

# CUP LITES SPEC. RACING DIVISION

## REVISED 2022 Rules and Regulations

Cup Lites, Southeastern Racing Division (herein after referred to as Cup Lite) is **designed as a high speed, low-cost, spec. racing division**. The only cars legal to race in this division will be those Cup Lite cars manufactured by Tim Bender Race Cars Inc. (herein after referred to as T.B.R.C.) that strictly conform to these rules. **To help keep the cost of racing as low as possible, to keep the emphasis on driver ability and make the division as competitive (equal) as possible**, the cars must be raced in their **stock condition** with absolutely **no alterations** or modifications to any part of the car except for the updates made by or Approved by Cup Lite official. Certain adjustments will be permitted but only as described in these rules. **Stock means "as manufactured by T.B.R.C., or specific part manufacture, unaltered!" IT IS THE DRIVER AND OR THE CAR OWNERS RESPONSIBILITY TO KNOW AND COMPLY WITH THE RULES OF THIS THIS RACING DIVISION AT ALL TIMES !!!**

**IF IT DOESN'T SPECIFICLY SAY THAT YOU CAN DO IT TO THE PART OR THE CAR, THEN YOU CAN'T DO IT!!!**

**DISCLAIMER:** Any and all persons taking part in the Cup Lite Division in any way agree and accept that this and all forms of automobile competition are dangerous and possible injuries and or death could result. Each person taking part in way assumes full responsibility for these risks and dangers of serious bodily injury, including permanent disability, paralysis and death at all times. No person taking part in the Cup Lite Division in any way, including the driver, car owners, crew members, officials and family members of the cup Lite Inc. Series or Division. Tim Bender Race Cars Inc., any dealers, sponsors, the speedway, the promoters, the series/division officials, the track officials or any officer or employee of any of these companies or groups regardless of negligence. Each person taking part in the Cup Lite Division in any way has the right to not take part or withdraw from competition if they are not willing to take these risks and personally assume the Responsibility for all the risks involved in Cup Lite Racing! All persons entering the pit area must sign the release waivers. If persons are under 18 years of age, their parent or legal guardian must also sign a special parental consent release form. At some tracks no one under the age of 16 will be allowed in the pits. (Local Track Rules apply).

## **Spirit of the Rules of Cup Lite Low- Cost Spec. Racing**

Within the “**Spirit of the Rule**” and the concept of Cup Lite Spec. Racing Division, these rules were designed to keep the competition as fair, and inexpensive, as possible—All this while Maintaining a first class, high-Quality, high-speed race car that is fun to drive and easy to maintain. To achieve these things – and in the name of safety, fair competition and cost control for all the competitors –the Cup Lite Division reserves the right to make alterations to these rules as needed. **All competitors, by entering in a Cup Lite event, agrees to abide by all the rules contained here, and their amendments; Agree to abide by the Cup Lite official’s decisions; and agree that those decisions are final.**

To help keep costs down, maintain high quality, and be able to meet supply demands, CUP LITE reserves the right to vary suppliers from year- to- year or production run to run, depending on price, availability and quality of supplier’s components or assemblies. To help keep cars equal and maintain quality, CUP LITE reserves the right to alter car configuration from year- to- year or production run-to-run, doing their best to keep cars equal as possible.

### **Cup Lite Car Regulations**

- The body’s approved for 2014 Cup Lite competition all must be manufactured by CUP LITE. and are as follows:
  - 1998/99 Chevrolet Monte Carlo
  - 1998/99 Ford Taurus
  - 2000/04 Pontiac Grand prix
  - 2000-04 Chevrolet Monte Carlo
  - 2000/04 Ford Taurus
  - 2001/04 Dodge Intrepid

- The approved fiberglass body must be used **COMPLETE AS SUPPLIED BY T.B.R.C. CUP LITE and cannot be altered in any way**, except for tire clearance, if more is needed, maximum of a 12" radius measured from the centered from the center of the axle at the legal ride height with the driver in the car. Body filler can be used to cover rivets and seams at the original joints of the body and only where the body had been repaired for damage. All dimensions, thickness, angles, corners radius and shapes of the original body must remain as manufactured, supplied and copyrighted by T.B.R.C. Competitors may repair body damage but cannot alter body dimensions, angles, corner radiuses and shapes from the stock Cup Lite body.

**The only body alterations allowed are those listed in the news bulletin 1/20/00.**

- **These Cup Lites bodies have been copyrighted with the United States Copyright Office 1997 Timothy R. Bender. Copying, duplication or reproduction of any of any Cup lite body parts is illegal and any persons doing so will be prosecuted! Any driver, car owner or crew member (together or separately) allowing their Cup Lites car body or any part of the entire Cup Lites race car to be copied, duplicated or reproduced will be banned from competition in the Cup Lites races or any related racing division and the Cup Lites car used for this duplication will not be legal for future Cup Lites racing.**
- Bodies cannot be offset on the chassis and rake or angle of body must remain stock.
- **NO streamlining (including the use of duct tape) of any body, chassis or other part of the car is permitted**
- Cars must be neatly painted and appearing. No primed, damaged cars, or cars with partial bodies, will be allowed unless authorized by Cup Lites officials. **Any immediate damage or repairs at track must be covered with coordinated duct tape to match the original paint.** All damage must be properly repaired before the next event.

**The front valance lower nose of the car cannot extend lower than 3.75" of ground clearance to the racetrack with the driver in the driver's seat. An adjustable, 1/8" plastic or thin aluminum front air dam strip, maximum 2" in height and full with of**

**car nose, can be fastened to lower front nose of the car and cannot extend lower than 3.75" of ground clearance to the track with the driver in the driver's seat. When measuring across the bottom corners of the front fenders in front of the front tires at the wheel opening, the maximum dimension allow is 62" centered from the frame.**

**The ground clearance from the car sides to race track with the driver in the car is a minimum of 3" LF, 3.5" LR, 4" RF, and 4.5" RR. A non-adjustable, 1/8" plastic or thin aluminum skirt strip, maximum 2" in height and the full length of the car side, can be riveted to lower car side and must conform to the clearance rule.**

- **The roof height shall be a minimum of 39" when measured at the top center of the windshield to the ground with the driver in the driver's seat.**
- A full windshield, both side ¼ windows and rear window, supplied by T.B.R.C., must be used at all times. Windows must be a minimum of 1/8" thick polycarbonate type material as originally supplied by T.B.R.C. Quarter windows may each have one single 7" long by 4" wide N.A.C.A. **INLET** duct with a maximum 2.5" diameter hose. The LH duct can be used to **directly** duct air to the clutches only. The RH or LH duct can be used to **directly** duct air to the Drivers compartment for drivers' comfort, or to the rear brakes only. **No air can be used to or toward the carburetors.**
- **Rear spoilers must be used as manufactured by T.B.R.C. and not altered and not altered for size, thickness or ANGLE and must be 50" wide and 4" tall when measured 90 degrees to the ground by the tech officials gauge.** The rear spoiler must be centered on the car and the deck lid must be flush down on the quarter panel's right and left. Rear deck lid must be in place and securely fastened before the car may enter onto the track.
- **The bottoms of the rear quarter panels behind the tires must be set inward of the car sides minimum 1", maximum 1.75" on each side.**

**The rear height of the car will be measured from the top of the rear spoiler down to the ground with the driver in the driver's seat and will be a minimum of 32" and a maximum 33.5". This will be at a point 20" right and left of the center line of the rear spoiler before and after the race.**

- **Front grill opening** must be covered with screen and all air must be directly ducted through the radiator with no baffles or aerodynamic devices of any kind. All the inlet air for the radiator must come through the grill opening. Grill openings must be the same size and shape as manufactured by T.B.R.C. for each brand of car.

The grill opening **CAN NOT** be taped off to regulate engine temperature, OR to change the aerodynamics of the car. The top of the grill area can be cut open to stock Cup Lites size and neatly covered with screen on outside for additional radiator cooling, if necessary. **If top grill area is open and not taped over, (THIS RULE DOES NOT APPLY TO THE CURRENT MANUFACTURED BODY DESIGN). NO taping or closing off of the bottom grill opening is permitted. If the car is equipped with an electric radiator fan, operating or not, the grill opening may not be closed off in any way, tape or otherwise.**

- The roof hatch must be securely in place and latched down while it's being operated, **at all times, including under caution or warm-up laps.**
- One clear N.A.C.A. duct or device for driver cooling only approved by Cup Lites officials can be added to **LH or RH side door open window** area mounted directly behind the "Pillar" to the top of the door sill. The N.A.C.A. duct must be mounted to, or part of, a piece of clear polycarbonate, and must be directly ducted to the driver or helmet and may have a cooling fan in line for driver only. **4ea 2 inch in diameter Holes may be drilled in lower portion of rear window just above rear deck lid, To let hot air out of drivers compartment ONLY.**
- Two holes can be cut in the removable speaker panel, one above the fuel filler and one above the radiator cap, for convenience to check or fill fluids. The hole must be covered with a hatch of the same material that is securely fastened to prevent fluids from entering the driver's compartment.

## **2. Identification and marking**

- All car numbers are subject to approval by Cup Lites officials. Only single or double-digit numbers will be permitted. Numbers must be neatly painted or vinyl graphics in easily legible block style form with a maximum lean of 30 degrees from vertical. Minimum size and locations are as follows:
  - Roof: 22" read from RH side of car.
  - Doors: 16" at the center of both doors.
  - Front: 4" in the RH headlight or bumper below the headlight area.
  - Rear: 4" in the RH tail light area.

### 3. Series / Division Reserved Advertising Areas

- The space in the center of the front bumper on the nose must bear the proper car for the approved body in 1.75" letters. Example: Monte Carlo, Taurus, Grand Prix, or Intrepid.

### 4. Competitors Advertising Areas

### 5. Approved Sponsors or Decals

### 6. Chassis

- The complete stock, unaltered, T.B.R.C. manufactured Cup Lites chassis must be used in its entirety with absolutely no modifications.
- Any chassis repairs must be done to bring the chassis back to original specs. As manufactured by T.B.R.C.
- All replacement bumpers, nerf bars, side bars and body mounts must be as manufactured and supplied by T.B.R.C. as Cup Lites legal parts. Competitors may make repairs to these bars, but not manufacture them or replace them with non-compliant T.B.R.C. part. **NO added supports or bracing allowed.**
- No external (Outside the body) side bars or nerf bars may be used.

### 7. Chassis Ground Clearance

**At all oval races the ground clearance to the chassis, with the driver in the driver's seat before and after each race, cannot be lower than 3" at LF and 3.3/8" at RF under the main frame at the frame rail kick up, and 3.1/2" at LR and 3.7/8" at RR at the rear lower nerf bar frame attachment bottom tubes, before and after each race.**

## 8. Overall Car Weight

**All cars must weight a minimum of 1225 lbs. for ovals and road courses as they exit the race track with the driver after ever race. After all time trial type qualifying, the weight minimum will be 1235 lbs. for ovals and 1225 lbs. for road courses. Nothing can be added to the car to make weight for tech inspection after each race or qualifying.**

- **All ballast** that is added to the cars must be in the form of lead painted white, (no tungsten), and have a car number marked on each piece. All ballast must be **securely bolted** in place with at least two 3/8" grade 5 bolts per ballast block in the designated ballast area to the ballast brackets to the left side and right side of the chassis between the roll cage vertical side and the driver's seat lower vertical side in the driver's compartment in a manner and form acceptable to Cup Lites officials.
- **The ballast must be divided equally from side to side, 50% to the LH side of the seat, plus or minus 10 lbs. That is, the weight to the left of the seat cannot be more than 10 lbs.** Greater than that on the right. (i.e. 25 lbs. total = 16.5 lbs. Left & 8.5 lbs. Right). All ballast must not extend under the seat or over side frame rail and can extend a maximum of 1.1/2" forward or rearward past angle ballast bracket locations. **Absolutely no ballast of any kind may be located anywhere else on the Cup Lites cars.** No weight shifting devices of any kind.

- **Engine**

**Engine and all of its related components, including the exhaust system, must be used, stock unaltered as manufactured by Yamaha / supplied by T.B.R.C. and mounted in an approved manner. Exhaust system cannot be spaced, coated, treated, wrapped or insulated in any way. Engine seals may be removed to facilitate engine rebuild. All engine parts and components (except exhaust system), must be factory Yamaha parts for 1997 Yamaha 700 Mountain Max. No aftermarket parts.** No coatings or treating of engine components in any way. No balancing or blue printing of any components. No machining, porting, or polishing. **Must be stock bore 70.5mm-2.756", and stroke 59.6mm- 2.323". No Big Bore Kits. Engine cranking compression (approx. 140 lbs.) The only approve cylinder (Jugs) will have 8CH00 and 8CH01 on the side of the Jug.**

- **The internal recoil starter cup must be removed.** The recoil starter assembly must also be removed.

- **Carburetors and reed valves** must be used as manufactured by Yamaha / supplied by T.B.R.C. Factory Yamaha for 1997 700 mountain max, completely unaltered. **The ONLY** jet that may be changed is the main jet and Only to the Cup Lites Series / Division specified main jet. For each specified race. Specified jets numbers are **#1 Cyl/pto 145.0 #2 Cyl middle 143.8 #3 Cyl stator 143.8** No Drilling, No Machining, Shimming, Spacing, altering or blocking passageways of any part of the carburetion system or parts in any way. The jet needle clip position and location of the needle clip spacers must remain stock. Any attempt by Anyone to alter the air or fuel flow of the stock carburetion in any way will result in penalties determined by Cup Lites officials. Throttle pedal may be altered to suit driver.
- Individual air filters must be used on each carburetor. Only three round foam "UNIFILTER" brand filters or K&N brand part number RU 2750 will be allowed. Air filters may be coated with oil only. Absolutely no power adding substances. All air must pass through the air filters un-pressurized in any way. No "Ram tubes" or funneling devices of any kind will be allowed. No air box, cool air inlet, ducting or directing air in any way toward the carburetors is allowed. A filter "Outer wear" (stock type material) may be used over the air filter.
- Any brand, single electrode, single ground strap-style spark plug approved by Cup Lites Officials may be used.
- The entire electrical system must be unaltered and used in its entirety as manufactured and supplied by T.B.R.C. wire harness may be wrapped with tape or run in plastic tubing to prevent damage. The IGNITION SYSTEM cannot be adjusted or altered in any way. The flywheel and its relationship to the entire engine cannot be altered in any way.
- The engine kill switch must be marked "**ON and OFF**". An additional engine kill switch or battery disconnect may be added and mounted within the driver's reach.
- **A 12-volt** battery must be used. It can be a maximum size of 8"L x 4" W x 6.5"H and a minimum size of 6.75"L x 3.5" W x 5.75"H and must fit safely and securely in stock unaltered battery box.



- **Gear and Chain System**

**Only gears supplied by T.B.R.C. will be legal and each track will have a specific gear rule. Unless posted otherwise, it will be 14/63 on all ovals 5/8 mile or less; 14/56 on all road courses.**

- Chains legal for Cup Lites will be any steel 520 size chain.
- The chain tensioner Lower Spring as manufactured by T.B.R.C. **may be replaced** with a single or a pair of springs connecting the upper and lower tensioner arms.

## **11. Transmission System**

- **The CVT, Continuously Variable Transmission, snowmobile system supplied only by T.B.R.C. must be used completely unaltered in any way, in its entirety. (except as noted) This will be checked.**

**Secondary clutch-** The **ONLY** Approved clutch is the **Team Roller style TSS-98 or TSS-04** Must be used in its stock form completely unaltered. Absolutely no machining, polishing, shimming or altering the secondary sheaves, surface, sheave angles, helix or altering the amount of overdrive the secondary clutch will achieve. Replacement buttons, bushings, rollers and all parts must be the same as supplied by T.B.R.C.

- **SPRING** - The **ONLY** approved spring is the **TEAM- (BLACK W/ RED STRIPE) (BLACK W BLUE STRIP) (RED W/ BLUE STRIP) (RED W GREEN STRIP)** spring permitted an initial variance of plus or minus 10%. No springs made of any other materials other than steel.
- **Helix – Team roller helix**, for **TSS-98** clutch is minimum of 36-degree ramp angle, and a maximum of 44-degree ramp angle. Must be stock production as supplied by T.B.R.C. Unaltered. No Custom grind helix or modified helix. Team roller helix for **TSS-04** clutch is 42 degrees/ 44-degree ramp angle part # LW 420453 and a 38-42 part # LW420562 or the old 36-38 straight Helix Unaltered. No other helix is legal.
- **Primary clutch-** The **ONLY** Approved clutch is the **Polaris P-85** Must be used in its stock form in its entirety, with no modifications. The (**ONLY** alteration allowed) is, the spider may have shims removed to adjust sheave to belt relationship, to account for wear on sheaves and belt. Minimum gap of .035”

**Absolutely NO machining or altering** the primary sheaves surfaces, or sheave angles. **NO altering** of the amount of overdrive primary clutch will archive. The stock rollers and bushings must be used unaltered. All components of the primary clutch must remain in their stock location configuration as supplied by T.B.R.C. (Except as specified in rules). Any attempt by anyone to alter the location or relationship of any component to the whole or modify any component. (Except as specified in rules).will result in serious penalties.

- **SPRING-** The only Approved spring is the **COMET- (SILVER)(PURPLE) (SILVER SILVER W/ RED STRIP)** Wire diameter .192, Length= 3 15/32, # of coils= 5.2, force rate @ 2 3/8"=85lbs. @ 1 1/8"=190lbs.Unaltered. Spring permitted an initial variance of plus or minus 10%. No spring made of any other materials other than steel.
- **Flyweights-** the **ONLY** Approved flyweight is the **Polaris 10-MB 47.5 gram or 10-M5 49.5 gram**. Must be used in their stock shape and weight as supplied by manufacture.
- The minimum clutch guard will be the one supplied with the car by T.B.R.C. If desired, the clutch guard can be made stronger, but no holes may be added. The only means of adding strength to the clutch guard will be adding rubber or Kevlar belting to the outside. Screening to keep the debris off the clutch or additional shielding of the belt from rain may be added but must not serve any other purpose, and must be approved by Cup Lites officials Additional shielding or clutch guard strengthening must not be adding any significant weight to the clutch guard or one side of the car.
- No air may be duct to clutches except one 2.5" diameter hose that is attached to the LH side 1/4 window 7"W x 4" W N.A.C.A. inlet duct.
- The only drive belt that can be used are the stock Yamaha belt, part #8DN-17641-01-00

## 12. Cooling System

- The radiator, hoses, lines and entire cooling system must be stock and unaltered as manufactured by T.B.R.C. No pumps may be added. An electric fan may have added and mounted to the radiator in a safe manner for additional cooling only when approved the Cup Lites officials. **If the car is equipped with**

**an electric radiator fan, operating or not, the grill opening may not be closed off in any way, tape or otherwise.**

- NO anti-freeze coolants to be used. Per track rules.
- **Radiator:** In the event of a radiator being damaged, the radiator can be repaired but must remain stock appearing and remain the same configuration, style, concept and dimensions as it was originally supplied by T.B.R.C. **Only Radiators approved are provided thru CUPLITE. No other radiator allowed.**
- **Absolutely NO cooling of engines, draining of coolant, exchanging of coolant or the use of any ice, dry ice, Freon, or any type of coolants of any kind before any qualifying or race event.**
- A securely fastened, unbreakable catch bottle or can must be added to the cooling system overflow hose.

### **13. Fasteners**

- All fasteners will be a minimum grade of what comes stock on the Cup Lites **cars.** NO self-tapping screws, wood screws, sheet metal screws or any fasteners that has a sharp point, when dislodged, becomes a hazard to a driver or any car.

### **14. Firewall**

- a. The original steel firewall must be in place at all times.
- Rear firewall may be insulated.

### **15. Suspension**

- All front and rear suspension components and mechanisms must be **Stock unaltered as manufactured by T.B.R.C. It is mandatory of all ovals, the right side and for road course both side LOWER OUTER BALL JOINTS be replaced with "Heavy Duty 5/8" Aircraft Grade Rod Ends" and a grade 5 bolt safety wired.** It is highly Recommended that these rod ends and bolts be replaced each season and/or after any major suspension or wheel impact. The only suspension components allowed to be replaced are the **Rod Ends** of the same size to a better grade of steel. **Shocks**, and **spring** on all four corners.

## 16. Shocks

- **Only QA1 Shocks (82 Series) (5 inch Stroke) approved, Only QA 1 parts allowed. No Other manufacture parts allowed. May be re-built and re-valved, NO internal or external Bump stops or Limiting of travel allowed. Shocks can and be mounted up or down. ( NO gas filled shocks)**

## 17. Springs

- Must be approved size, rate and color code as listed in rules. May be any brand. **Absolutely NO** altering. Different rate springs may use, but must be approved by Cup Lites officials and will be assigned a color and be added to below chart . All springs must be marked on outside with correct color code, that matches rate, lbs. Per Inch. or if approved, but not on color chart, will have lbs. rate marked on outside of spring for tech. No covers aloud.

The approved T.B.R.C. springs are as follows:

Rate, lbs., Per Inch	Color Code
75	Pink
90	White
105	Yellow
120	Black
135	Green
150	Blue
175	Gold
200	Orange
225	Silver
260	Purple

More springs may be added BY APPROVAL ONLY.

- All steering components and mechanisms must be stock and **unaltered as manufactured by T.B.R.C.** The only steering components allowed to be replaced will be the rod ends of the same size or be better grade of steel and an approved U-jointed and or telescoping steering column may be used. The maximum total thickness of tie washers allowed between the rod ends and the spindle arm or nut is .250". Tie rod end nylock nuts must be fully engaged and locktightened.

- Any approved racing steering wheel may be used. All steering wheels must be equipped with a center pad, a minimum of 2" thick 5.5" in diameter.
- **The suspension adjustment allowed will be only:**
  - Front suspension: caster, camber, spring preload, upper shock mount position (only to one of the 2 holes provided). RH and LH upper A-frames may be run in either chassis upper holes or lower holes provided.
  - Rear suspension: Axle alignment, upper link height (in one of the holes provided), panhard bar height (in one of the holes provided), upper shock mount position (in one of the holes provided) and spring preload.  
**Birdcages must be updated to T.B.R.C. wide style.**
  - **Front and rear track with measured at the outside of the widest part of the tire sidewall at the center of the axle height with the car on the ground at ride height with no driver and will be a minimum 60.75", maximum 61.25" on the front and minimum 60.75", maximum 61.25" on the rear.**
  - **There will be no offset in the front or rear suspension or axle +/- 1/4". All rear axle spacing and spacers must remain stock unaltered including length, amount and order of spacers. When measuring from inner rear tire sidewall to frame, it must be a minimum of 3.1/8" and a maximum of 3.3/8" with no driver in car before and after race. The wheel base front to rear must be minimum 80.1/4", maximum 81.1/4"**
- Rear axle and both rear hubs must remain locked together at all times.
- All lower spindle bolts must be red "locktighted" and safety wired.
- There will be no spacing of spindles or spacing behind bearings of any kind. There will be no spacing that alters the offset or track width in any way.
- The outer ends of the wheel studs may be chamfered. Any approved steel wheel stud and steel lug nut may be used.
- The only suspension alterations that are legal are T.B.R.C. or Cup Lites authorized up dates or modifications.

## 18. Wheels

- All wheels must be stock as manufactured by T.B.R.C. No altered, or damaged wheels permitted.
- No air bleed valves of any kind.
- Tires may be balanced but all wheel weights **must be stick on adhesive type fastened, NO hammer on weights.**

## 19. Tires

- **The only tires that can be used are part # 8.0/23.0-13 Hoosier Tires supplied by south Alabama speedway. Unaltered In anyway.**
- **Absolutely no softening of tires or chemically altering or treating of tires, ether externally or internally, in any way. This will be checked.**
- **QUALIFING TIRES: TIRES USED DURING QUALIFING MUST FIRST BE MARKED BY CUPLITE OR TRACK OFFICAL BEFORE QUALIFING. MARKED TIRES FOR THAT RACE MUST START THAT RACE, IF A MARKED TIRE IS DAMAGED (FLAT) AND CAN NOT START THAT RACE, A SPAR TIRE MUST BE PROPERLY MARKED BY CUPLITE OF TRACK OFFICAL BEFORE THE START OF THAT RACE OR THE CAR AND DRIVER WILL BE DISQUALIFIED. IF AFTER START OF THAT RACE, A TIRE IS DAMAGED (FLAT) IT MAY BE CHANGED WITH AN UNMARKED TIRE FOR THE DURATION OF THAT RACE.**
- **Only compressed air or nitrogen may be used in tires.**
- **Absolutely no cutting, grinding or altering the shape of the tires or wheels.**
- **No preheating of tires or wheels in any way before the car enters the track.**

## 20. Brakes

- Brakes and all related components must be stock as manufactured and supplied by T.B.R.C. No drilling of additional holes in brake rotors or elongating original holes.
- Any good quality racing brake fluid and brake pads can be used.

- The rear brake can be cooled by one single 7”L x 4”W. N.A.C.A. duct in the RH quarter window ducted **directly** to the brake **no aiming at or cooling the carburetor air in any way.**
- There will be no cooling of the front brakes.
- Brake bias front and rear can be adjusted by the adjustment supplied or adding a cable, dial, driver-adjustable adjuster.
- A Willwood 2psi Residual valve may be used installed in the front and rear brake system just after each master cylinder on the Cup Lites car.

## 21. Seats

- An aluminum full, deep bucket, high-back, full headrest seat must be used and approved by Cup Lites official.
- **The center line of the seat must be a minimum of 13.3/8” from the LH and 16.1/4” from the RH interior sheet metal vertical sides.**
- Cars must be equipped with approved RH and LH head support of ether padded 1/8” aluminum or net style construction.
- The use of leg supports attached to the seat is highly recommended.

## 22. Seat Belts and shoulder Harness

- A quick release lap belts no less than three (3) inches wide is mandatory. Both ends of the lap belt must be bolted to the frame with high quality bolts not less than 3/8” in diameter.
- Shoulder harness must be no less than three (3) inches wide (**may be HAANS Style harness**) and must come from behind the driver’s seat. The roll cage must prevent the harness from sliding side to side. Shoulder harness inertia reels may not be used.
- A center (crotch) belt must be securely mounted to lower seat frame at the bottom and to the seat belt on the top.
- Where the belts pass through the seat edges, seat must have a grommet installed, be rolled and / or padded to prevent cutting of the seat.
- All seat belts and shoulder harness must connect at the lap belt with an approved quick release buckle.
- **Seat belt must be dated by the manufacturer and must not be used beyond (2) years after the manufactured date. Beginning Race Season 2023.**

### **23. Window Nets**

- The window net must be used as supplied by T.B.R.C. and securely in place while car is on track always.

### **24. Fire Control**

- It is mandatory that each race car has, within driver's reach; built-in charged minimum 5 lbs. capacity fire extinguishing equipment. The fire extinguisher must be mounted securely in the approved location (LH side by the seat only) and manner.
- All entrants should have in their garage or pit area as part of their equipment, at all times, a fully charged 10 to 13 lbs dry chemical, halon or its equivalent fire extinguisher.
- It is recommended that at all times while the car is being refueled on a pit stop, or while the fuel is being transported to and from the pit area, all crewman involved should wear fire resistant suit, gloves, shoes and a head and face shield that effectively covers the body.

### **25. Roll Bar Padding**

- All roll bars and objects within the driver's reach must be sufficiently padded. It is up to each competitor to make sure that padding in their car is sufficient to protect them in a crash situation.
- The three roll bars directly within the driver's head are recommend to be padded with very high-density roll bar padding.

### **26. Mirrors**

- **(Optional)** All cars equipped with mirror(s) preferably made of a material other than glass. If glass is used, must be covered with clear vinyl to prevent broken glass dangers. Must be securely mounted. Mirrors cannot extend outside body.



## 27. Two-Way Radios

It is mandatory that each Cup Lites car has its own and separate spotter with an approved (by the Divisions Director) brand and model UHF two-way radio system communication with the driver of their car any time the car is on the track. A spotter may not spot for more than one car in each race. All teams must register all frequencies with the Cup Lites officials. Under no circumstances can the radios be used to communicate between two or more race cars or for blocking purposes. If it is determined by officials that a competitor(s) is doing so or abusing the radio privileges, that competitor(s) will be subject to penalties, fines or disqualification.

## 28. Scanners / Cup Lites frequency

- The Cup Lites / Track officials **Must** be able to convey information to each Cup Lites driver any time the car is on the race track and any time the car is involved in a race. It is each Cup Lites team's responsibility to have a spotter (that has radio communication to his driver) that has a working scanner with ear piece that is programmed to official track/ Cup Lites Officials frequency. This frequency must be monitored and understood by all team spotters any time the race car is on the track (including practice) and any time the car is involved in a race. The team spotter is responsible for monitoring the Cup Lites / Track frequency and must be in radio contact with the team's driver and be able to relay information to the driver when instructed by Cup Lites / Track officials to do so. Cup Lites / Track reserves the right to not let a car compete if the driver receives communication from the Cup Lites / Track officials until scanner and or radio communication has been restored.

## 29. Gauges

- The only gauges that are legal will be an analog water temp and an analog tach or a maximum of two displays in a digital tach / temp combination with a maximum of two temperature and tach functions with memory.
- A low water sensor and light may be used.
- Absolutely **NO** on-board computers, **NO** telemetry, **NO** sensing devices other than the tach and temp sensors described here.
- Non-computerized in car lap times are permitted.

### 30. Fuel and Oils

- **The only fuel that is legal are 97-99 Octane NON-Ethanol pump gas or Sunoco 110 racing fuel supplied by South Alabama Speedway or Approved by Cup Lites / Track Officials.** Absolutely no power increasing, no octane increasing and no oxygenating additives or any fuel of any fuel additives of any kind will be allowed. **No fuel will be legal with any alcohol content whatsoever.**
- **OIL** Any brand synthetic lubricant equal to Klotz Techniplate KL-215 or Klotz R-50 Racing Techniplate. Recommended 50:1 Ratio, **Absolutely NO power adding oils or additives will be allowed. Random fuel/oil samples will be taken and tested from time to time and violators of rules will be severely penalized.**
- **Absolutely no cooling of fuel at any time, in any way.**

### 31. Fuel Cell

- The larger (8 gal) T.B.R.C. supplied fuel cell is mandatory. The safety fuel cell, fuel pump and all related fuel system must be used in its entirety as supplied by T.B.R.C. unaltered.
- All fuel lines must be fire resistant. Steel braided lines may be used.
- A **Metal** fuel filter may be used in line between the fuel cell and the fuel pump. The maximum filter size 1.625" x 2.375".
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### 32. Set up Information Sharing

In an effort to help make the Cup Lites Division a **"DRIVING ABILITY DIVISION"** after each feature race while the top (3) cars are being inspected, a Cup Lites official will document the entire all the legal adjustments, setting, weights and tuning parts used on these cars. Later, this information will be made available upon request.

### 33. Replacement Parts

- The **Only** replacement parts allowed on the Cup Lites cars **not** manufactured and or supplied by T.B.R.C. but still have to meet these regulations are as follows:

Grill screen	Spark plugs
Engine kill switch	Suspension rod ends
12V battery	Brake fluid
Break Bias adjuster	Fire system
Seat	Head & leg supports
Tachometer	Water temperature gage
Fuel filter	Steering wheel
Fire wall insulation	Throttle control assembly
Brake pads	Tilting / Telescopic steering column

### 34. Driver Safety Equipment

- It is mandatory that all competitors wear a full faced, full-coverage racing helmet with eye protection and that all helmets meet the latest specifications set forth in the Federal Motor Vehicle Safety Regulations or meet the specifications set forth by the American National Standards Institute, Inc. A minimum of Snell rating of SA8 or better.
- **It is mandatory that all competitors wear either a "Horse Collar" type neck collar or a commercially available "Head and Neck Restraint System". It is highly recommended that driver's use the "Head and Neck Restraint System"** It is up to each competitor to make sure this will adequately support their head and helmet and sufficiently protects them injury in any crash.
- It is mandatory that at all times while operating a Cup Lites car all drivers wear a driving suit made of an approved fire resistant material that carries a SFI 3-SA/5 or higher rating, as well as fire retardant shoes and gloves and together they effectively cover entire body. The use of fire retardant long underwear, turtleneck, head sock, and foot socks are highly recommended. **It is each competitor's responsibility to make sure that he or she is adequately protected against all possible crash and fire situations.**

- It is highly recommended that all drivers wear arm restraints while competing in the Cup Lites cars.

### **Competitors Safety Requirements and Obligations**

- **The Cup Lites Series/Division, Cup Lites Series/ Division officials Tim Bender Race Cars Inc., Series/ Divisions sponsors, Race Promoters and agents or employees of these groups will NOT be responsible for the safety of the competitor's race car, equipment, the competitor's action before, during or after the event or the safety of a competitor himself, his crew or anyone at the race track.**
- **Competitors are obligated to inspect the race facility, the race track, their conditions, the track safety equipment, the firefighting equipment and the safety personnel. Any safety inadequacies, deficiencies or violations should be reported to Cup Lites Race Director immediately. Each person taking part in the Cup Lites Series/ Division has the right to not take part or withdraw from competition if they determine that any aspect of the of the Cup Lites Series/ Division, the race tracks or the Cup Lites cars, are unsafe and they are not willing to take the risks and assume full responsibility for all these risks involved in Cup Lites racing.**
- **Competitors are solely responsible for the safety of their race cars and their racing equipment. All Cup Lites drivers are obligated to operate their cars in a manner that will minimize the risks of injury to themselves and to others.**

### **Cup Lites Division Requirements**

- **General Responsibility:** Competitors are independent contractors, no employees of Cup Lites or of the speedways and assume full responsibility for any taxes or changes and any funds received from Cup Lites or the speedways.
- **Special Committees:** At the direction of the Cup Lites Division Director, **Special Committee(s)** may be formed to help to ensure fair and impartial treatment of all competitors and Cup Lites competitors. These committees may be called upon by the Division Director to determine the penalty(s) for a competitor who may have violated certain rules or procedures. It is the responsibility of Every Cup Lites Competitor who may be called upon to participate in a special Committee to do so responsibly, weigh the information provided and vote as fairly as possible for the

good of the Cup Lites Division as a whole The format for the meetings and voting will be laid out in a **Special Committee Format Supplement** to the rules.

- **Registration:** A car must be registered, all forms must be completely filled out, waivers signed and entry fees paid before a car may be practiced or raced. **Only one car can be registered and practiced for each car number and driver(s) earning points for that car. Once a car has entered the track for practice, all fees are non-refundable. (Local Track rules apply).**
- **Competitors in good standing:** All competitors, drivers, car owners and crew members associated with ant Cup Lites car **Must be in “good standing” (no money owed unpaid bills) with the Cup Lites Division, the race tracks, any series / division sponsors, to be allowed to compete at the discretion of the Cup Lites Race Director. Even if the car is sold to a different car owner, all money owed related to that serial # car must be paid in full before that car, driver, car owner or crew member individually or together will be allowed to compete.**
- **Knowledge of the rules:** Competitors are responsible to know policies, rules and regulations set forth herein and those which become effective during the season. Information contained in the Cup Lites rules updates become effective upon publication. All Cup Lites teams are responsible to be able to receive faxes, and email. All rule amendments, car updates, race schedule updates, starting times as well as any other important information will be distributed by fax machine or email. Drivers assume full responsibility for the car and conduct of the pit crew, family members, and sponsors and shall be the sole spokesman thereof.
- **DISCLAIMER:** Any and all persons taking part in the Series/ Division in any way agree and accept that this and all forms of automobile competition are dangerous and possible injuries and or death could result and each person taking part in any way assumes full responsibility for these risks and dangers of serious bodily injury, including permanent disability, paralysis and death at all times. No person taking part in the Cup Lites in any way including drivers, car owners, crew members officials, and family’s members of the aforementioned will have any claim for expense or damages against the Cup Lites Inc. Series/ Division, Tim Bender Race Cars Inc., any dealers sponsors, the speedways, the promoters, the divisions officials, the track officials or any officer or employee of any of these companies or groups regardless of negligence. Each person taking part in the Cup Lites Series/ Division in any

**way has the right to not take part or withdraw from competition if they are not willing to take these risks and assume full Responsibility for these risks involved in Cup Lites racing! All persons entering Pit Area must sign the release Waivers. Local Track rules apply.**

- **Competitor Accident policy: (Local track rules apply).**
- **Program:** The program consists of qualifying and feature events. The Cup Lites and local track officials will determine the number of events which constitute a complete program.
- **Participation:** Competing cars shall be inspected by Cup Lites or track officials. **Such inspection does not deem a car safe and free from defects.** No expressed or implied warranty of safety shall result from publication of or compliance with these rules. Anyone may inspect the race car course. By participating, you deem the race course acceptable for competition and accept full responsibility.
- **Pit Area:** When driving a Cup Lites race car through the pit area, the speed limit will be 5 mph. Any cars operated at unsafe speed higher than 5 mph. or driving in a dangerous manner in pit area may be penalized, disqualified or fined. (And or local track rules apply).
- **Conduct:** All Cup Lites competitors and members shall wear presentable attire. All competitors are subject to proper conduct. No crew members will be allowed near track. No performance of an act or participation in action deemed by officials to be detrimental to auto racing. No fighting or instigating abuse of officials or vulgarity will be tolerated. **Any race team member instigating, threatening or participating in physical or verbal abuse of Cup Lites officials or other race team members or using vulgarity toward Cup Lites officials, committee members, other race team members or anyone else will be penalized.** Entering a pit area of another competitor **or entering the Cup Lites Area in a hostile manner** after an incident, an official ruling or any time is deemed instigating. Cup Lites officials or applicable committee will determine the severity of the penalties of those involved. **Penalties may be, but are not limited to: monetary fines, suspension for one or more races, and disqualification from an event(s).**
- **Drugs & Alcohol:** Mandatory suspension of a competitor using drugs at any time or intoxicating beverages before entering race premises or while in attendance until last event is completed. All competitors must consent to drug or alcohol testing at discretion of the Cup Lites officials or applicable committee. Any driver, owner, or crew member violating this rule will result in disqualification of the car and loss of purse and points for program. And or local track rules apply.

- **Decisions:** All of the decisions concerning score keeping, suspensions, disqualifications, fines, and the interpretation of the rules by Cup Lites Division Director, Cup Lites and or track officials or applicable committee are non-protest able, non-litigable, are final and considered binding to all parties involved.
  
- a. **Inspections:** The Cup Lites Division Official reserves the right to inspect any part of, or any complete Cup Lites race car for safety damages, or rule conformity at any time before, during, or after any race event without any restrictions whatsoever. “ In the spirit of the rule” and to preserve the intent of the Cup Lites division to keep cars equal and ‘the playing field as level as possible” Cars that visibly look to the cup Lites officials to have a competitive advantage will be singled out and inspected before, during, and after any event without any restrictions whatsoever. All competitors’ cars must be available for inspection before each event and after each race event
  
- **Immediately after each feature race, the top (3) finishing cars must report directly to the Winners circle. Then immediately report to the designated Cup Lites inspection area. At which time No one other than the driver and the Cup Lite Officials will be allow at the car. (This also means no assistance by anyone other than Cup Lite Officials. pushing the car on the scales). The (4th) place car will be standing by in the Tech Area. During Inspection only the driver and one designated crew member will be allowed within (6) feet of the car(s) being inspected. During inspection the driver and the designated crew member will cooperate with the Cup Lites officials. As directed to the tear down procedure required. Each race team will provide their own tools, jack stands, and jack that are needed for the required inspection. Failure to comply any with any part of the inspection process will result in possible disciplinary action, and forfeiting of all monies and points earned that race, and possible further disciplinary action by the Cup Lites and or track officials or applicable committee.**
  
- **The Cup Lites Officials reserves the right to impound any Cup Lites car, engine, or parts for further detailed inspection as deemed necessary by Cup Lites officials.**

**The Cup Lites Division Official / Director has the right to confiscate any parts and or equipment which fails to meet applicable Cup Lites rules and or specifications during inspections before, after or during any event and will do so. If Cup Lites officials determine parts and equipment is in violation of a technical rule, the illegal parts will be impounded and become property of the Cup Lites Division and Cup Lites**

**officials or applicable committee will take whatever action deemed appropriate toward the offending competitor and to further interests of fair competition and finality in competition results. Such action includes but is not limited to, revising race results, imposing penalties (disqualifications, suspension, or fines), awarding or subtracting points or taking no action. All decisions of the Cup Lites Division Director or applicable committee are non-protectable, non-appealable, non-litigable, and are final.**

- **Protest:** A registered Cup Lites competitor competing at an event who believes that another competitor has a significant unfair advantage by some action or device that the competitor believes is in violation of the Cup Lites rules may file a protest to cup Lites officials. **The protest must be made in writing by the competitor to Cup Lites officials within 10 minutes after the checkered flag is displayed signifying the completion of the race event. Each separate protest must be accompanied by a \$250.00 cash protest fee.** The Cup Lites official division Director will determine whether the matter is protestable or not. If the Cup Lites Division Director determines that the matter is not protestable, the matter and decision are non-appealable, non-litigable, is final and the fee would be refunded.

If it is determined that the matter is protestable and it is a non-equipment related violation, the Cup Lites Division Director and or applicable committee will decide the protest as quickly as possible and shall inform parties involved in the protest of decision.

If it is determined that the matter is protestable and the protest is for an equipment-related technical rule violation, the protesting car will remain impounded in the Cup Lites area. The protesting competitor's car will also be subjected to inspection at the discretion of the Cup Lites division Director. **The protested car's driver will designate one qualified crew member will provide tools, jack stands, and jack. Driver and crew member will cooperate and perform with the Cup Lites officials directed tear down procedure.** Failure to do so will result in an automatic disqualification and the forfeiture of all money and points earned that race, possible point loss from previous races and possible disciplinary action by the Cup Lites officials or applicable committee for future events. If Cup Lites Officials determine an equipment technical rule violation was committed, the illegal parts will be impounded and become property of Cup Lites Division. The protesting competitor would be refunded his \$250.00 back, and the Cup Lites Division would retain whole or in part any prize money the rule violating competitor may have received. If the Cup Lites officials determine that the protested car is not in violation of the rules, the protesting party will forfeit the protested fee and \$250.00 of the protest fee will be given to the protested car owner and \$100.00 will go to the Cup Lite Division. In deciding the protest, the Cup Lites officials or applicable



committee may take whatever action deemed appropriate to further interests of fair competition and finality imposing penalties (disqualifications, suspensions, or fines), awarding or subtracting points or taking no action. **All decisions of the Cup Lites Division Director or applicable committee are non-appealable, non-litigable and are final.**

### **CUP LITES ENGINE TECH SPECS**

**Head thickness is measured with a dial Vernier caliper from the bottom of the head gasket surface to the top of the head next to the nut on the stud at approximately 3 o'clock on cylinder #3 and should be 1.353" to 1.357".**

**Cylinder height and base and head gasket heights are all checked in one measurement by using a dial Vernier caliper and measuring from the base gasket surface of the crank case to the bottom gasket surface of the head and should be 3.575" to 3.585".**

**The head to piston measurement can be checked with a Vernier caliper with the spark plug removed from the gasket surface of the spark plug down through the spark plug hole to the rear of the hole to the piston top at TDC (rotate the crank 360 degrees) and should be 1.275" to 1.305".**

**The ignition timing (flywheel orientation) can be checked by installing a screw in dial indicator in the spark plug hole, zeroing the dial at IDC, and rotate the crank backwards and at .090" to .105". The back edge of the raised area timing tab of the flywheel should be even with the back edge of the cast in timing tab on the crank case.**

**The ignition timing can also be checked by making sure the ignition pick up is in the stock location and no modification.**

**White Stock fiberglass reeds in the carburetor are the only reeds acceptable.**

**Engine measurement**

**Top of Head to Bottom of Head is 1.353 to 1.357**

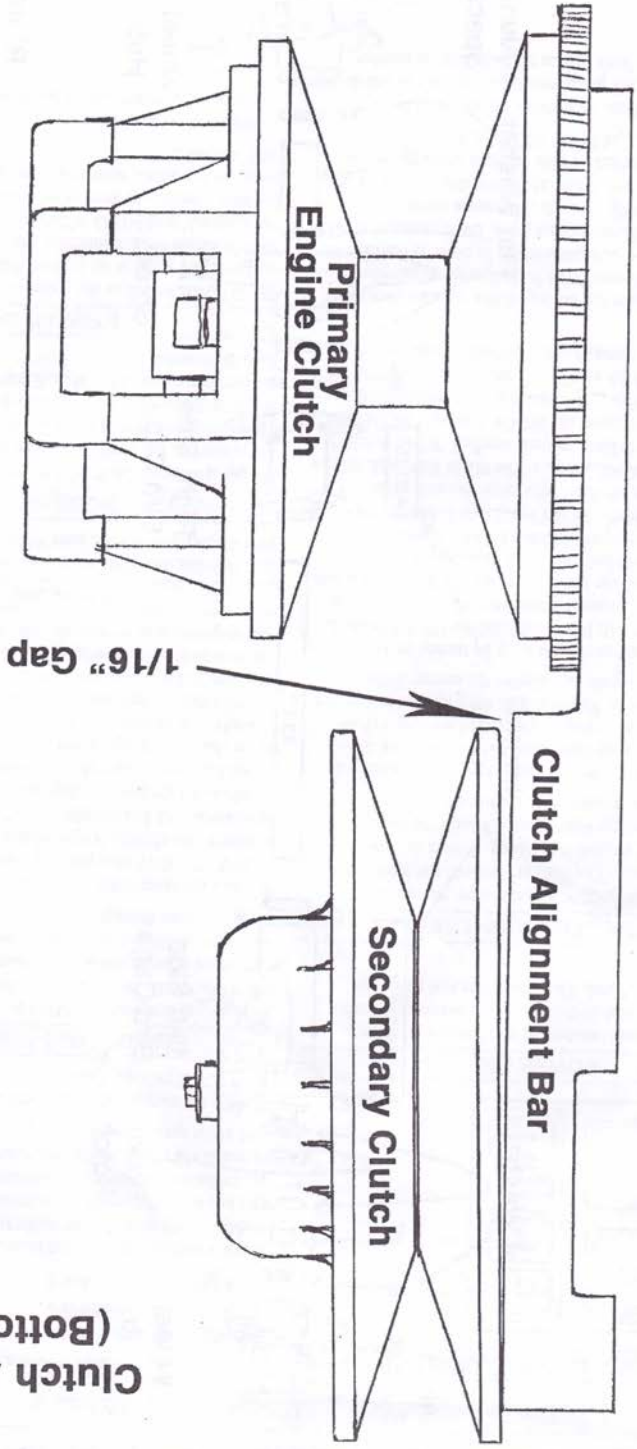
**Bottom of head to Crank Housing is 3.575 to 3.585**

**Piston at TDC is 1.275 to 1.305**

**Rotate crank 360 degrees to Check TDC**



REAR ↑



Clutch Alignment  
(Bottom View)

# CUP LITES REAR AXLE ASSEMBLY

(Viewed from Rear)

