduled events. The driver may not race a different kart for that time period and that kart will not be allowed with a different driver, even if engine was replaced. NO EXCEPTIONS

Open tire rule and open clutch rule.

## **FLAT KART CLONES CLASSES**

All other rules follow under the NKA or AKRA RULES

Track rules

Kid Kart 50cc class. age 5-7. Weight 0lb.

Rookie Red Plate class. age 5-7. Weight 235lb

Jr 1 Green Plate class. age 8-12. Weight 275lb

Jr 2 Blue Plate class age 13-15. Weight 320lb

Clone Medium class. age 16-up. Weight 350lb

Clone Heavy class. age 16-up. weight 375lb

Clone Super Heavy class. age 16-up. Weight 400lb

Pro Clone class. age 16-up. Weight 375lb

Open Tire Rule for Flat Karts but must be SLICKS. Prep is allowed no grooving, cutting allowed on all classes.

WEENIE PIPE or BIG PIPE in all Junior classes and Rookie classes

BIG PIPE for the Adults classes

Weights must be doubles nutted. And it must be painted white and have # of cart marked on them. If you have a weight in a race that comes off you be DQ for that race and be FINED A \$25 for a safety violation for weight in that race!

## **LO 206 Restricted Box Stock (Green Slide)**

DOE RUN RACEWAY INDOOR GOES BY THE RULES OF

BRIGGS & STRATTON 2021 OUTLAW KART 206 UNITED STATES RULE SET

(Some rules are modified for track purposes)

Track Rules

Age 5-8 years old

Weight 250lb

Green slide Briggs & Statton .490 BRI -555740



Geen coil (6100 RMP) BRI 555718

Open tire rule. Treaded tires only. no prep is allowed. Kart type tires only 6" max diameter.

Open air filter rule

Open clutch rule

It is mandatory that race have a fire suit full face helmet, racing shoes/ boots, neck brace and arm restraints in all wing karts

Weights must be doubles nutted. And must be painted white and have # of cart marked on them. If you have a weight in a race that come off you be DQ for that race. And be FINED A \$25 for a safety violation for weight in that race!

## **LO 206 Winged (Black Slide)**

DOE RUN RACEWAY INDOOR GOES BY THE RULES OF

BRIGGS & STRATTON 2021 OUTLAW KART 206 UNITED STATES RULE SET

(Some rules or modified for track purposes)

Track rules

Age 7-14 years old up all exception must be approved by promoter.

Weight 300lb

Black slide Briggs & Statton .285 BRI -555728

Geen coil (6100 RMP) BRI 555718

Open tire rule. Treaded tires only. no prep is allowed. Kart type tires only 6" max diameter.

Open air filter rule

Open clutch rule

It is mandatory that race have a fire suit full face helmet, racing shoes/ boots, neck brace and arm restraints in all wing karts

Weights must be doubles nutted. And must be painted white and have # of cart marked on them. If you have a weight in a race that come off you be DQ for that race. And be FINED A \$25 for a safety violation for weight in that race!

## **WINGED OPEN 500**

Age 10-up any exceptions must be approved by promoter.

250 cc up to 500cc

250-300cc Weight 430lb

301-500cc Weight 450lb

Cage wing kart only

It is mandatory that race have a fire suit full face helmet, racing shoes/ boots, neck brace and arm restraints in all wing karts

Chain guards are required

Exhaust any pipe allowed as long as it is not a safety issue the mufflers must remain attached to the header at all times. muffler and header components must remain intact and operating. if the muffler becomes disconnected from the header and /or failures to operating, the kart must leave the track immediately. Failure to leave could results in disqualification.

Open tire rule. Treaded tires only. no prep is allowed. Kart type tires only 6" max diameter. Right Rear tire D 50 or harder

Weights must be doubles nutted. And must be painted white and have # of cart marked on them. If you have a weight in a race that come off you be DQ for that race. And be FINED A \$25 for a safety violation for weight in that race!

## **WINGED BP CLONE GREEN PLATE (RBOX) (BP)**

Restrictor Box Stock BP (ENGLISH CREEK RULES)

ENGINE SPECIFIC TECH SHEET FOR: BOX STOCK 6.5 OHV

Description: Single cylinder, 2 valve, OHV 4 cycle engine. (Gas Only)

Must run an ARC green .425 plate. 6.5 OHV – Fuel Pump Gas ONLY – Approved Engine: 6.5 OHV 196cc clone engine- No Kohler, No Honda, No Predators.

No aftermarket coatings of any type are permitted on any part of the engine (exception Blower Housing and Shrouds)

Restrictor Box Stock: age 5 to 8 (All exceptions must be approved by promoter.)

(.425 restrictor plate)

Combustion chamber volume: 26.5 cubic centimeter minimum, with piston at TDC, using prescribed procedure. The Liquid CC check is the official check

Cylinder Head Requirements: Must be OEM casting only. All cylinder heads must be the "JT" 4 bolt valve cover cylinder head (168-f 6.5hp GX 200 series) or the TG-1 head only. Porting and / or grinding are not permitted. Valve seats are two angles 45 degrees valve face and 30 degrees

top relief. Intake seat maximum ID .897", Exhaust seat maximum ID.862". Outside face of valve may not be below floor of combustion chamber (i.e. don't sink the valves). Stock head bolts only, must have four. Head gasket/s maybe after market, must be of stock configuration, gasket thickness is a non tech item. Depth check between the valves, front to back and side to side may not vary by more than .005" max. No copper or aluminum gaskets allowed. Any stock configuration exhaust gasket allowed no other sealer of any type on head, exhaust, and intake.

Block Requirements: Stock cylinder bore is 2.685" max. Stroke is 2.123" + .010" or - .005". No piston pop out allowed. Matting surface finish of block and cylinder head is a non-tech item, surfacing of both to correct gasket failure and meet cc check allowed however, no piston pop out is allowed. May use 2 side cover gaskets of stock configuration. Block must remain stock as produced. Stub for governor may be removed and hole plugged. No machining of block allowed. Welding to the block shall be for rod damage repair only and may not constitute a functional modification. Tillotson blocks allowed. Side cover bolts are non tech

Carburetor requirements: Huayi OR RUI\*ING model type carb only. Carb to intake sealer is gasket only no other sealer allowed. Choke must be as supplied from factory, but may be fixed to stay in open position. Venturi .615" NO-GO. Rear carb bore .751" NO-GO. Main fuel jet .042" NO-GO. Low speed idle jet is a Non-Tech item. Stock emulsion tube must be used and unaltered, .066' max ID (no pass through). Side holes in E-Tube 4 holes max in bottom section and 20 holes max in top section.

Minimum E-Tube length 1.092". Throttle shaft - .115" minimum. Butterfly - .037" minimum. Aftermarket air filter adapter allow (max length of 1.375).

Valve Train: Stock valve cover only with any stock configuration gasket, no sealer.

Factory stock rocker arms 1:1 ratio and push rods only. Stock valves only 45-degree angle only both valves, Intake valve Max OD .982" +/- .005" and Exhaust valve Max OD .945" +/- .005", no modifications allowed. Only Box Stock valve springs. (Installed Height for valve springs .815", must be checked by using the .815" spring must go gauge with retainer seal in place on intake an exhaust valve if used.) Prescribed check procedure as follows – Remove valve spring, reinstall spring retainer, insert .815" must go gauge in spring location. Gauge must go in both locations Intake and Exhaust with any allowed retainers in place, as raced, during check procedure. Max wire diameter on spring wire is

.071" with a maximum tension of 10.8 lbs. at a height of .850". Lash cap on exhaust valve only. Valve stem seal allowed on Intake and Exhaust valve, 11 maximum lip thickness of .027". Minimum thickness of Intake retainer .230", Exhaust retainer .250". BS lifters only, no modifications allowed.

Ignition system: Stock Box Stock system only and must be unaltered. Low oil sensor may be disabled and removed.

Flywheel: Approved SFI certified billet aluminum flywheel only. No machining or alteration of any kind allowed. Minimum weight for flywheel is 3.3 lbs. Any timing key or no key at all may be used.

A flat washer or spacer may be used, and is recommended, between the flywheel and the nut.

Handheld electric starter may be used, but compression release mechanism must remain on camshaft.

If choose to use a electric starter and your karts engine dies on the track we will not restart it.

Current Approved flywheels: ARC 6619, ARC 6618, ARC 6689, Racing Flywheels RSP-13-075 Revwheel NF- S1 & RSP-13-077 Revwheel F-S1. If manufactured for use with removable fan, the fan must be unaltered, attached and functional. Timing and flywheel key is non-tech.

Header and Muffler Requirements- Silencer must be a (B91XL round hole muffler). Exhaust Pipe must be double nutted or safety wired and silencer must be supported by clamped on brace to secure it in place. No modifications allowed. Muffler will be teched against stock B91XL No loop pipes.

Piston and Rings: Must be unaltered Box Stock only. Must have 3 rings. No machining of piston and rings allowed.

Connecting Rod: Stock Box Stock rod or billet. No machining of any type allowed

Crankshaft Requirements: Stock Box Stock crankshaft required. Machining, polishing, addition of material or other alteration of crankshaft is prohibited. Stock factory timing gear mandatory and must be installed in original location. Crankshaft journal diameter is 1.180" max - 1.168" min. Camshaft Requirements: Stock camshaft cores only, ez-spin assy must remain as stock. Cam lobe base circle diameter .865"  $-.005"/+.010"$  Duration check for Intake and Exhaust lobes (taken off pushrod). Intake duration of 219 degrees at .050 lift/86 degrees at .200 lift. Exhaust duration of 222 degrees at .050" lift/97 degrees at .200" lift. Max Intake lift on cam .225" – Min .215" lift taken at the pushrod. Max Intake lift at the valve .238" Taken on valve spring retainer with zero lash. Max Exhaust lift on cam .232" – Min .222" lift taken at the pushrod. Max Exhaust Lift at the valve .242" Taken on valve spring retainer with zero lash

Blower Housing Assembly: pull starter must be present and remain stock. Pull starter may be rotated for a better crank angle. After market coating allowed. If choose to use a electric starter and your karts engine dies on the track we will not restart it

Fuel Tank Requirements: stock tank must be removed. Floor mount or gravity fed Must be approved by promoter

Fuel Pump Requirements: Fuel pump must be pulsed from either the crank case or the valve cover. You may install a flat metal plate in the original tank location for the purpose of mounting the throttle linkage and fuel pump.

Clutches: DISC OR DRUM CLUTCHES ONLY ALLOWED +/- .005 or 2 degrees on all measurements to allow for gauge variances and wear

WING RULE: DIMENSIONS IS OPEN RULE FOR DOE RUN INDOOR " NO COCKPIT ADJUSTABLE WING SLIDERS.

## **Box Stock – (BP)**

(ENGLISH CREEK RULES)

6.5 OHV – Fuel Pump Gas ONLY – Approved Engine: 6.5 OHV 196cc clone engine-

No Kohlar, No Honda, No Predators,

Any 168-f Clone Block

SPEC SHEET FOR 6.5 OHV CLASS

Description: Single cylinder, 2-valve overhead 4-cycle engine.

No aftermarket coatings of any type are permitted on any part of the engine (exception Blower Housing and Shrouds). Cylinder Head.

Requirements: Must be OME casting only. All cylinder heads must be the "JT" 4 bolt valve cover cylinder head (168-f 6.5hp GX 200 series) or the TG-1 head only. Porting and /or grinding are not permitted. Valve seats may have up to three angles, 45-degree valve face and 30 degrees top relief and 60-degree bottom relief. Cutting of the valve seats allowed to ensure proper seal. Intake seat maximum ID .897". Exhaust seat maximum ID .862". Outside face of valve may not be below four of combustion chambers (i.e. don't sink the valves) Stock head bolts only, must have four. Head gasket/s may be aftermarket, must be of stock configuration, gasket thickness is a non tech item, sealer allowed to ensure proper seal. Depth check between the valve, front to back and side to side may not vary by more than 13 .005-inch max. No cooper or aluminum gaskets allowed. Any stock configuration exhaust gasket allowed, sealer permitted, Header may also be run without gasket, sealer only. Allen head bolts permitted on header to head. The use of aftermarket FLANGED bolts of similar OEM design (head size, diameter, length and thread length/pitch) allowed as replacements for stock head bolts. No studs allowed. Breather hole on valve cover may be tapped with ¼" pipe tap to accommodate breather fittings, no oversize drilling. Allowed.

Bore and Stroke: Stock bore is 2.685" and may be over bored to 2.718" Stroke is 2.123" +.010"-.005".

Connecting Rod: Billet aluminum rods, with or without bearing inserts required. No titanium rods allowed. Rod length is a non tech item. MUST use billet rods.

Combustion Chamber Volume: 25 cubic centimeter minimum, with piston at TDC, using prescribed procedure. The Liquid CC check is the official check.

Carburetor/Intake Requirements: Stock Huayi or RUI\*ING TYPE carb. Venturi .625" NO-GO. Rear carb bore .751" NO-GO. Carb bore finish, non tech. Throttle shaft - .115" minimum. Butterfly - .037" minimum. Air Filter adapter of 1.375" max length allowed. No air rams. Pulse-type fuel pump is mandatory (other fuel system must be preapproved by promotor). Fuel pump must be pulsed from either the crankcase or the valve cover. Black phenolic carb spacer must be unhalated and used. Choke assembly may be removed. Jets, air bleeds jets, and emulsion tubes are non-tech. Throttle shaft, washer, and butterfly must be stock and must be present, butterfly screw non tech. Stock intake runner gasket

configuration only. One extra gasket may be used with restrictor plates. No other alterations are permitted.

Ignition system: Ignition timing is non-tech. Stock ignition module only. No modifications of any type allowed. Sparkplug connector must be stock as from factory.

Piston Requirements: Must be stock dished piston with no modifications. Oversize Clone or Honda dished piston is allowed up to .035" oversize. Rings must appear stock and all three rings must be installed. Piston may not pop out above cylinder deck.

Valve Train: Stock valve-train only in stock configuration except: Any single valve springs and valve spring shims are allowed; Any 5.5mm stem steel valve (including stainless) that uses stock retainers OR 2 PICE RETAINER allowed. Intake valve head Max OD .982" +/- .005" and Exhaust valve head Max OD .945" +/- .005". Valves must be one angle only, 45°. No knife edging of valves (1mm min. margin). Valve length is non-tech. No additional support for rocker studs permitted. Champion rocker arm assembly and valve cover allowed. 14 Camshaft Requirements: Stock camshaft cores only, ez-spin easy must remain as stock. Duration check for Intake and Exhaust lobes (taken off pushrod). Intake duration of 248 degrees at .050 lift/107 degrees at .200 lift. Exhaust duration of 247 degrees at .050 lift/116 degrees at .200 lift. Max lift at the valve retainers, Intake .238" and exhaust .242" taken on valve spring retainer with zero lash.

Crankshaft Requirements: Stock, factory crankshaft only with stock, factory timing gear in factory location. No modifications to crankshaft allowed. Aftermarket steel main bearings of non-self aligning type, with or without seal are allowed. No ceramic bearings. Crankshaft Journal diameter is 1.180", 1.168" minimum.

Block Requirements: Stock Block, as cast and produced with no alterations or modifications other than those specifically permitted. Block head matting surface may be machined, however, no piston pop out is allowed. Blocks may NOT be welded for repairs. No addition of material to block (i.e. welding, jb weld, etc.). All bolt bosses in block may be drilled and tapped for repairs or other uses. Additional side cover gaskets as required for crankshaft thrust are permitted. All parts associated with the governor and the low oil sensor may be removed, plugging any associated holes. Billet side cover allowed. Side cover bolts are non tech. Tillotson block allowed.

Flywheel: Approved SFI certified billet aluminum flywheel only. No machining or alteration of any kind allowed. Minimum weight for flywheel is 3.3 lbs. Any timing key or no key at all may be used. A flat washer or spacer may be used, and is recommended, between the flywheel and the nut. Handheld electric starter may be used, but compression release mechanism must remain on camshaft. If choose to use a electric starter and your karts engine dies on the track we will not restart it.

Current Approved flywheels: ARC 6619, ARC 6618, ARC 6689, Racing Flywheels RSP-13-075 revwheel NF- S1 & RSP-13-077 Revwheel F-S1. If manufactured for use with removable fan, the fan must be unaltered, attached and functional. Connecting Rod: Must use Billet aluminum rods, with or without bearing inserts required. No titanium rods allowed. Rod length is a non tech item.

Clutches Disc and Drum only allowed

Header and Muffler Requirements- Silencer must be a (B91XL round hole muffler). Exhaust Pipe must be double nutted or safety wired and silencer must be supported by clamped on brace to secure it in

place. No modifications allowed. Muffler will be teched against stock B91XL. No loop type pipes are not allowed. +/- .005 or 2 degrees on all measurements to allow for gauge variances and wear.

WING RULE: DIMENSIONS IS OPEN RULE FOR DOE RUN INDOOR" NO COCKPIT ADJUSTABLE WING SLIDERS

## **JR Sprint non wing Rules**

weight 375 with out the wing

ages 8 through 14 may

compete in the Junior Sprint Class. A driver whose 14th birthday falls during the racing season will be allowed to finish the season in which they began accruing points before their birthday. Exception: drivers age 7 with prior racing experience that can prove they can safely handle the car can participate with the tracks approval and must start at the rear for a minimum of 3 racing programs.

**ROLL CAGE:** Roll cages shall be at least 1 inch .083 wall thickness mild steel, or 1 inch .065 wall thickness chromoly steel. The front section of the cage shall be no further back than the steering wheel. Roll cage shall have sufficient fore and aft bracing and strength to support the weight of the car & driver in case of an upset. Cage shall have gussets at the intersecting bars to the uprights. Bends must have at least 3 inch radius. No square or pointed corners allowed. Roll cage must be a minimum of 3 in above the drivers helmet. It is mandatory to install a cross brace behind the seat to support the shoulder harness.

**BUMPERS and NERFS:** Car must have bumper extending beyond the front and rear tires. Nothing may extend beyond a tangent line from the outside edge of the tires to the bumpers. Nothing may extend beyond the outside edge of the tires or wheels, whichever is the widest. No sharp corners or design as to hook or damage. All cars must be equipped with nerfing bars. Nerfing bars must extend to inside edge of tires, but not beyond the outside of tire.

**SAFETY:** Seat belts must be securely attached to the car and used at all times. Metal to metal latches only. 5 point seat belts, shoulder harness and sub strap are required. Belt dates must not be over three years old. (Example: Oct 14 may be used in 2015, 2016 and 2017.) Arm restraints are mandatory and must be adequately adjusted to keep the drivers hands below the top of the roll cage. Helmets must be full head coverage competition type and one of the three latest SNELL approvals. All drivers will wear a name brand flame-retardant uniform. Neck braces, cage nets and/or head and neck restraints with a SFI 3.2-1 rating or higher are mandatory for safety

**Cock pit** controls on and off switches must be on dash top of the cowl or on steering wheel on/off switch must functional no radio communication is allowed with the car or the driver cockpit controls carb adjusters kill switch starter button and engine monitor no wing sliders or pan hard adjusters driver operated in cockpits

**Battery.** All wet cell batteries mounted in the cockpit must be covered and vented outside the cockpit area.

**Fuel.** Methanol will be the ONLY approved fuel at SIR in 2019. No top-end lube is allowed. Fuel MUST pass water test.

**Weight.** Minimum Wing car and driver weight: 400 lbs. Non wing weight minimum weight car and driver is 385 lbs.

**Suspension.** Aluminum or steel body shocks are legal.

**Wheelbase;** Maximum 52 inches. Minimum 50 inches, center of front axle to center of rear axle. Rear axle to be steel or splined aluminum 1 1/4" min dia.

Maximum Tread Width. not to exceed 55" outside of tire to outside of tire.

**Steering;** Front wheels must be connected by a solid or tubular tie rod. Rear wheel drive only. All suspension bolts except wheel nuts must be secured by some type of locking device.

**Brakes.** Brakes will be of sufficient strength so as to slide the wheels while the car is in motion at any given time

**Tires And Wheels.** Wheels to be 8" dia steel or aluminum non-bead lock only. Right rear spec tire to be 10 x 8.50 x 8 American Racer (McCreary) or Hoosier RD 20 of comparable size Durometer of 42 reading minimum taken anytime. There can be no softening the tire in any way. Wheels must be held on with 4 or more standard lug nuts or knock-off hubs. NO CHEMICAL PREP allowed or tolerated. Samples must conform to factory benchmark as performed and tested by Blue Ridge Race Labs. All non-conforming samples will result in a 2 race suspension and loss of points and pay from that night

**Bodies.** All cars must have complete bodies of Sprint Car design only. Tail sections must be in place for time trials and all races. There must be a metal firewall between driver and engine, made of 24 gauge steel or .060" aluminum. Body of car must be made of aluminum, metal, fiberglass or high impact plastic. All cars must be painted an attractive color or colors. No rear view mirrors. The only part of the car allowed to be dismantled for driver to enter or exit is a quick release steering wheel hub. All mechanically operated devices must be mounted below the drivers shoulders for safety. All fuel tanks must be equipped with a one-way check valve designed to prevent the spillage of fuel from the fuel tank vent in the event of a rollover.

**Transmission.** The drive will be by engine and/or jackshaft mounted clutches. No axle mounted clutches allowed. No direct drive will be allowed. Chain guards will be made inch thick aluminum or equivalent and will run on top of chain from the front of the front sprocket to the center of the rear axle. Driver must not be able to touch the chain or sprockets while sitting in the cockpit.

**Wings .** Right side board, maximum 42" x 20". Left side board, 42" x 20". Minimum center section size is 6 sq. ft. The wing cannot be mounted outside the centerline of the tires. Side boards may not extend more than 3" beyond center section and sides must cover center section. All wings must have 1/16" radius edges or edging. No raw edges. No wood except for ribs or spars inside center section. Lower front corner of the wings sides cannot be more than 4" below top of roll cage. Nose wings cannot exceed 24"x 18", and must carry car number. Top wings are mandatory to enter a night's event except non wing events. Cars may finish without a wing if no replacement is available.



**Numbers.** All cars must have legible numbers painted in contrasting colors on both sides of car and the nose.

**Ballast.** Any material used for ballast must be firmly attached as a part of the car's structure. No liquid or loose ballast such as water, fuel, oil, sand bags, rocks, log chains etc. allowed.

**Hubs.** Front hubs; Go kart type with 5/8" bearings and 5/16" wheel studs minimum. Rear hubs: 5/16 bolt minimum or splined with safety key.

**Engine Rules. Briggs & Stratton World Formula engines as defined by the KSUSA engine and FIA Homologation specs. Engine may or may not be sealed but both versions must pass Tech as defined by the previously mentioned rules upon request of a Track Official.**

**The Briggs World Formula will use a RLV 5442S header or stock pipe and RLV 4100 silencer as defined in the KSUSA Briggs World Formula rules. Stock pipes may be cut and turned as necessary to fit the race car as long as the pipe still retains the original length, diameters and volume as the original stock pipe. KID SPRINT MOTOR RULES CAN BE FOUND UNDER SEPARATE TAB TITLED KID SPRINT USA MOTOR**

### **KID- JR SPRINT USA MOTOR RULES**

These rules are proprietary and cannot be changed or altered without the express written consent of Chuck Kidwell All parts are subject to comparison with a known stock part. All tolerances are +/- .001 inch CYA Rule: If the rules does not say you can - You can't!!!!!! Questions? Contact Chuck Kidwell 317 507 5968 or email: chuckkidwell@gmail.com

717.1: Shrouds and covers: All shrouds and covers must be run as supplied. Cylinder shield may be bent slightly or drilled around spark plug hole to allow fitting cylinder head temperature lead and clearance for Coil Ground lead. Flywheel Cover, Top Cover and Plate are non tech items. They are replaced by Part # 555699. 717.2 : Header and silencer

717.2.1: Factory header or RLV part number 5442S. Any exhaust gasket or no exhaust gasket allowed. Sealer allowed on header. Header nuts are not required to be safety wired. Bottom bracing must be bolted to head. Factory header may be cut and turned to fit car as long as the overall length and tube size remains the same as the stock factory header: OAL 20.5" OD .9375" x .065 wall (ID .807 +/- .005) Coating the pipe is allowed. 717.2.2: Exhaust gas temp sensor is optional.

717.2.4: RLV Silencer #4100 required. Baffle rattle is allowed however if baffles have been altered or removed, the muffler will be deemed illegal. Baffle holes are .128 inch(#30 drill bit) no go gauge. Coating is allowed 717.2.5: Springs attaching Silencer to header must be safety wired. 717.3 :

Electric starter: Starter motor must be operational and capable of starting engine. Battery must be minimum of 8 AH rating and capable of starting warm engine. Recoil starter and flywheel starter cone optional. Starter support bracket P\N 557119 is optional. 717.4: Air filter must be Green Brand 40 X 75 filter attached directly to Carb. No Extensions or Adapters.

717.5 : Spark plug: Any commercially available, 10 mm thread, spark plug allowed. Spark plug must be stock. Indexing washers allowed. Removal of factory sealing washer is no allowed unless using head temp sensor ring. 717.6:

Fuel pump must be B&S part 557033. Must be pulsed from intake manifold only. 717.7: Clutch: May be engine and/or Jackshaft mounted. Belt or chain drive from engine to jackshaft. May use #219 or #35 sprocket. 717.8: Rev Limiter: Rev Limit is 7100 rpm +/- 50 rpm. Rev limiter may be checked at any point in the race program. Rev limit will be checked with a suitable memory capable tachometer attached to the plug lead and the motor accelerated until the rev limiter begins to function. All rev limiters must function within 100 rpm when checked with the same instrument. Each competitor is allowed one courtesy check of the rev limiter with the instrument to be used at the event.

717.9: Fuel: Fuel to be Kidsprint approved Racing Gas. Racing gas will be Sunoco Purple; VP C-10 or C-12 or Rocket Fuel 111 octane no additional additives. Fuel may be checked by any means. Each competitor is allowed one courtesy check of fuel in his tank with the method to be used at the event. Compliance with the common source will be determined by zeroing a Digitron gas meter in a sample of source gasoline and allowing each competitor deviation of + / -5 points from zero and/or by any Digitron recommended method. KSUSA FUEL WILL BE METHANOL IN 2018

717.9.1: OIL: Any crankcase oil is allowed BUT MUST PASS THE BURN TEST AND/OR THE SNIFFER TEST. (Recommend TIFF Industries Sniffer)

717.10 Carburetor: Stock Walbro PZ carburetor only. No alterations allowed; choke excluded. Carb mount boot Briggs #557130 is required. New Carburetor may have different color and exterior appearance.

717.10.2 : Slide must remain unaltered. Unaltered Stock needle marked CDB is required. 717.10.3: Choke assembly is optional and may be removed and shaft holes plugged with silicon. If choke is retained choke lever may be fastened open with spring, rubber band or tie wrap. 717.10.4:

Pilot Jets: 36, 38, 40 are allowed. Check by .017 inch (#77drill bit) no go gauge. Drilling or reaming is allowed.

717.10.5: Main Jets: 90, 93, 96, 98, 100, 102 are allowed. Check by .041 inch (#59 drill bit) no go gauge. Drilling or reaming of jets allowed.

717.10.6: Venturi measurement

717.10.6.1: Vertical .9902" max

717.10.6.2: Horizontal .7382" max

717.11:Camshaft:

No alteration of the camshaft by machining, polishing, or altering is allowed. Must compare to stock Briggs part. First camshaft check will be taken at the valve spring retainers. With the lash set at zero, the movement of the valve spring retainer may not exceed .3085". Any camshaft with a measurement at the push rod of less than .306 should be removed and measured on the grind and checked for alteration. Camshaft must be as supplied with Stock Profile and compression relief.

717.11.1: Install degree wheel, using positive stop method.

717.11.2: Check ignition timing. With the right edge of the magnet (not the magnet holder) aligned with the right edge of the notch on the bottom of the right leg of the coil. The degree wheel must indicate

between 23 and 29 degrees BTDC. Flywheel key must have BS logo. Minimum key width is .182 inch.  
717.11.3: Tech camshaft at pushrods. Push gently down on dial indicator stem to ensure that there is no lash when pushrods are going down. Exhaust Lobe Lift Intake Lobe

75-71 BBDC .020 34-30 BTDC

57-53 BBDC .050 18-14 BTDC

39-35 BBDC .100 2BTDC-2ATDC

25-21 BBDC .150 13-17 ATDC

9-5 BBDC .200 29-33 ATDC

12-16 ABDC .250 49-53 ATDC

25-29 ABDC .275 63-67 ATDC

.3085 MAX .3085 MAX 70-66 BTDC

.275 31-28 BBDC 57-53 BTDC

.250 18-14 BBDC 37-33 BTDC

.200 2-6 ABDC 21-17 BTDC .150 18-22 ABDC 6-2 BTDC

.100 33-37 ABDC 11-15 ATDC .050 49-53 ABDC 29-33 ATDC

.020 66-70 ABDC 717.12: Deck/Piston Clearance: Machining of deck surface is permitted. There will be no knife edge finishes allowed, Smooth finish only. Piston pop up cannot exceed .035" above block surface in the center of the piston. When measuring piston pop up, use the backside of the Sox pushrod gauge or set flat bar stock across piston parallel to wrist pin. Use dial indicator to check pop up on center of this bar. Carbon may be removed from the top of the piston prior to measuring. Top of piston may be filed to relieve protrusions left by number stamp on top of piston. 717.13: Bore: Maximum bore 2.725". Factory oversize pistons allowed. 717.14: Stroke: Maximum stroke is 2.204". Push piston down to take up rod play. 717.15: Head gasket:

Any commercial available head gasket may be used but must maintain same configuration of shape of standard Briggs World Formula gasket. Minimum thickness is .040 measured with a micrometer from inside of cylinder hole of gasket at 4 points between the head bolts. Fire Ring B&S gasket is legal. Current engines using .010 and thicker will be legal to 01/5/2018. Any engine built after 7/15/2017 will use the .040 head gasket. This will allow those engines that are fresh to be used til 1/5/2018 then rebuilt to .040 spec. All engines used in 2018 will require the .040 gasket. 717.16: Head: Head may not be altered in any way from factory specifications. NO PORTING OF ANY SHAPE OR WAY! Heat sink P\N 555690 is allowed. 717.16.05: Cylinder head gasket surface may be machined. Remove Carbon first. Depth from gasket surface to head surface between valves must be a minimum of .319". Measure by using a depth micrometer. No knife edges or angle milling of head. 717.16.1: Rocker Arms / Push Rods: rocker arms must be as produced. Length must be 2.820 inches minimum. Push rod length 5.638" no go to 5.656 must go. Push rod diameter is .185 to .190".

717.16.5.1: Intake port: No media blasting of any type allowed on intake port in\on the head or manifold. Must be as cast. Maximum diagonal measurement is 1.101". Maximum vertical measurement is 1.044". 717.16.5.2: Exhaust port: No media blasting of any type allowed on exhaust port. Must be as cast. Maximum I.D. of shoulder in bottom of exhaust port is .854"

717.16.6: Valve seats - one 45° angle only

717.16.6.1: Intake valve seat diameter is .966" - .972".

717.16.6.2: Exhaust valve seat diameter is .844" - .850".

717.16.7: Valves 717.16.7.1: Intake valve head diameter is 1.055" - 1.065".

717.16.7.2: Exhaust valve head diameter is .935" - .945".

717.16.7.3: Valve stem diameter is .232" - .238".

717.16.7.4: Valve face must have one 45° sealing surface only.

717.17.8 Valve springs 717.17.8.1: Dual valve springs as supplied by factory are required.

717.17.8.2: Inner spring wire diameter is .066" - .068".

717.17.8.3: Outer spring wire diameter is .112" - .114".

717.17.8.4: Valve Guides: Replacement of valve guides with B&S factory part 555645, is allowed.

717.18: Ignition: Unaltered B&S stock coil #557040 w\External Limiter or #557125 with Internal RPM Limiter is mandatory. Attachment bolts or bolt holes may not be altered.

717.18.1: Spark plug connector must be stock factory type.

717.18.2: Rubber plug boot is allowed.

717.18.3: There must be resistance from plug wire to ground on coil #557040. Resistance must be between 3000 ohms, minimum, to 6000 ohms, maximum. Coil resistance may be rechecked after a minimum of 10 minutes if correct reading is not attained upon first check. No spec available on P\N #557125. 717.18.4: Coil air gap is non tech.