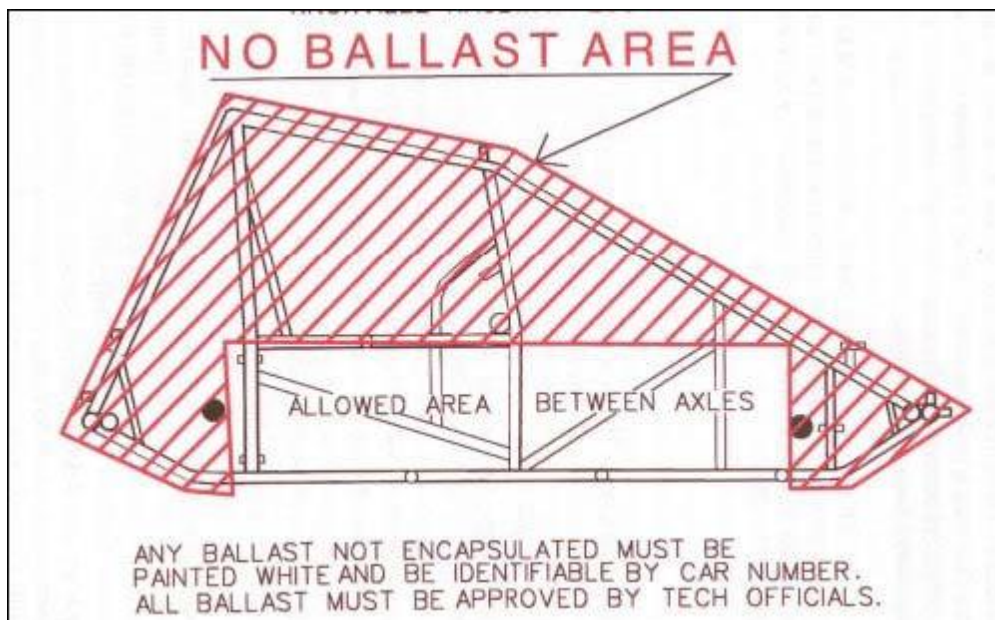


## **2018 CASTROL SPORTSMAN SPRINTS RULES**

**November 1, 2017**

1. **ROLL CAGE** – Roll cage must be constructed from 4130 condition N seamless steel tubing, top rails min. 1.5” outside diameter x .095” wall. Bottom rails 1.5” outside diameter x .083” wall or 1.375” outside diameter x .095” wall, upper rails and uprights 1.375” outside diameter x .083” wall. Side and Halo bars recommended. Required rear end protection bar under rear of seat.
2. **FRAMES & COMPONENTS** – No aluminum frames, 4130 construction only. No titanium products, parts or components allowed anywhere on the race car. No gun-drilled, tubular or hollow bolts or studs allowed anywhere on car. Minimum wheelbase of 84 inches.
3. **STEERING WHEEL** – Steering wheel must be quick disconnect (no pip pins).
4. **KNEE GUARDS** – Knee guards are mandatory.
5. **SEAT** – Must be a full containment aluminum ONLY high back seat. The Hans or equivalent device is mandatory. The technical staff will determine if the seat installation and structure are safe & sound for competition)
6. **BUMPERS** – Steel rear bumpers and nerf bars (rub rails) are mandatory. Front bumper may be aluminum or steel.
7. **SAFETY** – A five or six point SFI 16.1 competition shoulder harness with lap belt and sub-strap are mandatory. Working arm restraints are mandatory. Seat belts recommended being not more than one year old but must be dated within two years. Fire retardant gloves, shoes, socks, balaclava or (helmets with fire retardant liners) are mandatory . A racing suit with minimum rating of SFI 3.2 A/5 is mandatory. Fire retardant underwear is highly recommended. Helmets are required and must be Snell full face SA2010 minimum. Head and Neck restraint systems are mandatory and must be SFI accredited systems only. (Hans, Z-Tech, NecksGen and the Hybrid Series are SFI compliant) Carbon fiber helmets are allowed. Helmets & drivers suit must be worn at all times when the car is on the track or during startup. Rock screens are mandatory. Drive shaft must be fully enclosed by torque tube. The torque tube must be drilled for inspection of the steel drive shaft. Safety hoop must be attached to the chassis below the forward edge of the seat around the torque tube. Drag link tether strap mandatory.
8. **ELECTRONICS** –Memory Tachometer, Race Transponder mandatory (You may own your transponder AMB X260 or rent one from the track), Race radio is mandatory and video camera are the only electronic devices allowed on or within the car. No traction control of any kind.
9. **MIRRORS** – No mirrors allowed.
10. **FUEL SYSTEM** – (A) A racing fuel cell with bladder is required. Check valve required. Fuel shut off valve recommended at fuel cell outlet. (B) Alcohol or ethanol fuels ONLY.
11. **MUFFLERS** . Mufflers are required at Castrol Raceway, maximum 100 DBA at 100 ft.
12. **WEIGHT JACKS** – No in-cockpit adjustable torsion bars or weight jacks allowed.

13. **WEIGHT** –Weight Rule: Weight rule is 1600 lbs minimum, including the driver, at the conclusion of the race. Any bolt-on weight must be painted white and the car number must be on the weight. Loss of any bolt-on weight during competition will disqualify the individual from the event. Bolt-on weight can only be added in the areas designated in the accompanying diagram. The weight must be securely attached and must remain in place during a race. It must not be moved or removed during a red flag situation. We reserve the right to disqualify any individual whose weight mounting procedure does not meet our specifications. (see illustration)



14. **TIRES AND WHEELS** –RR tire required is the Hoosier medium 105.0/16.0-15 at a durameter reading of 40 minimum. All other tires may be of any brand (Goodyear, Hoosier, American Racer, etc). (C) Wheels – No plastic or carbon fiber wheels, bead locks are mandatory on RR outboard minimum.

15. **SUSPENSION** – No cockpit adjustable shock absorbers allowed. Left rear adjustable shocks are allowed. No adjustable shocks or remote canister allowed on the Front and RR of the car.

16. **BRAKES** – Minimum LF and rear inboard workable brakes. No carbon fiber brake components allowed.

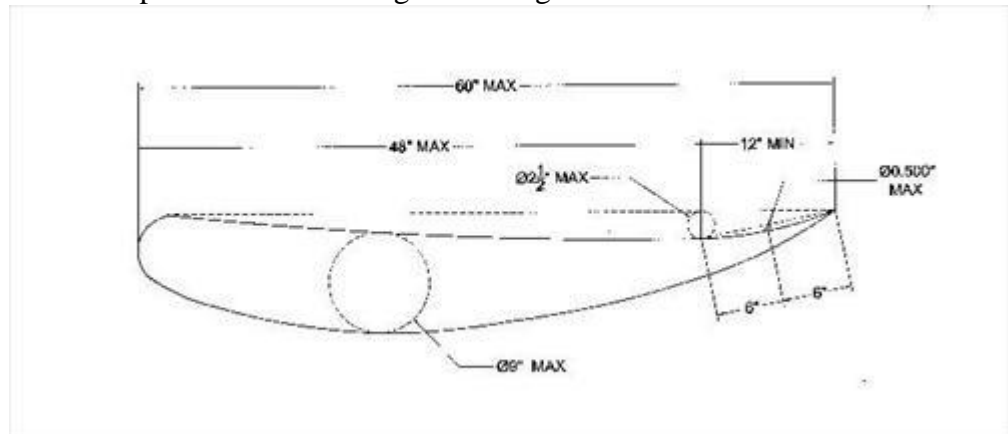
17. **BODIES** – Must be of “sprint car” design. Full-length hood is recommended. No carbon fiber body panels allowed.

18. **DRIVELINE** – In - out box, slider driveline, shifter rear end or Bert Sprint transmission required or approved driveline.

## 19. WINGS

Cockpit adjustable wing sliders allowed.

**A.** Top wing mandatory, maximum of 25 square feet. Maximum center foil width 60 inches. The deepest point allowed in the top surface of the wing will be 2 ½ inches. No Wicker Bills or Gurney Lips allowed on center foil. The 12 inch section located at the rear of the center foil must not have the belly/curl arc out of proportion with the rest of the center foil. Belly/curl arc must span the entire length of the center foil and appear to be a gradual arc with the deepest point no further back than 48 inches from the leading edge. The belly/curl arc must start at the center foil's leading edge and shall not exceed a depth of 2 ½ inches. Top surface of the wing measuring crosswise must be flat.



### **B. Flat Top Wing**

A maximum 1" removable wicker bill may be mounted on the rear edge of the center foil. Wicker bill must be 90 degrees to the top of the center foil. Same size as the top wing in "19 A" section

**C.** The side panel maximum is 72" long by 30" wide. Side panels attached to the wing must be fabricated flat at 90 degrees, as to have no turnouts or flaps made of more than two inches of material on the front or rear panel and no more than 1 ¼ inches on the top or bottom sideboard. All top and front wings must be fabricated of metal alloys only. No fiberglass, carbon fiber or other similar materials may be used in the basic framework (center foil and side panel) of the wing.

**D.** Center foil must be one piece. No split wings or bi-wings. Top wings must not extend beyond outside of rear tires.

**E.** Nose wing optional, if used maximum (6) square feet. The front wing may not be cockpit or driver adjustable.

**F.** Wing caps, plastic allowed. No carbon fiber.

**G.** No rudders anywhere on the wing

**H.** Center foil must be square to side boards. Side boards must be parallel

20. **ENGINE** – No turbo or superchargers allowed. Any General Motors, Ford, or Chrysler steel block push rod V-8 automotive engine.

**A. BLOCK, CRANKSHAFT and RODS** – Engine must have a stock steel OEM block, Dart #31161111, World #084010, GM #10066034 or GM #12480047 no lightening

anywhere on the block. General Motors and Ford limited to maximum displacement of 360 CID + or -1%. Chrysler limited to maximum of 364 CID. Maximum bore allowed is 0.060" over stock. Crankshaft and connecting rods must be steel. Stock type after-market crankshafts are allowed. No modifications to crankshaft counterweights allowed except for balancing purposes. (No knife edging). No pendulum cut counterweights (no scalloping). No stroker crankshaft (example: Cannot start with a 302 Ford to make a 351). Ford must be 351W or 351C. Crankshaft stroke: Chev 3.48 or 3.50. Ford 3.5. Dodge 3.58. Crankshaft weight for Chevy 47 lbs minimum. Highly recommended that all engine block frost plugs be pinned, screwed or tack welded. No titanium components allowed anywhere in the engine. No GM LS style engine.

**B. CYLINDER HEADS** – Cast iron cylinder heads only. No billet heads. No CNC porting. All cylinder heads and valve angles must remain within 1 degree of the original manufacturing (example: Chevy valve angle is 23 degrees, no other than 23 degree valve angle heads are allowed for Chevy motors). After-market heads allowed. Angle milling prohibited. Heads limited to two valve per cylinder in stock OEM location only, 11/32" valve stem minimum diameter. Steel valve spring retainers and locks only. Must retain stock spark plug location. Guide plates and screw-in studs permitted. Must use spec Comp Cams ONLY #982 single or 994 dual valve springs, as is from Comp Cams, no modification allowed. A maximum of .580 valve lift at zero valve lash. Roller rockers permitted but no shaft style rockers allowed, except one single shaft per head on Chrysler only. Hydraulic or mechanical flat tappet camshaft allowed. No roller cams and no rev kits allowed. Original manufacturers stock lifter diameter. No mushroom or Schubeck style lifters allowed.

**C. FUEL INJECTION** – Mechanical fuel injection systems must be configured of one individual stack per cylinder with a maximum of 8 injector nozzles up to 3 1/2" long. No nozzles permitted in the heads. Injector stack must have a maximum of 1 7/16" (1.437) I.D. square edge restrictor round and centered in the stack with a thickness of 1/4". Square edge (no blending) top and bottom, no taper bore. Restrictor (1 7/16) must be mounted 2" down from the top of the bell. No air deflectors allowed. No straight sleeve or tapered sleeve. The stack diameter has to match the intake butterfly diameter. No downsizing of the stack, no thick wall stack. No plastic or rubber removable bell. The ONLY component allowed in the stack is the 1 7/16 restrictor. The restrictor must be held in place by three pins, rivets or screws inserted into the restrictor. The restrictor must be sealed between the outer edge and the stack. No rotary injection system. Air filters with carbon fiber construction allowed.

**D. OILING SYSTEM** – Only wet sump-oiling systems allowed. A minimum one-inch pipe plug must be installed in the left side of the oil pan for crankshaft inspection (Not to be installed by the main caps). Accumulators are optional. No external oil pumps allowed. No vacuum pumps allowed. No pan-evac system. No dry sump-oiling systems allowed.

**E. IGNITION SYSTEM** – Only Vertex, Mallory, or comparable magnetos permitted. No MSD magnetos allowed. No MSD or electronic ignition allowed.

F. **FUEL** – Only methanol or ethanol fuel can be used.  
No fuel additives allowed.

The 305 French Grimes RaceSaver is the only other engine allowed, some restrictions may apply. If you're unsure of any rules please contact the Castrol Raceway for more information.

**NOTE:** French Grimes Racesaver 305 Engines

Castrol Raceway will allow the Racesaver engines to compete **ONLY** after the Castrol technical staff has inspected and documented all pertinent head information. It is up to the competitor or car owner to make arrangements with Castrol Raceway to have the technical inspection completed before finishing the engine assembly.

The French Grimes RaceSaver engine rules are at <http://www.racesaver.com/rules.cfm?rk=9>

Castrol Raceway management reserves the right to modify any rules at any time to ensure a fair and competitive event for all participants.

### **Technical Inspection**

**It is at the discretion of the technical inspector to enforce and interpret the rules.**

**SPORTSMAN SPRINTS**  
**CHECK SHEET**

1. Crotch strap installation should go to seat bar not seat
2. Seat belt installation, condition and dates
3. Shoulder harness mounted to frame tube just below opening where they pass through the seat
4. **Cockpit roll bar padding is recommended**
5. Seat installation and condition of seat, cracks? Holes?
  - a. 2 bolts in top of seat with fender washers
  - b. 2 bolts in bottom of seat with fender washers four total minimum
6. Rear end protection bar under rear seat recommended
7. Driveline safety hoop
8. Drag link tether strap
9. Wing mounts and tabs, check for cracks
10. Chassis, check for cracks
11. Axles, front and rear, check for cracks
12. Hubs and wheels, check for cracks
13. Switches and valves, clearly marked on / off
14. Fuel valve shut off easily accessible from all sides of the car
15. Condition and routing of fuel lines
16. Condition of brakes, pads, calipers and lines
17. Mounting of mufflers
18. Tire condition
19. Nerf bars and bumpers
20. Helmet rating
21. Fire suit, gloves, shoes, neck brace and arm restraints
22. Fuel cell conditions, roll over valve
23. Fuel, oil or coolant leak

