



Last Edited- 01/13/21 Changes in Red  
2021 Mini E Raceway Rules

**General Track Rules-**

**Holding the line on cost by maintaining consistent rules and enforcement**

**Sportsmanship and conduct:** Rough driving will not be tolerated and will result in disqualification of the driver/drivers involved. It is expected that pit crews, fans and family members conduct themselves in a sportsman like manner as well. Any car owner, driver, or crew member that in any way is discourteous to an official or addresses any official in a non-professional manner shall subject the team or kart they are affiliated with to suspension, fine, loss of points, or expulsion from Eagle Raceway. Any fighting in the pit area will subject the offender, and the car they are associated with, to suspension or fine. No driver may get out of their kart or stop on the racing surface to argue or discuss a race situation with the flagman or officials. Violation of this rule will result in disqualification or fine. When in the pit area, make every effort to maintain a constant watch for your own protection. The race director at their discretion may add further fines, disqualifications, suspensions, point or position deductions, or any combination to any violation.

**Fire Extinguishers:** Fire extinguishers are mandatory in every pit. Please keep them visible and easily accessible not only for yourself, but for others not familiar with your pit. All extinguishers should be Purple K or ABC dry chemical.

**Reserved Pit Stalls & Number Reservation:** Pit Stalls and Numbers reserved in the 2021 season will be reserved until February 1st 2022. Pit Stalls reservations will not be honored during special events. Any non-registered driver with the same number as a registered driver will be asked to change his/her kart number prior to the start of the races. Points are awarded to the driver, not the kart. Registered drivers racing in a different kart must do so in the same class in which they registered in order to receive points.

**Rainouts:** Rainouts will be posted on the following website- [www.eagleraceway.com/littleeagle](http://www.eagleraceway.com/littleeagle). It is recommended that in the event of inclement weather, you call the racetrack (402)238-2595 to verify the status of the races. We also recommend that you sign up for Eagle Raceway's text club for first updates on rainouts (visit [https://www.rainedout.net/team\\_page.php?a=19e9649d247f448bcf5a](https://www.rainedout.net/team_page.php?a=19e9649d247f448bcf5a) to sign up.) If the race program rains out before the heat races are complete, you will be able to use your pit pass (band) for the following regular Friday night race only. You must have your pit pass (band) to be admitted in free. Or you may turn in your band on that night for a refund. If the races rain out after the last heat race is complete, the race program will be considered a full show and there will be no rain checks or refunds issued, and the "A" Features will be resumed the next week.

**Participants Insurance:** Available upon request is a certificate of insurance which covers everyone signed in at the pit gate. You and your crew members are covered by the best secondary insurance available to any racing facility. We recommend however, that every participant have their own personal medical coverage. If any questions or problems with insurance come up, contact Eagle Raceway at 402/238-2595.

**Liability Insurance:** Every driver is expected to inspect the racing surface to learn of any defects, obstructions, or anything else which, in his or her opinion, is unsafe for racing. He or she should immediately report any conditions, if discovered, to officials and/or management. Any driver entering an event is considered to have inspected the track and found all conditions satisfactory to them. Drivers understand the risks of auto racing when they enter an event. Mini “E” assumes no responsibility for damage to or loss of your equipment, vehicles, or any parts whatsoever.

**Driver Age:** Mini “E” requests proof of age of all drivers that are minors. Proof of age is considered either a birth certificate, Drivers License/Permit, Passport or State ID and must be provided to compete. Your actual age as of January 1, 2021 or after determines your age for the 2021 racing season year. There are specific age requirements stated for each class. A driver may not move down into a “younger” age group class then specified. However, if a driver submits a request with Mini E Raceway and officials deem the driver to have enough experience and skill, the driver may be able to move up to a “higher” age group class with permission. All minors must have both parents/guardians sign a minor release agreement in front of a Mini E official or Notary before they are able to compete.

### **On-Board Computers:**

Including tachometer and temperature gauges are not allowed at anytime with the exception of Age 14+ Classes.

### **General Safety Rules-**

**RaceCeivers:** Mandatory in all classes. Channel 454.00. This is to help speed up the show and provide extra safety for the drivers. We recommend purchasing one from Precise Racing Products or any other vendor <http://preciseracing.com/search.cfm?lineCode=RCE>

Or you may purchase one at the track for \$100 while supplies last.

**Helmets:** Full face Snell rated helmet 2011 or newer required.

**Neck Brace:** Collar type neck braces or Hans devices designed for motor sports are mandatory.

**Driver Apparel:** It is recommended that drivers wear a full fire resistant driving suit with racing shoes and gloves. Drivers are required to wear at least a long sleeved jacket (i.e., leather, vinyl, denim, race suit jacket), long denim jeans, high top sneakers and gloves.

### **Track Procedure-**

- The pit gate opens at 5:30 p.m. (unless otherwise stated). Check-in / draw closes ½ hour before scheduled start of races (unless otherwise stated). Any driver signed in after that starts at the rear of their 1st heat. Practice sessions begin ½ hour before race time unless otherwise stated.
- Pit stall reservation is \$50 (see registration form). Kart must be registered with Mini “E” to reserve a stall. Priority given to previous pit stall renters until February 1<sup>st</sup>. Pit stalls will not be reserved on special shows.
- ATVs and other utility vehicles: ATVs will not be allowed on the racetrack at any time. All ATVs will be loaded onto the trailers as soon as reasonably possible following the conclusion of the races. No joyriding. One person per seat. All ATV drivers must have a valid driver’s license, and have a “HOT” or “DRIVER” pit pass. Speed limit is 5 MPH. Violations will result in driver disqualification or fine of the offending team.
- You must run in your assigned hot lap session or forfeit your right to hot lap.
- Management and officials determine all finishing positions and their decisions will be final. Mini “E” will not use any video replays for scoring purposes.

### **Line-up Procedures and Points:**

-All competitors will draw for their line-up position for their first race. The second round of heat races will be a complete inversion based on lineup of your first heat race. Accumulated heat points will determine feature line ups. (Highest amount of heat points to the front, Lowest amount of heat points to the rear) In the event of a tie in heat points, position will be determined by total season points to date. If it is the first night, a tie in heat points will be determined by pill number. (Higher season point total or Pill number ahead of the driver/s with a lower season total or pill #) Accumulated heat points are for the determination of Feature line-ups only and do not count towards season points. Points given per heat race: Heat Race win is 40 points, with each subsequent position worth one point less. If you do not start a heat race, you receive 0 points for that race. A predetermined number of karts qualify through the heat races for the 'A' Feature (Track Preference depending on class' skill level). A 'B' Feature(s) may be run if necessary with a predetermined number of karts to move up to the rear of the 'A' Feature if needed.

-Points for all classes will be awarded using the following guidelines:

Weekly 'A' Feature win is 40 points, with each subsequent position worth one point less. If track runs a 'B' feature(s), first non-transferring driver receives 1 point less than the driver that finishes last in the A Feature and each subsequent position receives one less point per position. 11 is the minimum amount of points that the driver will receive as long as they started at least one race during the night. This applies to all 'B's, even if more than one is run. If the driver does not start a race, no show up points are given. -Any entry not in staging area and ready to race when previous race has ended is subject to start scratch (in the rear of the field) for the race.

-Disqualifications may result in either "0 Points" or "Minimum Points (11)" depending on the severity of the infraction.

**Transponders:** Drivers will receive a transponder for electronic scoring at Check-in supplied by Mini E Raceway. If you wish to purchase your own transponder, you may. (Westhold) All drivers are to sign a transponder agreement. Transponders are to be returned nightly. If they are not returned on time, late fees will apply. If your transponder is not returned at all or is damaged, you may be subject to pay the track up to \$200 in loss or damages. Transponders should be mounted in the location that the track requests. If you forget to put the transponder on your kart, you may not be scored for that race.

**Year End Track Awards:** There will be an awards banquet at the end of the full season. The top 10 in Each class will receive awards. We may award more places depending on the kart count throughout the season. To receive year end track awards, point fund, and contingencies a driver must race 75% of the point's races for that class. End of year point fund- Everyone who registers their number for the season will pay a \$20 registration fee. All of the money from the registration fees will be put into a point fund for each class.

**Yellow/Red Flag Conditions:** Any kart causing a yellow flag condition will be sent to the back upon restart of the race. If a driver causes a yellow flag 2 times in the same race, he/she may be disqualified from that race. Any driver who fails to stop his/her kart under a red flag may be disqualified from that race. If the caution flag is brought out after the white flag has been thrown in the heat races, the race may be scored on the white flag lap and may be considered complete. If it occurs during an "A" feature, we will revert back to two laps remaining.

**Restarts:** Restarts following a red or yellow flag will be single file if one full lap has been completed or side-by-side if a full lap has not been completed. An orange cone may be used on single file restarts indicating that no drivers may pass prior to the cone and all karts must go on the outside of the cone upon the restart of the race.

**Start:** All karts must stay in line and maintain pace. No acceleration until reaching the designated starting line. Inside pole kart sets the pace. If caution is thrown before completion of one lap, drivers will line up in original positions, with the exception karts involved in the incident, which will start in the rear of the field. If the majority of the entire field is involved in the incident, a complete restart with original positions will occur. A single file restart may be signaled at the Flagman's discretion.

**Restart After one Lap Complete:** Line up is in the order in which the karts were scored on the last completed green flag lap. If sufficient laps have been completed, the race may be called with points and payout according to the position to be held for restart.

**Incident:** Any Kart causing a caution, or stopping due to a mishap, and not immediately lining up with other karts, will be considered involved in the incident.

**Repairs:** No kart may be attended to on the track without permission. All entries returning to the track shall start in the rear of the lineup when returning to the track. Once the white flag is shown signifying one lap to go, no entry will be allowed back on the track. Only authorized personnel shall be in the infield or on the track at any time during the race program.

**Fees:**

Pit Stall Reservation (optional): \$50 (Previous years pit stall renters have priority until Feb. 1st

Yearly Number Registration Fee: A once a year fee of \$20 (All of the money from the registration fees will be put into an end of year point fund for each class.) –You must pay a registration fee for each class that you will be racing in.

Driver Pit Pass- \$20 (If you are racing a second class it is \$10 extra.)

Crew Pit Pass(Allowed in staging area and hot pass areas, usually the person starting the kart and helping on the track if there is an issue)- \$10

Spectator Pass- \$5 (Spectator pass, Not allowed on the track or in the staging area, Not allowed in Hot Pass Areas)

**Nightly Payout and Trophies:**

*CAGE Rookies/FLAT Jr. Amateur-* Top 3 receive a trophy and all participants receive an award

*Amateur/Jr. 1/ Jr. 2-* Top 3 receive a trophy

*CAGE ADULT CLONE & FLAT ADULT CLONE-* 1<sup>st</sup> place receives \$100 and a trophy (With a minimum of 3 karts starting a race) and 2nd-3<sup>rd</sup> place finishers get 50% payback from their classes entries. Or if there are less than 3 karts in the class, 1st-3rd receive 50% payback.

*CAGE BLUE WAZOOM - 1st-3rd place receives 50% payback from their classes entries.*

Contact Information:

Office: 402-238-2595

Fax: 402-238-3768

Email: r\_hadan@hotmail.com

**FLAT KART CLASSES:**

**JR. AMATEUR (Rookie)-**

(2016 AKRA Rules) AKRA BSP Clone - Age 5-8, minimum weight-235lbs., Restrictor plate- .375

**JR. 1-** Age- 8-12

(2016 AKRA Rules) AKRA BSP Clone - minimum weight- 265lbs., Restrictor plate- .425

**JR. 2-** Age- 12-15

(2016 AKRA Rules) AKRA BSP Clone - minimum weight- 315lbs., Restrictor plate- .500

**ADULT CLONE** - (2016 AKRA Rules) AKRA BSP Clone - Age- 16+, minimum weight- 370lbs., no restrictor

**– Tires may not be wet when you get to the staging area. 2016 AKRA RULES APPLY TO ALL FLAT KARTS**

unless otherwise noted

**Flat Kart Numbers:** Must have a MATCHING number on top of the right front fender/hood, and both side panels. Also must have a black on white, or white on black number plate on the rear bumper. All numbers must have a height of at least 6 inches and be a legible font and color. Any additional letters must be at least 3 inches in height and legible.

## **CAGE KART CLASSES:**

### **Cage Rookie-**

**Age:** 5-8 years (NO EXPERIENCE-VERY FIRST YEAR IN RACING)

**Weight:** No Minimum Weight

**Restrictor:** ARC .375

**Rules:** See RaceSaver Cage Kart Rules

### **Cage Amateur-**

**Age:** 6-9 years (Maximum of 2 years in this class)

**Weight:** Minimum of 280lbs

**Restrictor:** ARC .375

**Rules:** See RaceSaver Cage Kart Rules

### **Cage Jr 1-**

**Age:** 7-11 years (May move from CAGE Rookie to CAGE Jr. 1, CAGE Amateur Class is not necessary to move up unless officials deem necessary)

**Weight:** minimum of 310lbs

**Restrictor:** ARC .425

**Rules:** See RaceSaver Cage Kart Rules

### **Cage Jr 2-**

**Age:** 12-15

**Weight:** minimum of 350lbs.

**Restrictor:** ARC .500

**Rules:** See RaceSaver Cage Kart Rules

### **Cage Adult Clone-**

**Age:** 14+

**Weight:** minimum of 400lbs.

**Restrictor:** No Restrictor

**Rules:** See RaceSaver Cage Kart Rules

### **Cage Blue Wazoom-**

**Age:** 14+

**Weight:** minimum of 400lbs.

**Restrictor:** No Restrictor

**Rules:** See Blue Wazoom Cage Kart Rules

## **RaceSaver and Blue Wazoom CHAMP CAGE KART CHASSIS RULES:**

1. Main frame members shall be constructed of cold rolled, electric weld, round steel tubing or other material of equal or greater strength, of 1.125 inch nominal minimum diameter, .083 inch wall thickness. Conventional tubular space frame construction methods only are allowed. Non-conventional construction techniques must receive review and approval of the race director and/or tech inspector prior to competition.
2. Wheelbase: 42.0 inches minimum, 45.0 inches maximum. Wheelbase is measured true axle centerline, each side.
3. Overall width: 40.0 inches minimum, 52.0 inches maximum. Overall width shall be measured from outside tire sidewall to opposite outside tire sidewall.
4. Overall length: 95.0 inches maximum. Overall length is measured at any cross section of the kart, parallel to the longitudinal centerline.
5. Roll Cage specifications:
  - A. Full roll cage of four point conventional construction is mandatory. The four uprights and top horizontal connecting tubes must be constructed of 1.125 inch nominal minimum diameter mild steel tubing. All attachments by welding unless otherwise specified.
  - B. Uprights and positioning: Each of the rear uprights must be welded to the main frame rails at a point aft of the rear axle centerline. Each of the front uprights must be welded to the side frame rails at a point forward of the steering wheel mount point and aft of the leading edge of the front tire. All uprights must create an angle of no less than 45 degrees with the main frame rails and have no bends within three inches of attachment point except for left rear.
  - C. Top hoop rails: Corner construction shall be rounded type with no sharp edges or corners allowed.
  - D. Shoulder harness mounting bar shall be welded laterally between rear uprights, double braced to the top lateral bar, at a height suitable for harness mounting. A minimum 6.0 inch square headrest shall be mounted to the braces level with the driver's head.
  - E. Side protection bars are mandatory and must run horizontally between front and rear uprights each side. One end connection may be slip jointed. Side protection bars must be positioned vertically between the drivers shoulder and elbow.
  - F. Roll cage overall width: 16.0 inches minimum, 24.0 inches maximum. Width to be measured outside to outside between any two uprights.
  - G. Roll cage to overall height: 38.0 inches to minimum. Height to be measured vertically from highest lateral cross bar centerline to main frame rail centerline.
  - H. All roll cages that deviate in any way from the above description must be brought into conformance or receive approval from the race director or tech inspector prior to being used in competition.
6. Front bumper: All components shall be constructed of round steel tubing of .750 inch nominal diameter minimum. Front Bumper must encircle entire front nose area at a height of 7.75 inches minimum from ground level, Double bumpers are recommended.
7. Rear bumper must encircle the tail section of the kart. The top of at least one bar must be 7.50 inches maximum from ground level.
8. Nerf bars: All components shall be constructed of round steel tubing of .750 inch nominal diameter minimum. Double bar construction is mandatory. The top of the upper bar must be no higher than the top of the rear tire. The bottom of the lower bar must be no lower than the bottom of the main frame rails. Nerf bar must extend from an area inside a longitudinal line from the outer portion of the front tire to a point no further outboard than 1.0 inch from outer tire surface.
9. Seat positioning: No part of the seat may be positioned closer than six inches inside the left hand nerf bar. Must have an approved aluminum high back seat. 65 degrees is the maximum seat angle. (measured on back of seat)
10. Harness: Five point, SFI-rated racing harness is mandatory. Metal to metal harness fastener is mandatory. Mounting bolts must be cotter-keyed and attached to a 3/16 inch minimum thick, 2.0 inch minimum square steel mounting plate that is welded to the frame and/or roll cage. Arm restraints are mandatory.

**RaceSaver and Blue Wazoom CHAMP CAGE KART BODY REQUIREMENTS:**

1. All bodywork components must be constructed of high strength plastic, fiberglass or advanced composites only. No component of the bodywork may be adjustable in any way while kart is in motion. Bodywork must be confined to the area defined by the front and rear bumpers, inside the area defined by the inside sidewalls of the tires.
2. Cockpit must be entirely open when viewed from above.
3. Wings, spoilers or other aerodynamic effects are prohibited.
4. Full midjet/sprint type, open wheel, conventional construction methods are approved. Flat panels are allowed only for side panels and all other body components must have rounded, compound curve configuration. Nose bodywork is mandatory, tail section is optional.
5. Numbers: Must have a number on the front hood, and both side panels. Also must have a black on white or white on black number plate on the top, rear portion of the cage. All numbers must have a height of at least 6 inches and be a legible font and color. Any additional letters must be at least 3 inches in height and legible. Maximum of 3 numerals may be used.

### **RaceSaver & Blue Wazoom CHAMP CAGE KART TIRE RULES:**

*Front-* Hoosier Part #11901RS (11.0x5.5-6 RaceSaver) *Rear-* Hoosier Part #11939RS (12.0x8.0-6 RaceSaver)  
Hoosier tires must have RaceSaver Stamp, no alterations, must have tread. Minimum Durometer: 59

### **RaceSaver & Blue Wazoom CHAMP CAGE KART WHEEL RULES:**

Approved metallic materials only. No plastic or carbon fiber wheels allowed. Rear wheel is 6 inch diameter x 7 inch width maximum and front wheel in 6 inch diameter x 6 inch width maximum measured bead to bead (outside edge to outside edge)

## **RACESAVER CAGE KART ENGINE RULES:**

### **BOX STOCK PROJECT CLONE 6.5 OVH ENGINE:**

All Parts must be Box Stock Project factory production parts unless otherwise specified in this rules manual. No machining or alteration of parts is allowed unless specifically noted. Any engine that has been tampered with or otherwise found to be illegal may be confiscated by the track and the driver/owner will lose all awards and points for that event, lose all points accumulated to date, and may be suspended from competition at Mini E Raceway until further notice. *Pull starting mechanism must remain on the engine.* Tumbling of engine parts is strictly prohibited. Engine will need to be inspected and sealed by a certified RaceSaver Clone Engine inspector before raced (Roger Hadan for 2021). Any new part must be submitted to and approved by RaceSaver before use. All new incoming engine & performance parts must be submitted to RaceSaver for review prior to them being allowed as legal components for competition.

### **RaceSaver Engine Sealing in the Mini E Raceway Area:**

*CAGE KART Clone Engines can be inspected and sealed by calling or texting Roger to set up an appointment (402)639-4722.*

*All seals cost \$25 Or \$10 per seal*

**Engine Description:** Single Cylinder, 2 valve, and OHV 4 cycle (Box Stock Project)

**Combustion Chamber Volume:** 26.5 cubic centimeter minimum, with piston at TDC, using prescribed procedure. The liquid CC check is the official check (If the engine fails the CC Liquid check at anytime during the tech procedure it must be called illegal.)

**Cylinder Head Requirements:** Must be OEM casting only. All cylinder heads used 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. Exhaust Port Pours should check 22.5cc minimum-22.8cc Maximum, Intake Port Pours 27cc should check minimum-27.5cc maximum. Valve seats may have up to three angles, 45 degrees valve face and 30 degrees top relief and 60 degree bottom relief. Cutting of the valve seats allowed to insure proper seal. Intake seat maximum ID .899", Exhaust seat maximum ID .862". Outside face of valve may not be elbow floor of combustion chamber (i.e. don't sink the valves.) Stock head bolts only, must have four. Head gasket/s may be after market, must be of stock configuration, gasket thickness is a non tech item, sealer allowed to insure proper seal. 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, 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 replacement for stock head bolts. No studs allowed. No additional washers allowed. Breather hole on valve cover may be tapped with 1/4" pipe tap to accommodate breather fittings. No over sized drilling allowed.

**Block Requirements:** Stock cylinder bore is 2.67" may be bored to 2.691" maximum. Stroke is 2.123" + .010" or - .010". 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. (Oil drain hole between lifters .250" Max. Any type side cover fastener and lock washer permitted, must be original size, sealer permitted.) Solid dowel pin replacement for the side cover to block .317 maximum diameter allowed (Factory stock dowel pin is 8mm or .315). Dowel pin must remain in the factory position.

**Carburetor requirements:** Huayi or RUIXING model 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. (Choke area must remain as cast). Venturi .615" NO-GO. Venturi may be machined to spec, Minimum Venturi size is .608, no polishing permitted and all transitions must remain stock in and out of venturi. Rear carb bore .751" NO-GO. Carb bore at rear of carb .750" maximum depth (This measurement is taken from the flat surface on the rear of the carb down to the circular ridge at venturi edge). Main fuel jet .042" NO-GO. No use of loctite or other materials on high speed jets or damaged threads permitted in an attempt to lock jet in a non stick location. Main jet must seat firmly on bottom of E-Tube,. Low speed idle jet is a non tech item. Stock emulsion tube must be used and unaltered, .066' max ID (NO-GO). Side holes in E-tube 4 holes in bottom section max and must have 20 holes in middle section. Minimum E-Tube length 1.092". The minimum protrusion of the E-tube into the Venturi must be check by the newly approved NO-GO gauge Huayi .488" or Ruixing .479". Minimum outside diameter of the E-tube at any point is .154". Side holes in e-tube diameter .036" NO-GO. Throttle shaft - .115" minimum. Stop arm of throttle shaft maybe filed to adjust for butterfly position. Butterfly - .037" minimum thickness. Butterfly screw minimum length .305":, screw must remain stock as produced with no alteration allowed to achieve minimum length. Air Filter adapter should be part #6931ARC. Air Filter should be 4" tall angled or straight for Box Stock Project Clone. Phenolic spacer must be flat across entire gasket mating surface, with a minimum thickness on gasket surface of .265" (not including gasket). Gasket surfaces must remain parallel. No angle cutting allowed. Center inlet hole is Non-tech (size, configuration, finish), but no rifling, grooving, dimpling, etc. allowed. Maximum mounting hole/s size .300" NO-GO (checked with .300" pin gauge)". Phenolic spacer/gasket/s subject to spray test to check for leakage or introduction of air into intake track.

**Valve Train:** Stock four bolt valve cover only with any stock configuration gasket, sealer allowed. Factory stock rocker arms 1:1 ratio and push rods only. Minimum overall length of rocker arm 2.145" minimum thickness of the upper valve stem ONLY, non tech, to adjust for proper running lift. Square tipped rockers

allowed. Stock steel/stainless nitrate coated valves only 45 degree angle only both valves with a minimum weight of 21 grams each valve. 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. Single valve springs only. (Installed height for valve springs .815", must be checked by using the .815" spring must go gauge with retainer seal and shims in place on intake an exhaust valve if used.) Shims may be used to achieve .815" installed height, maximum thickness of shims used .075", any combination of valve seal and spring shims allowed. The ruling on the .075 shim thickness includes the oil seal if used. The valve stem seal has no tech other than it's thickness combined into the max of .075 to obtain a minimum of .815 installed spring height. In other words, the valve stem seal can be used or not used and is no longer a tech item unless used as a shim. Also, the rubber inside it is a non tech item. Prescribed check procedure as follows- Remove valve spring, reinstall spring retainer and shims, insert .815" must go gauge in spring location. Gauge must go in both locations intake and exhaust with any allowed retainers and shims 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" and a maximum tension of 18 lbs at .650". Prescribed procedure for using weight checker is as follows. Spring must slide over post on it's own to the bottom. When weight is placed gently on the spring, push weight down onto spacer so that it bottoms out. Release weight and shine a flashlight between weight and spacer. Light must be visible in its entirety of 360 degrees to disqualify spring. Add (Additional check for valve springs – Each spring is to be checked using a .750" height by 800" width plate gauge and a .250" (square) no-go gauge to check the center spacing of the spring coils while inserted in the plate gauge. Prescribed check procedure as follows – Insert the spring in the .750" x .800" plate gauge (spring must be centered in plate gauge and must fit inside of gauge with the ends of the spring wires perpendicular to the plate). Once inserted in the plate gauge take the .250" no-go gauge and check the center coil spacing on both sides. The .250" no-go gauge must be parallel to the spring wire and perpendicular to the center of the spring when checking. The .250" no-go must pass check on at least one side of the spring. This check is to be performed after the 10.8 lb, 18 lb, check, and .071" max wire diameter check. Lash cap on exhaust valve only. Valve stem seal allowed on intake and exhaust valve. BS lifters only, no modifications allowed. Over-all length of push rod 5.285" max, 5.230" min. Push rod must be of 3 piece design (Hollow or solid tube with 2 solid ball ends). Lifter head diameter .915" min with no visible modifications. Weight check lifters 18 grams min and push rods 9 grams min.

**Ignition system:** Stock Box stock system only and must be unaltered. Spark Plug boot must be the stock bolack hard plastic boot ONLY. Kill switch and low oil sensor may be disabled and removed. Since Steel flywheels are no longer being produced, we will be allowing the PVL Aluminum flywheel part # DC-PVL-FW, or you can use the previously allowed Steel Flywheels – min. 5lb. 4 oz. including plastic fins. Timing and flywheel key is non-tech.

**Piston & Rings:** Piston must be unaltered Box stock only. Overall piston length 1.935" max, 1.920" min and from top of wrist pin to top of piston .580" max. Arrow on top of piston must be pointed toward valves/lifters. Overall length wrist pin 2.100" min, inside diameter .550" max. Top ring and middle ring .115" max width, .060" max thickness. Filing of ring end gaps permitted including oil expander, max end gap .040" (top 2 rings only). Lapping of rings permitted for proper seal. Piston ring must be in one piece (unbroken) when presented for tech. Piston rings must be self supporting in cylinder bore when checked installed on piston with connecting rod attached (rod cap and bolts installed are not required for this check). Minimum weight of piston is 145 grams (must conform to this spec by 4/15/15). Honing of wrist pin journals permitted. Bore surface must remain flat and retain stock configuration edges. Skirt of piston must remain as produced. No chamfering, radiusing or breaking of edges permitted. Up to .010" over pistons allowed.

**Connecting Rod:** Stock Box Stock rod only. Stock rod bolts only. Length of from top of journal to bottom of wrist pin hole 2.375" max and 2.350" min. Honing of journal end and wrist pin hole permitted, those surfaces must remain flat. Oil hole size .179" max, .0180" no go. Minimum weight of rod assembly 133 grams. New stock performance CAST rod 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. Stock Crank bearings only. NO ceramic bearings allowed.

**Camshaft Requirements:** Stock camshaft cores only, ez-spin assy must remain as stock. Cam lobe base circle diameter .865"-.005"/+.10" Duration check for intake and exhaust lobes (taken off pushrod). Intake duration of 219 degrees at .050" lift/97 degrees at .200" lift. All checks will allow +2.-5 (minimum duration checks effective 03-1-2016) degrees for wear and gauge variances, 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 as raced. Max Exhaust Lift at the valve .242" taken on the valve spring retainer as raced. Running lift should be checked in front of the rocker arm on the valve retainer. Preloading dial indicator not required for this check, check lift as run. Competitor/Tech may rotate the retainer 2 times max to achieve proper running lift. Once dial indicator has been set to zero dial indicator must not be reset until check has been verified.

**Blower Housing Assembly:** Pull Starter must be present and remain stock. Pull starter may be rotated for a better crank angle. Color and finish of blower housing, valve cover and all sheet metal is a non tech item.

**Header Requirements:** DJ1137 RLV SuperBox Header Only.

**Fuel Tank Requirements:** Floor Mounted fuel tank mandatory (stock tank must be removed). Pulse type fuel pump allowed.

**Fuel Pump requirements:** Fuel Pump must be pulsed from either the crankcase 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:** 12 tooth #35 chain spec. clutches only. Must remain stock and 12 tooth. Ex.- Hillard Extreme Duty (No Roller Bearing type clutches allowed) No disc type clutches allowed.

**RaceSaver BSP Clone Claimer Rule:** There will be a \$200 claiming rule in place for this engine or \$350 if engine has billet flywheel installed. (minus the clutch/chain guard/throttle kit, header pipe/muffler, air filter adaptor/air filter, top plate & fuel pump). Refusing to accept the claimer will result in immediate disqualification of competitor along with forfeiture of any points earned to date in class. Competitor will also not be allowed to compete any longer in that class for the remainder of the season. Claim rule will not be in effect on first TWO track point nights. Following second night, no driver may claim unless they competed at ALL previous weekly sanctioned track point events. Engine claim rule will not be in effect on season championship night. Exception is: If a driver is claimed at any weekly point event, he may claim at any following event at that track without needing perfect attendance. Driver can only claim one engine during current calendar year. Exception is after any driver has had more than one engine claimed, they are eligible to claim as many engines as they have had claimed. No driver may claim the same driver more than once during current calendar year. When claim rule is in effect, top three finishers must report directly to claim/tech area and are subject to claim by any eligible driver finishing fourth on back in feature that is scored on the lead lap. Driver making claim must drive immediately after feature, under own power, directly to claim area. Driver/Kart Owner must have correct amount of cash. Claim must be made to official immediately after feature. In case of multiple claims on same engine, drawing will be held to determine outcome. During any cash claim, all claimable items should be inspected for legality prior to transfer of items. If claimed item is found illegal, driver is disqualified. Claimer then has option to accept or decline claim. Additional penalties may apply, depending on infraction.

**FUELS & LUBRICANTS:**

The only acceptable fuel is gasoline and lubricating oil. None of the following substances may be added to the fuel. This list is inclusive only in that these are known ingredients that have been used in the past. Additionally, all other substances recognized by bonafide race sanctioning bodies or deemed to exceed the Threshold Limit Value for human exposure as listed by the American Conference of Governmental Industrial Hygienists, are considered part of this list.

Alcohols (all), Aldehydes, Aminodiphenyl, Benzene (in excess of EPA limits), Benzidine, Beryllium compounds, Bromine compounds, Butadienes, Chlorinated compounds, Chromates, Dioxanes, Ethyl acrylate, Ethylene oxide, Hydrazine compounds, Methylene dianiline, Napthylamine, Nitrogen compounds (nitromethane, nitropropane, etc.), Styrenes, Toluidine, Zylidine.

Testing:

a. Field Testing

Digatron meter: The preferred method of field testing is with a digatron meter. The meter shall be set at -75 with the probe fully immersed in a plastic container of clean cyclohexane at ambient temperature. The probe is then fully immersed in the competitor's fuel and allowed to settle. Care must be taken to not touch the probe on any part of the fuel tank while the meter is coming to settle. The final meter reading must be zero or below (negative). The competitor has the right and the inspector may allow removal of the fuel from the kart's fuel tank into a suitable plastic container for testing. This is done to eliminate the effects of aluminum tanks on the meter and to facilitate cooling to ambient temperature. Artificial cooling of the sample (ice baths, etc.) is not allowed. Final testing shall occur no later than ten minutes after time of sample removal.

b. Laboratory testing may be performed on a competitor's fuel either on the tech inspectors own volition or on instructions from the race director. Upon request, the competitor shall draw a sample from his tank or container (inspector's preference) into a suitable, clean container. The tech inspector shall then mark the container and provide tamper proof sealing of the container. The sample shall be forwarded to an accredited testing lab for chemical analysis. Presence of any listed prohibited substances shall be grounds for disqualification.

## **BLUE WAZOOM CAGE KART ENGINE RULES:**

### **Blue Wazoom Engine Sealing in the Mini E Raceway Area:**

*CAGE KART Blue Wazoom Engines can be inspected and sealed by calling Uncle Franks to set up an appointment (402)926-2370.*

*All seals cost \$25 Or \$10 per seal*

### **720 BRIGGS ANIMAL BLUE WAZOOM:**

This Engine is to be run as originally manufactured by Uncle Frank's (UF) in Omaha, NE with no modifications of any kind.

In Order to assure that no modifications are performed, the side of the engine is sealed along with the head. Both side cover and head seals are required in order for the participant to be allowed to race. No tampering of any kind is allowed. The seals are not to be re-used.

The following specifications are to aid the tech personnel in determining whether the engine has been altered after original manufacture. In no way do these specifications constitute a need for, nor permission, for additional blue printing. Any other method of determining the legality of the engine is OK.

Tech gauging is available from Uncle Frank's upon request. After an engine is re-built, it must be re-checked

and re-sealed by an authorized Service Center. Most items are stock, un-altered parts from Briggs and Stratton. Most parts can be compared to known Briggs and Stratton stock parts. Those parts that are not Briggs and Stratton parts can be compared to known stock parts from Uncle Frank's.

**720.1** Technical Procedure: Engine to be run as supplied from UF factory. No blue printing allowed. Check side cover and head seals for tampering. Any part or parts may be removed from motor for inspection and measurement.

**720.2** Carburetor, Manifold, Air Filter Adapter, Air Filter

**720.2.1** Zama .820 Carburetor with butterfly throttle assembly. Venturi, .820 No-Go. Carb must be stock with single pumper stack of original style on carburetor.

**720.2.2** Inspect carburetor for "as cast" Venturi surface.

**720.2.3** Inspect dump tube for original installation.

**720.2.4** Check for additional holes, or enlarged holes in carburetor

**720.2.4.1** Hi-speed needle seat .070" No-Go

**720.2.4.2** Lo-speed needle seat .070" No-Go

**720.2.4.3** Inlet needle seat .055" No-Go

**720.2.4.4** Tillitson CARB HL334 WX602 may also be used with the following

a. Venturi Bore .820" No-Go

b. Hi-Speed needle seat .095" No-Go

c. Low-speed needle seat .070" No-Go

d. Inlet needle .95" No-Go

e. Carb to be run in as cast condition and may be compared to a known stock part

**720.2.5** Remote card needle adjusters are allowed.

**720.2.6** Inspect manifold for angle cuts and offset bolt pattern

**720.2.6.1** Manifold bore, block end: .950" No-Go, at carburetor end: 1.000" No-Go,

**720.2.6.2** Manifold length, 1.680" to 1.700"

**720.2.7** Air Filter adapter to measure less than 1.00" long, tapering to 1.070" small I.D., no radius allowed. May use Air Filter Adapter EC-306 on Tillitson Carb ONLY.

**720.2.8** Inspect Air Filter. Modifications to direct the flow of air are not allowed. Filter may not act as a ram tube (Top must be of equal or more dense material than sides.) A ram tube shall be defined as anything designed, built or installed in such a manner to deliver air to the engine air intake above the pressure or flow that there would be without it present.

**720.3** Header

**720.3.1** Header must be stock from Uncle Frank's, no tampering. Minimum length 13" when measured with a ¼ inch wide steel tape in the bore of the header.

**720.3.2** Header may be wrapped. Exhaust gas thermocouple allowed. If header is run without temp probe, mounting hole must be sealed.

**720.3.3** Unaltered RLV muffler #4102 is required. Muffler may not be wrapped, painted, coated or otherwise altered.

**720.3.4** May use UNALTERED RLV HEADER PIPE part #5506 with RLV MUFFLER part #4106

**720.4** Flywheel Cover

**720.4.1** Cover must be stock from B&S factory

**720.4.2** Uncle Frank's supplied flywheel screen only. No alteration to flywheel screen. Taping of Screen is permitted

**720.4.3** Sheet Metal may be repainted or plated.

**720.5** Fuel Pump: Inspect for one single Fuel Pump

**720.6** Rocker Cover

**720.6.1** Rocker Cover must be stock from UF. No modifications of any kind are allowed.

**720.6.2** Rocker Cover gasket must meet stock configuration. No sealer allowed.

**720.6.3** Filter or tube may be fitted to outlet. No welding or tapping of valve cover allowed.

**720.6.4** Any breather lines used on engine must be run to a catch can.

**720.7 Camshaft Profile: Must be taken before head is removed.**

**720.7.1** Max lift allowed is .286" measured at the valve spring retainers with lash set at zero.

**720.7.2** Cam profile, taken off valve spring retainers with lash set at zero and with TDC set by positive stop method.

**720.7.2.1** Intake, as valve is opening, is to reach 7 degrees ATDC before .100" lift.

**720.7.2.2** Intake, as valve is closing, is to reach 37 degrees ABDC after .100" lift.

**720.7.2.3** Exhaust, as valve is opening, is to reach 52 degrees BBDC before .100" lift.

**720.7.2.4** Exhaust, as valve is closing, is to reach 20 degrees BTDC after .100" lift.

**720.8 Cylinder Head**

**720.8.1** Head bolts must be stock from B&S. Dowel pins must be present..

**720.8.2** Check for one head gasket. Gasket must be in stock configuration. Gasket material non-tech.

**720.8.3** Head must be stock from Uncle Frank's. Spark plug non-tech. Bead blasting is allowed to remove carbon.

**720.8.4** Combustion Chamber must remain as cast. Check width of combustion chamber at the Widest part across the valve seat area with a 2.640" No-Go.

**720.8.5** Depth at the floor of the head is .300" minimum.

**720.8.6** Rocker Arms must be stock from Uncle Frank's. No modifications allowed.

**720.8.7** Ball Rocker must be stock from B&S. Diameter .600" +/- .010"

**720.8.8** Ports must be stock from UF. No additional porting, polishing or dimpling allowed.

**720.8.8.1** Carb inlet port: .950" No-Go when checking 90 degrees to line between center of studs, No-Go will be straight.

**720.8.8.2** Exhaust outlet port: 1.000" No-Go. Check for a machine cut chamfer at header flange surface.

**720.8.9** Push Rods must be stock from B&S.

**720.8.9.1** Diameter is .185" - .190".

**720.8.9.2** Length is 5.638" - 5.658"

**720.9 Valves, Valve Springs, Valve Seats**

**720.9.1** Valves must be unmodified stainless steel from Uncle Frank's. Only one 45 degree face allowed.

**720.9.2** Tech for single valve springs. Maximum length allowed is 1.250". Keepers and retainers are non tech. Retainer between spring and head surface, if installed, maximum lip thickness of .085".

**720.9.3** Valve Seat

**720.9.3.1** Seats must be stock from B&S. Must be one 45 degree angle only on valve Seats.

**720.9.3.2** Intake seat diameter is .966" - .972". Check for machined chamfer into port.

**720.9.3.3** Exhaust seat diameter is .844" - .850". Check for machined chamfer into port.

**720.10 Deck and Pop Up**

**720.10.1** Only single plane machining of deck surface is permitted.

**720.10.2** Piston pop up cannot exceed .015" above block surface in the center of the piston. When measuring the piston pop up, set bar stock across piston parallel to wrist pin. Use dial Indicator to check pop up in this area.

**720.11 Cylinder Bore and Stroke**

**720.11.1** Stock bore is 2.690". Over boring permitted up to a maximum of 2.725". No Re-sleeving allowed. No circular or machine grooving of cylinder is allowed.

**720.11.2** Maximum stroke is 2.204". Push piston down to take up rod play. Check stroke from BDC to TDC.

**720.12 Flywheel**

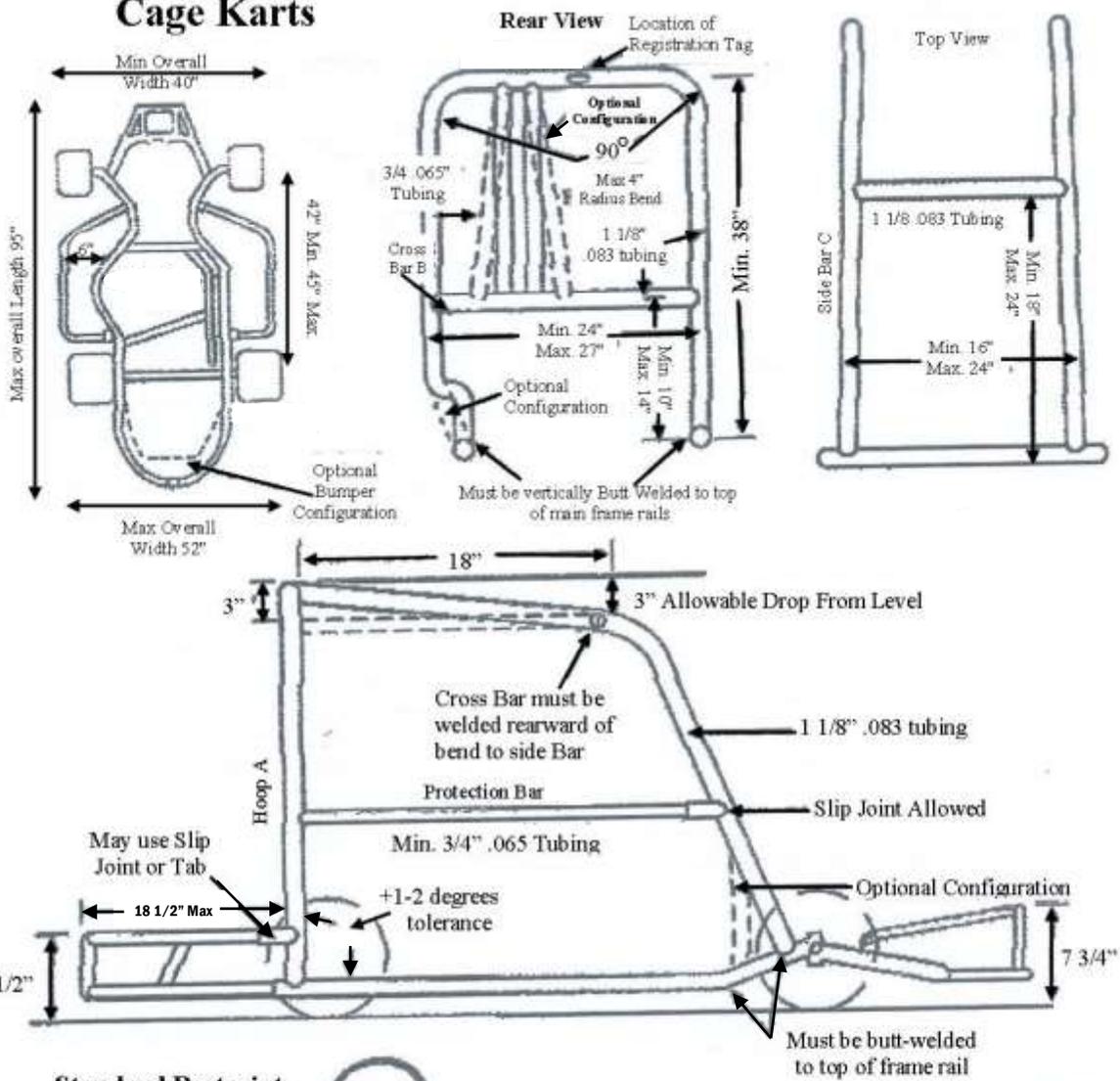
**720.12.1** PVL Flywheel must be stock from Briggs. No modifications allowed. Plastic fan must be intact.

**720.12.2** Flywheel key must be stock B&S straight key only. Width to be .1825" - .1875".

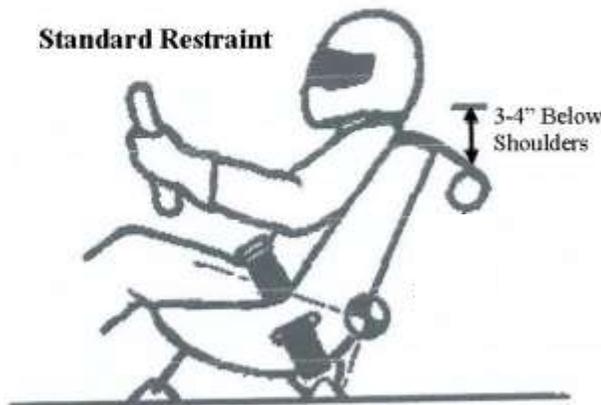
- 720.12.3 Aftermarket starter nut allowed.
- 720.13 Ignition Coil
  - 720.13.1 Coil must be stock PVL from B&S. Attachment bolts must be stock from UF.
  - 720.13.2 Stock from B&S supplied spark plug connector only. Boot allowed.
  - 720.13.3 There must be resistance from plug wire to ground.
- 720.14 Crankcase Cover, Camshaft, Rod and Piston
  - 720.14.1 Shims, if used, to be installed as from B&S
  - 720.14.2 Inspect for stock camshaft alignment.
  - 720.14.3 Camshaft must be stock from Uncle Frank's with stock alignment as supplied from UF.
  - 720.14.4 Inspect Lifters. Must be stock from B&S
    - 720.14.4.1 Lifter diameter to be .820" minimum to .860" maximum.
    - 720.14.4.2 Overall length of lifter to be 1.515" minimum to 1.525" maximum.
  - 720.14.5 ARC #6247 Billet Rod required. No modifications allowed.
  - 720.14.6 Inspect for unaltered Wiseco #4839 series piston or B&S Animal piston or Burris Animal BSA-202 series piston.
  - 720.14.7 Inspect for B&S Animal or Total Seal Rings
  - 720.14.8 Inspect for B&S wrist pin, part #499423.
  - 720.14.9 Crankcase cover must not be modified. PCV valve required on top, front oil fill hole. There must be a tube from PCV valve to catch tank.
- 720.15 Crankshaft must be stock as from B&S.
- 720.16 Block must be stock from Uncle Frank's with no alterations, except blocks may be repaired from Broken rod damage, providing that repair does not constitute a functional modification of original block. No welding is permitted from the cooling fins upward. The repair of one coil post is allowed as long as the remaining post is unaltered.
- 720.17 Chain guard/Clutch cover is required but may be other than supplied by Uncle Franks.
- 720.18 Only Pure Methanol is allowed. Additives of any type will not be permitted. Fuel is subject to Chemical analysis

**Blue Wazoom Claimer Rule:** There will be a \$750 claiming rule in place for this engine. (minus the clutch/chain guard/throttle kit, header pipe/muffler, air filter adaptor/air filter, top plate & fuel pump). Refusing to accept the claimer will result in immediate disqualification of competitor along with forfeiture of any points earned to date in class. Competitor will also not be allowed to compete any longer in that class for the remainder of the season. Claim rule will not be in effect on first TWO track point nights. Following second night, no driver may claim unless they competed at ALL previous weekly sanctioned track point events. Engine claim rule will not be in effect on season championship night. Exception is: If a driver is claimed at any weekly point event, he may claim at any following event at that track without needing perfect attendance. Driver can only claim one engine during current calendar year. Exception is after any driver has had more than one engine claimed, they are eligible to claim as many engines as they have had claimed. No driver may claim the same driver more than once during current calendar year. When claim rule is in effect, top three finishers must report directly to claim/tech area and are subject to claim by any eligible driver finishing fourth on back in feature that is scored on the lead lap. Driver making claim must drive immediately after feature, under own power, directly to claim area. Driver/Kart Owner must have correct amount of cash. Claim must be made to official immediately after feature. In case of multiple claims on same engine, drawing will be held to determine outcome. During any cash claim, all claimable items should be inspected for legality prior to transfer of items. If claimed item is found illegal, driver is disqualified. Claimer then has option to accept or decline claim. Additional penalties may apply, depending on infraction.

# RaceSaver Cage Karts



## Standard Restraint



Tab Approx. 1.5" x 2.5"

