

HISTORIC BOLIVAR SPEEDWAY

2020 BABY GRAND RULES

RULE BOOK DISCLAIMER:

The rules and/ or regulations set forth herein are designed to provide the orderly conduct of racing events and to establish minimum acceptance requirements for such auto racing events. These rules shall govern the condition of all events, and by participating in these events, all participants are deemed to have complied with these rules.

NO EXPRESS OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM PUBLICATION OF, OR COMPLIANCE WITH THESE RULES AND / OR REGULATIONS.

These rules and regulations are intended as a guide for the conduct of auto racing at South Sound Speedway and are in no way a guarantee against injury, or death to a participant, spectator, officials, or others.

The Race Director and/or Technical Director shall be empowered to permit minor deviation from any of the specifications or rules herein, or impose any further restrictions that, in their opinion, do not alter the minimum acceptable requirements.

NO EXPRESS OR IMPLIED WARRANTY OF SAFETY SHALL RESULT FROM SUCH ALTERATION OF THESE SPECIFICATIONS OR RULES.

Any interpretation of, or deviation from these specifications or rules is left to the discretion of the Race Director and/or Technical Officials. Their decision will be final.

1. COMPETING MODELS:

(A) CHASSIS REQUIREMENTS: All cars participating must be a complete car manufactured by BABY GRAND MFG. Inc. with the original decal serial number and/or MMRA plate intact. The serial number panel is located on the main frame rail below the door bars. If this plate has been tampered with or altered, the car will be considered an illegal, non-numbered car, until owner receives a legitimate plate from Bartley Racing Enterprises. Modifications to the main frame, floor pan, roll cage, pickup points, or shock mounts will not be permitted unless a letter has been issued from the PNS authorizing the upgrades, or unless specific changes are allowed elsewhere in the rules, modifications for R1 engine ok. Brackets, plates, or bars may be welded to the chassis for mounting weights, fire bottle, second battery tray, or seat belt mounts. A skid plate may be installed to protect the oil pan. This skid plate cannot be wider than the main frame rails, and cannot extend beyond the front or rear of the engine.

It is legal to add a window vent post under the right-side halo. This support bar is not mandatory, but allowed. If added, the part must be made of 1 1/2" .095" mild steel tubing. It must be welded into place in a position that is similar to the existing vent post on the Driver's side of the car. Minimum weight 1500lbs.

2. BODIES:

(A) Only fiberglass bodies and replacement panels manufactured to BABY GRAND MANUFACTURING dimensions. No "Homemade Bodies" allowed. No modifications to body shape are allowed. On old style bodies, only one cowl opening (directly in front of windshield) is allowed in the centerline of body, with maximum dimensions of 2 1/8" X 13 1/8". Stock opening on new style bodies is legal. No other openings may be made in new style bodies other than the ones outlined by the factory.

(B) Stock roof hatch on new body style is approved. For older bodies, a roof hatch may be installed over the driver's seat. The hatch must be hinged on the end towards the front of the car. A mechanical latch must be installed to hold the lid in the closed position any time the car is being operated. Velcro latches are not allowed. The latch must be operational from inside and outside of the car. Maximum opening size cannot exceed 24" x 24".

(C) The Driver's side window may be enlarged to accommodate larger drivers by the following method; the 1/4" square tubing may be removed from the top door bar. The fiberglass window ledge can be cut and lowered to the top door bar. The fiberglass window ledge must be repaired and re-fiber glassed to body to original appearance. In addition to the top of the door height to roof dimension described above, an additional modification is allowed. You may also modify the lower part of the "A" post for visibility. The fiberglass may be cut out and replaced with Lexan of the same shape pop riveted in with no less than 6, 3/16" pop rivets.

(D) The driver's side port window may be made into an opening by the following method; begin cutting the fiberglass at the window ledge, trimming underneath the port window and follow the shape of the port window back to the top of the side window opening. The back end of this opening must be securely hinged to the body and fasteners must be used to keep the window from opening during racing.

(E) The fiberglass body must be firmly attached to the Car during any Event. Bodies damaged during an Event may be repaired to finish that weekend of racing. If a body is damaged, it can continue to race with pieces missing, however, it may be Black Flagged by an Official if it poses a safety hazard. If a body is damaged, it must be repaired and repainted before the next race unless it is a double header weekend and time does not permit repair.

(F) A Lexan window is required in the front, rear, and port windows on both sides of the car at the beginning of an Event, with a minimum thickness of 1/8". Any car that loses a front windshield during an Event must replace it in order to continue racing. If rear or port windows are damaged or missing after an Event has begun, the car may finish that Event if the Official declares it poses no safety hazard. No holes are allowed in any windows, except for those mentioned in Section 12.9

(G) Windows cannot be installed in the driver's side window opening or right-side window opening.

(H) Three 2-inch round holes may be cut in the rear window of the car to allow air to escape from the driver compartment. Testing has shown that the maximum cooling benefit is derived from locating the holes 3 ½ from the top edge of the window.

(I) Additional air dams, spoilers, or other aerodynamic devices not sold by BABY GRAND MFG. are not permitted. External hood scoops or louvers are not permitted, except that an air Scoop not exceeding 13 ⅛ inches wide by 2 ⅛ inches long, by 1 inch tall, may be added to the rectangular hole in the cowl at the base of the windshield. A. You will be allowed to Change But NO LARGER than a 3" HOLE!!! The rectangle 13 ⅛ " x 2 ⅛ " opening below the windshield may be modified to accommodate a 3" fan on the driver's side only. The rest of the opening length and width must remain within the rule. The fan and opening must cover only the 3 & 4 cylinder of the engine. More pics to follow!

(J) Belly Pans, other than the original floor pan and engine skid plate, are not allowed.

(K) An adjustable flat trim strip may be added to the bottom of the front air dam. This trim strip must be mounted around bottom perimeter of air dam with fasteners, no more than 6" apart. The trim strip may be adjusted to desired height. Tape is allowed around edges of hood during Qualifying and Feature Race.

(L) The Manufacturer's original air intake opening on old style bodies only may be enlarged to a maximum opening size of 6 inches tall and 19 1/2 inches wide. A maximum of two new air intakes, in addition to the Manufacturer's original air intake on old style bodies only, may be made in the front air dam. These additional openings may be made on either side of the original Manufacturer's screened intake in front center of car. If two additional intakes are made, one must be placed on each side of Manufacturer's original air intake, and mounted flush with body. New openings cannot be more than 30 square inches per intake. One or more hole(s) is allowed per intake. No other holes are allowed in the body, other than those made by Manufacturer, and those allowed in other sections of these Rules. Air can be directed to any part of the car except carburetors. Ducting or other devices may be added to cool driver. Air intake receptacles are also allowed in the port windows and/or the window vent post area, only. All air intakes must be flush mounted.

(M) The rear spoiler manufactured by Baby Grand Inc. can be used as supplied from the Manufacturer, without any alterations. Spoiler angle must be between 45 and 70 degrees (These angles do not apply to the Stock Original Plastic Baby Grand Spoiler unless there has been alterations made.) Spoiler braces are allowed to maintain proper spoiler angle and no other use. ADD: We will allow a Lexan Spoiler with Braces and Dimensions cannot exceed the 41 ¾" L X 5" H based off the Aluminum MMRA Stamped spoiler. So, if you run a Lexan spoiler and it is a 2 piece that includes the space between the 2 Lexan Pieces.

(N) Hinges and pin kits required. Roof opening must be hinged in front only. Positive latches that can be opened from inside and outside body required. Hood and trunk must be held shut with positive pin fasteners-one (1) on each side or fastened in a manner acceptable to official(s).

3. SUSPENSION:

(A) All working suspension must be in facsimile to what is intended to be ran on Baby Grand/Pro National cars. Spindles may not be altered or changed. Adjustable Ball Joints ok, NO BUMP STOPS of any kind. Maximum tread width outside of tires measured with toe plates is 56". Wheel Base must be between 76-76.5". Minimum ride height 2.5". The maximum left side weight is 57% with Driver. Any FJ powered Car that Weighs Over 1575 LBS is exempt from the 57% Left Side weight but not to exceed 60% Left side weight. Every driver will adhere to the track scales. R1 powered cars add 50lbs.

(B) WHEELS: Maximum 7" steel wheels permitted. Must be approved for Circle Track, Bassett, Aero, etc. No remanufactured or homemade wheels. No bead lock wheels permitted or extreme beads. No Offset rule max 1" of wheel spacers per corner.

(C) TIRES: American Racer BG 52 tires only.

(D) BRAKES: The car must have four-disc brakes that are operational at all times. Brake lines cannot be plugged or disabled. Only steel rotors issued from the Manufacturer are allowed. Rotors cannot be drilled or grooved. Any type of brake pad may be used. Ducting may be installed to cool brakes

4. ENGINE AND TRANSMISSION:

The only approved engines that can be used in Baby Grands are the Yamaha FJ1200, XJR1200, or XJR1300 and R1 with or without the replacement water cooled cylinders. There are a few changes allowed to a stock engine, which will make maintenance easier and provide longevity to your engine. No changes are allowed unless specified in the following rules.

Engine specifications for the FJ1200, XJR1200, or XJR1300 engines are as follows; Stock Yamaha or aftermarket pistons are allowed. Machine cutting of the dome to achieve correct compression is the only allowed change to aftermarket pistons. Gas porting of the pistons is allowed. Any brand of rings may be used. Only stock Yamaha rods with no modifications can be used. The stock Yamaha rods for a 1200 or 1300 may be used for either engine application. Aftermarket rod bolts may be used. Cylinders can be decked. Changing crank stroke is not allowed. Dry film lubricants or powder coat finishes cannot be applied to internal engine parts. Lightening of the crankshaft is prohibited. Damaged journals may be repaired and reground, but lightening of crank throws is not allowed. A 1200 engine may be converted to a 1300 (1250 cc max.) engine by the following methods;

A. Changing cylinders. -or- B. Changing sleeves to the maximum 79mm or 3.114" bore.

XJR1300: The Yamaha XJR1300 engine cannot exceed 1250 cc. Cylinder bore cannot exceed 79 mm or 3.114".

The cranking compression of any of the four cylinders cannot exceed 180 P.S.I., hot or cold, after not more than 10 cranking revolutions. The compression ratio may not exceed 10.2:1 under any circumstances, including but not limited to, carbon build-up. A minimum of 296.97cc

per cylinder must be maintained. Procedure for calculation of cc's per cylinder are as follows:
 $\text{bore} \times \text{bore} \times .7854 \times 2.51 \times 16.387 = \text{per cylinder cc.}$

No modifications are allowed to the heads, except for the following: Heads may be decked, but additional base gaskets may be needed to obtain correct compression. A 5-angle valve job is allowed. Valve seats and guides may be replaced as needed. Shortening of valve guides is prohibited. Cylinder port modifications are prohibited, including, but not limited to, porting and polishing. Combustion chambers may be matched and cc balanced in accordance with specifications in section 14.3. A relief cut may be added to the combustion chamber, which must not exceed bore size. This will allow for a damaged combustion chamber to be repaired.

Stock Yamaha valves meeting stock Yamaha shape and size must be used. Heavier valve springs are allowed, but original Yamaha valve spring retainers and clips must be used. Valve spring shimming is allowed. Titanium parts are prohibited. Valves must meet the following specifications:

HEAD DIAMETER: Intake 1.138" MIN./1.146" MAX. Exhaust 0.980" MIN./0.988" MAX. STEM OUTSIDE DIAMETER: Intake 0.2156" MIN./0.2161" MAX. Exhaust 0.2150" MIN./0.2155" MAX.

Stock Yamaha camshafts or steel billet camshafts meeting stock Yamaha specifications may be used. The cams cannot be altered from stock specifications, including but not limited to, alterations to cam profile, lift, or duration. If a cam does not meet the profile below and PGNS officials determine that the only reason is excessive wear on a formerly legal cam, the cam will pass tech for that race only and the driver will be instructed to have a new cam installed for the next event.

CAMSHAFT SPECIFICATIONS: 1. LOBE HEIGHT: Intake: 1.411" MIN./ 1.419" MAX. Exhaust: 1.411" MIN./ 1.419" MAX. 2. LOBE WIDTH: Intake: 1.101" MIN./ 1.116" MAX. Exhaust: 1.101" MIN./ 1.116" MAX. 3. INTAKE CAM PROFILE: MAX. LIFT 315 +/- .002" MAX. DURATION 233 +/- 1 DEGREE 4. EXHAUST CAM PROFILE: MAX. LIFT 313 +/- .002" MAX. DURATION 232 +/- 1 DEGREE

Camshaft sprockets may be slotted for degreasing, or aftermarket cam gears may be used. Plastic cam chain tensioner may be replaced with metal. The head may be drilled for the addition of cam oiling kits.

All cars must have mufflers installed which reduce noise. Mufflers must be used to comply with local noise level guidelines. An opening may be cut in the right side of the body for an exhaust exit. The opening cannot exceed 3" tall and 8" long for a rectangular opening or 4" in diameter for a round opening. Exhaust may also exit at the rear of car, under the body, not extending further than rear bumper. The tail pipe cannot extend beyond body.

For water cooled engines – all major components of the system including the water pump, radiator, and cylinders must remain stock unaltered. No aftermarket parts or modifications to the system will be allowed.

Only stock Mikuni carburetors are allowed. It is illegal to bore carburetors or modify any internal part in any manner. No polishing or grinding is allowed. No ducting or baffling can be installed to improve air intake to carburetors. Allowed modifications are: Jetting kits with any jets, except jetting systems that can be manually adjusted without removing jets. Float bowls may be changed to accept a jet change bowl nut; Air cleaners may be changed to preference. The intake manifold cannot be modified in any manner.

Each car may use the stock Yamaha or Dyna coils and any aftermarket plug wires. A factory stock Yamaha Igniter, Dyna 2000, Red iNex Dyno Box or a Vance and Hines model #20500 with adjustable rev limiter is allowed. Relocation of igniter is permitted. A backup igniter is

allowed. Aftermarket pickup coils and pointer coils are allowed. Modifications to the igniters are prohibited.

Alternator must be fully operational and transferring current to battery at all times. Switches or other devices intended to disrupt or reduce the flow of electricity to the battery are illegal. If alternator is not fully operational at post race tech inspection, regardless of illegal devices, damage, dysfunction, or disrepair, the car will be disqualified.

The starter must be fully operational at the time a Driver enters an Event. If the starter is damaged during an Event, the car may continue, but must be repaired before the next Event.

An aftermarket clutch or pressure plate may be used. An additional pressure plate may be used. Kevlar clutch plates are allowed. Clutch must be operational when entering an Event.

There MUST BE a Master Kill Switch on the Right-Hand Side of the car that when Used will Terminate ALL Electrical Current when Used and must be Visible to Track Officials!! The Switch Must be Red and available for Track Officials to Use if Necessary!! If the battery is located in the tunnel, it must be mounted behind the point of contact with nerf bar and main chassis rail. One battery must be installed in the car and fully connected to electrical system while racing. A maximum of two batteries is allowed in the car. Gel cell batteries are allowed. Remote quick-charge terminals are allowed. Only 12-volt batteries are allowed; 16-volt batteries are prohibited.

Different styles or brands of oil coolers may be used. The oil coolers and their ducts may be relocated or modified, but must be confined to the engine compartment or the tunnel area on right side of the car. Remote oil filters may be used. Fans may be added for additional engine cooling. A deep well oil pan and pickup extension may be used. All cars must be equipped with a vented oil catch bottle, which is connected to the breather tube of the surge tank.

All breather lines must run above the engine to the back of the car into a tank – not an open catch can. An oilcan with the top cut off is unacceptable. If a car is using the new vented loop system, no line to the rear is required. No dry sump oil systems allowed.

4B. R1 Engines:

All R1 engines will have a maximum compression of 215lbs per cylinder. Must use factory rated injectors. Must use Factory ECM. Must use all stock internal parts in R1 engines.

5. SAFETY:

(A) FUEL CELL:

1. The use of a commercially manufactured fuel cell is mandatory. The maximum capacity, including filler spout and overflow vent check valves is 5 gallons. Overflow check valves are required. The fuel cell vent must exit out of the trunk area on the left rear side of the car. No materials other than standard foam supplied by the fuel cell manufacturer are permitted to make the fuel cell meet the 5-gallon capacity.

2. Fuel cell container is required. **The fuel cell must be enclosed in a container of not less than 22-gauge steel.**

3. Fuel cell and fuel cell container must be fastened to the frame in a recessed frame support as far forward in the trunk area and at an equal distance between the frame rails.

4. Fuel cell and the fuel cell container must be secured with 1"x1" x .065 steel tubing. Not less than two (2) lengthwise, and two (2) crosswise, and two (2) across the top, evenly spaced at the top and must bolt to container support frame. The support frame must have two (2) tubes that are welded to and extend between the left and right frame rails. Three (3) tubes must be

evenly spaced across the recessed well (front to rear). These tubes must be welded to the cross-support tubes and extend down the front side, rear side, and under the fuel cell container. If the fuel cell container has a bolt-on top, it must be bolted together with a minimum of 1/4" diameter bolts spaced a maximum of 4" apart. If the fuel cell container has a bolt in end panel, it must be fastened together with a minimum 10/32" diameter screws with nuts spaced a maximum of 4" apart. No sheet metal screws or pop rivets are to be used to secure to top or end panel of a fuel cell.

5. A protective bar, minimum 1 3/4" x .090 must extend below the rear frame section behind the fuel cell. This protective bar must be as wide at the rear frame rails and extend as low as the bottom of the cell with two (2) vertical uprights evenly spaced between the frame rails and attached to the rear cross member. Two (2) support bars; one (1) located on each corner must angle upwards and be welded to the rear frame rails.

6. A reinforcement plate, of not less than 14-gauge (0.078) inch thick magnetic flat steel, must be installed behind the fuel cell container. The plate must extend the entire width and height of the fuel cell container. The plate must be welded in the spaces between the rear cross member and/or the cross bracing at the rear of the rear sub frame. It must be welded with a 1" weld, spaced a maximum of 4" apart.

7. All fuel lines that run through the Drivers compartment must be encased in metal pipe or conduit and wrapped with red tape and labeled fuel line for the safety crew. Fuel lines under the car must be safely secured away from exhaust and moving parts in metal casing.

8. No exotic and/or fuel additives allowed. Fuel will comply with ASTM D4814, Standard Specification for Automotive Spark Ignition Fuel. No electric fuel pumps, no fuel cooling devices, no NOS, no Oxygen bearing agents, no Nitro, no HRB-11.

(B) SEATS:

Only approved, custom manufactured, aluminum seats are permitted, Minimum .090 thickness required. It is recommended that all seats have padded rib protectors and seat leg extensions on both sides. A padded headrest is mandatory. Seat must be mounted to the roll cage, not the floor pan. A minimum of four (4) Grade 8, 1/2" bolts, and flat washers must be used.

(C) BELTS:

A quick release lap belt no less than 3" wide is required. Both ends of the lap belt and both ends of the shoulder harness must be fastened to the roll bar with Grade 8 bolts not less than 1/2" in diameter. The shoulder harness and lap belts must be bolted so that the ends of the belts move freely. Shoulder harness must be no less than 3" wide and must come from behind driver's seat max 3" below the driver's shoulders or less than 10 degrees'. Where the harness crosses the roll cage, it must pass through a steel guide welded to the cage that will prevent the harness from sliding side to side. Shoulder harness inertia reels cannot be used. A center (crotch) or submarine belt must be mounted to the lower seat frame at the bottom. Where the belt passes through the seat edges, it must have a grommet installed, be rolled and/or padded to prevent cutting. All seat belts and shoulder harnesses must connect at the lap belt with an approved quick release buckle. Seat belts must be dated by the manufacturer and must not be used beyond five (5) years after the manufacture date. If a HANS device is being used, then the HANS style seat belts may be used.

(D) HELMETS:

It will be mandatory for **ALL** Drivers to wear a helmet carrying a valid, orange SA2010 or newer, standard Snell sticker, or a sfi 31.1 rating at all times while on the racing surface. **NO** motorcycle helmets and **NO** "M" Snell sticker helmets. Helmets must accompany the car at time

of all inspections. **It is strongly recommended that all Drivers record blood type and RH factor, plus any major medical allergies to adhesive tape label to outside back of helmet.**

(E) CLOTHING:

Drivers must wear an approved Nomex or Proban driving suit at all times when the car is on the track. Driving suits must effectively cover entire body and meet a minimum sfi 3.2A/1 rating. It is strongly recommended that the Drivers wear Nomex underwear, headgear, socks, gloves and shoes made of fire resistant material.

(F) WINDOW NET:

A nylon window screen is mandatory; the window screen must be a rib type, made from 3/4" wide nylon material with a maximum of 1-3/4" square opening between the ribs. The minimum window screen size shall be 22" wide by 16" high. It must release from top with seat belt type latches, and it must be fastened to the roll cage top bar and highest Drivers door bar on the cage. All window net mounts must be welded to the roll cage.

(G) FIRE EXTINGUISHER:

It is mandatory to have a Dry charged 2-1/2 lb. minimum, with quick release fire extinguisher. This fire extinguisher must be securely mounted to the frame and/or roll cage structure and must not use hose clamps, worm drive clamps, duct tape, or cable ties. It may NOT be taped to the roll cage. Must be fully charged. The gauge must be easily visible for the Technical Official to read. Recommended on-board fire extinguisher system.

It is mandatory that all entrants have in their pits, at all times, a fully charged 10 lb. Class B fire extinguisher, showing current inspection certificate and a visible operating pressure gauge.

6. GENERAL RULES:

(A) An ON/OFF ignition switch will be installed within reach of the driver when belted in the car. The on/off switch will be clearly marked. A MASTER on/off switch must be located on the roll bar directly behind the driver and accessible from the outside and must kill power to the entire car.

(B) Car must have securely fastened working muffler with exhaust exiting behind the driver. Maximum sound level is 95 decibels at 100 Feet. Will be strictly enforced.

(C) Ballast weight may be used. Must be painted white with the car number on it. Minimum ballast 5 lbs. Ballast must be securely fastened with 3/8 or larger bolts.

(D) Battery may be relocated to inside of the car, but not in the trunk area. Battery must be isolated from fuel lines, must be enclosed in a protective container, and must be securely fastened to the floorboard. One battery permitted per car.

(E) Electric fuel pumps allowed, must use oil pressure shut off switch.

(F) Baby Grand cars must be registered by South Sound Speedway and will be assigned a number. **Call SHELLEY CHASE AT 360-870-1046 for number.** Last years numbers will be reserved until the January registration meeting, at which time the numbers will be given out on a first come, first serve basis. Numbers are to be displayed on the car as follows: A minimum 24" high by 3" wide number is required on both door areas. A Minimum 30" high by 3" wide number is required on the roof of the car readable from the right side of the car. All cars must have a 5" number on the top right-hand corner of the windshield and/or right head light cover. All numbers must be legible with paint schemes approved by South Sound Speedway. Sponsors names and lettering must not interfere with the car numbers. **No Metallic or reflective numbers are allowed. They must be able to be seen at night across the track.** South Sound Speedway

retains the right to approve commercial or editorial messages on competing cars. Suggestive or rude remarks are not permitted on cars.

(G) Rainout Policy: **NO CASH REFUNDS WILL BE GIVEN.** If ANY car takes the track for practice, there will be only a half rain check given. Full rain check only if cars have not taken the track.

(H) ALL RULES ARE SUBJECT TO INTERPRETATION OF THE TRACK OFFICIALS, ANY EQUIPMENT THAT THE OFFICIALS CONSIDER EXOTIC OR NOT IN THE INTENT OF THE RULES WILL BE CONSIDERED ILLEGAL FOR COMPETITION. IN THE INTEREST OF FAIRNESS, THE RULES MAY BE ADJUSTED TO CREATE A BALANCE IN COMPETITION OR FOR SAFETY REASONS.

7. NOTES AND AMENDMENTS: