



## 2023 Junior Sprint Rules (6.5 HP)

### Ages - up to 13 years old

1. **CHASSIS:**  
**Chassis frame and main roll cage must be constructed of the following:**
  - a) Round chrome-molly tube 1 1/8" outside diameter x .083 wall minimum.
  - b) Seamless round D.O.M. tubing 1 1/8" x .090 wall thickness minimum.
  - c) Wheel base 40" minimum, 48" maximum
  - d) Overall chassis length cannot exceed 100"
  - e) Maximum rear width measured outside to outside of tires 52".
  - f) The roll cage must be a minimum height of 38" to a maximum of 44". And a minimum pipe size of 1" DOM 090 wall. Measured from bottom of frame rail to top of roll cage.
  - g) The top of driver's helmet must be completely below the bottom of horizontal roll cage bars.
  - h) Roll cage must be welded to chassis all four up rights and front up right bar located within 34" - 36" from centerline of rear axle
  - i) No suspension parts allowed. Suspension parts include the use of shocks, springs torsion bars, coil covers, compressible / expandable devices that exceed 1/2" of travel.
  - j) Driver's head must not be outside of the main roll cage at any point.
  - k) Chassis must have foot protection
  - l) QRC Chassis allowed (under development 2022) using Little Middleton Box Stock rules (Restrictors and weight may be utilized by GBS)
2. **SIDE BARS:**
  - a) All sidebars must be constructed of a minimum of 3/4" dia o.d. x .065 wall mild steel round tubing.
  - b) Right side must have at least one side bar mounted 19" - 21" above the bottom frame rail.
  - c) Left side must have three parallel bars, the top bar to be mounted 19" - 21" above the bottom frame rail and have the lower bar mounted parallel, maximum of 7" (inside dimension) below the upper bar and so on (check diagram)
  - d) A vertical bar must be mounted diagonally between the upper side bar and the top roll cage bar.
  - e) The attachment point of the vertical bar to the upper side bar will be 10" - 16" in front of the rear cage upright.
  - f) The attachment point of the vertical bar to the top of the roll cage bar will be 5" - 9" in front of the rear cage upright.
  - g) 3 Left side door bars must have a minimum of two vertical door bars, being a minimum 3/4" dia x .065 wall steel tubing with a minimum spacing of 7".
  - h) Distance from highest point of left nerf bar to lower side bar is maximum of 7".
  - i) All sidebars are to be constructed and mounted to provide maximum driver protection. Bars may be welded, coupled, coupled and pinned. And there must be a removable or pinned roof bar above driver's head. MANDATORY
3. **STEERING:**
  - 1) **Steering Shaft Specifications:**
    - a) Solid minimum .625 (5/8") diameter cold rolled steel.
    - b) Hollow minimum .750 (3/4") x .070 wall d.o.m. tube.
    - c) Steering shaft must be one piece with no extensions.
    - d) Quick release mechanism is mandatory.

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e) No loose-fitting quick releases will be allowed.

**3) Rack & Pinion:**

a) Rack & Pinion steering boxes not allowed.

**4) Steering Bolts:**

a) All steering bolts and nuts must be drilled and cotter keyed or safely wired.

**Note: Any fastener (nut or bolt, etc.) of a component that would enable movement of or adjustment of spindles such as caster, camber, etc., must be drilled and utilize either a cotter pin or safety wire.**

4.

**FRONT BUMPERS:**

- Front bumper must be constructed of minimum 3/4" dia o.d. x .065 wall steel tube.
- Must be located inside of front tires.
- The upper hoop must be a minimum of 5" and a maximum 8" above the ground.
- The upper hoop must be supported by at least 2 vertical bars in the front portion of the bumper by 3/4" x .065 wall or larger round steel tubing.
- **Note:** No weights mounted to front bumper

5.

**REAR BUMPERS:**

- Rear bumper must be constructed of minimum 3/4" dia o.d. x .065 wall steel tubing. Maximum 1" o.d. steel tubing.
- Rear bumper must be constructed with 2 horizontal bars with a minimum of 2 vertical bars.
- The horizontal bars must be a minimum of 5" and a maximum 7" overall apart.  
Minimum height - no lower than top of frame rail. Maximum width - no wider than roll cage uprights with a 12" up right push bar at back.
- Rear wheel protection bars may be mounted to the rear bumper. May not exceed outside of rear tires.

6.

**NERF BARS:**

- Nerf bars are mandatory on both sides of car.
- Nerf bars are to be constructed of mild steel tubing with a minimum of 3/4" diameter o.d. x .065 wall and a maximum 1" d.
- Nerf bars shall be a minimum of 23" in length measured from backside of nerf bar closest to rear tire in a straight line to where it attaches to front of car.
- Nerf bars to have a minimum overall height of 5" at the highest point and a maximum height of 7 W'.
- Nerf bars must not extend outside of rear tires.

7.

**FLOOR PAN:**

- The car shall have a floor pan under or on top the frame rail covering a minimum area from front frame rail to front of drivers' seat constructed with 22g Alum. riveted or bolted in or 3/16" Alum. Plate bolted in only. A floor under the drivers' seat (of no less than .100 steel plate or .125 aluminum plate) **Can Be Bolted in or a roll bar welded under driver seat. MANDATORY.**

8.

**FUEL TANKS & FUEL LINES:**

- Fuel tank to have minimum capacity of four quarts.
- Fuel tanks may be constructed of aluminum or approved plastic and have secure leak-proof fill cap.
- Fuel tanks must be located in rear tail section of car and be securely attached.
- No cool cans or other fuel conditioning components.
- Fuel lines to be short as possible.
- Fuel lines max. 3/8" or 1.0. Or -4 braided.
- Fuel lines must be clamped at all connecting points.  
Fuel lines from tank to the fuel pump must have protective covering to prevent a cut. Fuel line coverings must meet technical approval. Steel braided line is recommended.
- All cars must have a mandatory fuel shut off valve and must be located over the right-side rear bearing hanger bracket and must be easily accessible.

9.

**DRIVELINE COMPONENTS / CLUTCH:**

- Dry type engine mounted clutch is mandatory.
- No transmission gear box or other device which permits a change of gear
- Sprocket ratio while vehicle is in motion is allowed. Torque converters are not allowed.
- **No disc type clutches allowed.**
- No direct drives allowed.
- Crankshaft extension no more than 7".

10.

**CHAIN GUARDS:**

- A chain guard designed to retain a broken chain from reaching the driver is mandatory.
- Chain guard must curve 120° around clutch and extend to rear of car to cover sprocket.
- Chain guard must be constructed of steel or aluminum. (No plastic or lightning holes allowed).
- No automatic chain lubricators allowed.

11.

**BRAKES:**

- Only hydraulic brakes allowed. (No scrub or band type brakes allowed).
- All brake systems must be in good working condition.
- All master cylinder & caliper bolts must be cotter pinned for safety.

12.

**REAR AXLE:**

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13. **FRONT AXLE & SPINDLES:**
- All cars must run steel axle 1 ¼" o.d. x 48" Max allowed (no alum. Or titanium) **No ceramic bearings**
  - Must use cotter pins or safety clips to prevent axle & spindle nuts from coming off. If a front axle is used it must be a one-piece axle mounted directly to the frame. Spindle size is ¾".
  - Two-piece front axles are allowed and must have locking collars to prevent axle from moving out.
  - The use of rod ends or heim joints will not be allowed to be incorporated into either a one or two-piece axle.
  - **Spindle tethers are mandatory.** No clip on or electrical connectors.
  - One-piece spindle only.
  - No Threaded spindles  
Designs not covered by the above must be approved prior to racing
14. **SEAT & HEAD SUPPORTS:**
- High back aluminum seat is mandatory. **Head and neck restraints HANNS NEX-JEN or ZAMP MAMDITORY for 2018**
  - Seat must be bolted in 4 places with minimum 5/6" diameter bolts.
  - **All cars must have right and left head supports attached to the seat.**
  - **Head supports must be made of aluminum and have a padded cover.**
  - Head supports must be mounted to provide maximum driver safety.
  - **These head supports are mandatory and roll bar padding on all bars hands & feet can touch.**
15. **SEAT BELTS:** Cars must have a 5-point safety harness.
- Harness cannot be cut or worn in any place. Any belts in question will not be allowed.
  - Any belts mounted in an unsafe manner will not be allowed.
  - **Belts must be 3 years old or newer with tag visible.**
16. **WEIGHT / BOLT IN WEIGHT:**
- **Jr. " division cars must have a minimum weight with driver of 375 lbs.**
  - Any removable weight must be fastened with 2 bolts and be double nipped.
  - **Any removable weight cannot be bolted to nerf bars, front and/or rear bumper or in front of front axle or behind rear axle.**
  - Any removable weight must be painted white with your car number on it.
  - Any car found to be illegal shall be immediately disqualified, and the next finisher shall be called to the scales.
17. **MIRRORS:**
- No mirrors will be allowed.
  - Two-way radios allowed
18. **TIRES / WHEELS / HUBS:**
- A tire brand and compound may be specified. Slick type tires only. (No re-caps allowed). HOOSIER
  - No grooving of tires allowed. 5" or 6" wheels only.
  - No bead locking devices allowed. No screws allowed.
  - No discs allowed.
  - No clip-on wheel weights allowed.
  - **Both rear hubs must be locked to axle no floater hubs allowed.**
  - Wheels must be made of aluminum and be an approved racing rim.  
(Example: Douglas, Van K, etc.) and shall have an approximate minimum thickness, 5" rim should have 1/4" wall thickness.
19. **WINGS:**
20. **All cars may use a box stock size wings (center 32" x 35" Left board 40" long 20" high, Right board 40" long 14" high. Must be within +/- 2 inches) Measurements include any lip on the side panels. Only 1 bend is allowed. Lips cannot exceed 1 inch.**
- All cars must run a side panel wing only with a maximum size of 10 ½ " high x 32" long and a minimum of 10" x 32".
  - Wing panels must be mounted on both sides of car. Wing panels must be made of aluminum.
  - Wing panels must be clamped to roll cage. (No tie wraps allowed)
21. **BODY:**
- A full midget / sprint type open wheel body is mandatory.
  - Body consists of nose and tail section fiberglass or alum -22ga.
  - Body components must be located within area defined by vertical inner surface of tires, except side body panels may be located upon the inside vertical plane formed by nerf bars.
  - No cars will be allowed on track without body in place.
  - Side body panels are subject to technical inspection.
  - Any cars not meeting these guidelines will be asked to make the necessary changes by the technical official.
  - **Officials** reserves the right to refuse competition to any car not meeting or following these guidelines.
22. **NUMBERS / LETTERING:**
- It is mandatory for cars to have professionally painted / decaled legible numbers of contrasting color.
  - Numbers must be located in each of the following locations.
  - Front of hood - Minimum height 6".

- Tail section both sides - Minimum height 9" • Wing both sides - Minimum height 8".
- All cars must be kept neat in appearance.
- Numbers must be easy to read for scoring purposes.

23. **APPEARANCE:**

- Chassis, bumpers, nerf bars, bodies, etc., must be painted, plated or finished in a professional manner. (Any cars in question will be at the discretion of the tech department.)

24. **MOTOR:**

- Honda GX200 6.5 HP motor is mandatory (Specs to follow).
- Must be located on right side of car.
- **NEW ROOKIES will run a restrictor plate if officials feel there not ready**

**GX200 Motor Specifications:**

1. Absolutely no porting, polishing, de-burring or machining allowed. (Motors are stock)
2. Governor mechanism may be removed.
3. Decompressor mechanism may be removed.
4. Block may be bored to three over-sizes available from Honda .25mm, .50mm, and .75mm.
5. Piston dish must be a minimum of .050".
6. Piston must be a minimum of .030" below deck.
7. Stock Honda rings must be used and installed properly.
8. Any ring gap allowed.
9. Stroke shall be 54mm or 2.130" maximum.
10. Stock or .010" undersize rods allowed.
11. Stock air cleaner only. PAPER TYPE ONLY(stock filter and pre-filter must be used)
12. Stock ignition system only.
13. Spark Plug – optional
14. Stock valves and keepers and rockers 6.5 hp., stellite ex allowed.
15. Valves may be refaced but not excessively.
16. Any valve spring permitted.
17. **6.5 carb only stock jet and emulsion tube allowed only max jet size allowed 82. NO MODIFIED CARBS.**
18. **Minimum head cc is 19.**
19. 3 Angle valve jobs allowed.
20. Cylinder head thickness from deck surface to valve cover surface **is 2.910" minimum.**
21. Head gasket is steel shim approximately .010".
22. Any flywheel air gap allowed.
23. Stock X200 flywheel and locating key.
24. 140/160 flywheels not allowed. No cutting fan vanes
25. **Carb throttle bore .753" maximum.**
26. **Carb venturi .579" no go.**
27. No grinding and/or machining of carburetor allowed.
28. Any vacuum operated fuel pump allowed.
29. Any camshaft timing allowed.
30. No metal may be removed or added to camshaft.
31. Cam Lobe height intake 1.087" Minimum - 1.093" Maximum. / Cam Lobe height exhausts 1.089" Minimum - 1.095" Maximum.
32. Maximum lift at valve intake .245. Maximum lift at exhaust intake .260.
33. Camshaft may not have lobe separation angle changed from stock.
34. FUEL Any pump fuel only, **NO straight Alcohol or Methanol allowed.** NOTE: some pump fuel contains 8%alcohol is ok
35. Crankcase Oil: Engine lubricating crankcase oil may be checked by the technical inspector reserves the right to conduct oil sampling and testing at any time and by any method.
36. Crankcase Oil Type: It is mandatory that each competitor use 4-cycle engine lubricating oil that conforms to SAE or API standards with additives. A sample bottle of oil shall be provided to the technical inspector upon request.
37. **Header pipe 1" OD only is permitted for a minimum of 20" after that 1 5/16" OD to muffler maximum over-all length of 28" measured on the outside of the pipe bend with muffler.**
38. **All cars must run a R L V part # 4104 Model # B91-XL approved muffler only.** Muffler must be unmodified. The pipe must enter the muffler by a minimum of 2" if clamped. Also, complete pipe available from KART WORKS R L V Part #5438C that's with Flange 1" OD pipe expanded to 1 5/16 OD to fit muffler RLV # 4104 with clamp pt # 4144 which is approved for use.
39. If the muffler is clamped onto the header pipe it must also have a MINIMUM of two tack welds holding the muffler to the pipe.
  - All cars must have a marked kill switch accessible to driver and safety crew.
  - Any part in question may be confiscated. .
40. Head vent tube may not return to motor.

**Note:**

- All engines must be properly assembled in accordance with Honda shop manuals.
- Ex. - Piston arrow to bottom of cylinder valve guides in stock location.

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- All parts may be compared with a known stock Honda part to verify their originality.
- Seals may only be done by Keith Marshman or Dave McAdams.and Ryan Custer.
- **Seals, crankcase, head bolts** if any question on seals or motor parts will be seized for testing.
- One-piece spindles only. No threaded in spindles.
- **Spindle tethers are mandatory.**
- **AFTERMARKET PISTON ROD allowed PT # GX 200 ARC –ROD#6270**
- **MAX Horse Power for these motor with stock parts are “TBD”**
- **Little Middleton Box Stock QRC type cars must follow engine rules as in their rulebook.**

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