



## 2021 Crate Racin' USA Thunder Bomber Rules

**\*Rule Changes for 2021 In Red\***

**ALL Technical Rules MAY Be checked by Technical Inspectors at ANY time!**

**Everything MUST remain STOCK unless otherwise stated!**

### **General Rules:**

1. The Rules and/or Regulations set forth herein do not express or imply warranty of safety from publication of or compliance with Rules and/or Regulations. These rules are intended as a guideline for the conduct of Crate Racin' USA sanctioned Thunder Bomber Division events, and are in no way a guarantee against injury or death to participants, spectators, or officials.
2. The Rules and/or Regulations will apply to all Crate Racin' USA Thunder Bomber Division sanctioned events. The Rules and/or Regulations will also apply to events sanctioned by the Crate Racin' USA Thunder Bomber Division, but not counting for National points (i.e. events that pay more than Weekly Payout limit, event held outside of Points Season dates, World Championship, etc.).
3. Crate Racin' USA officials shall have full authority over said sanctioned events, and in the event of any dispute, the head official's decision will be final.
4. All competitors and cars are subject to inspection by Crate Racin' USA Technical Inspectors or their representatives at any time during any event.
5. Crate Racin' USA, and its officials and representatives reserve the right to confiscate any suspicious or deemed illegal parts or components.
6. Crate Racin' USA reserves the right to alter or amend these Rules and/or Regulations in the interest of fair competition, efficient completion of an event, or for safety. All official's decisions are final.
7. The Rules and/or Regulations for the Crate Racin' USA Thunder Bomber Division have been sanctioned and approved by Crate Racin' USA, P.O. Box 2037, Adairsville, GA 30103, and available online at [www.CrateRacinUSA.com](http://www.CrateRacinUSA.com).
8. There is NO appeal process in the determination of or application of fines and/or penalties assessed by the series. All Official's decisions are final, and drivers will not be allowed to compete in any sanctioned events until all fines are paid, penalties assessed have been cleared, and/or suspensions have been served.
9. The following are **REQUIRED**: Series decal will be required to be placed on the left rear of the trunk/tail piece, and on the upper front of the door under the pillar post, on each side.
10. All drivers participating at Crate Racin' USA Thunder Bomber Division sanctioned tracks and events must purchase an Annual Membership at a cost of \$25 per year if purchased directly from the series by calling the office, purchasing on the series website, or via mail, or \$35 if purchased at the track (\$10 goes to track for Processing Fee). This membership makes the driver eligible for any Weekly Racing Series points fund monies and contingency awards. Drivers wishing to compete in the 2021 Thunder Bomber Shootout Series may pay an additional \$25 to cover both Weekly and Shootout Series events.
11. A driver visiting and not competing at a Weekly Sanctioned track on a regular basis may purchase Temporary Membership at a cost of \$10 per race.
12. Weekly Sanctioned tracks will be updated of driver's membership status on a weekly basis via e-mail and through My Race Pass (for tracks that participate in sanction management).

### **Safety Rules:**

1. **Safety is the primary responsibility of the RACER!!**
2. Series recommends Drivers have a SFI-Approved full fire suit (top and bottom), gloves, and shoes. Full Fire Suit (top and bottom or one-piece) is required (SFI rating optional, but highly recommended).
3. Snell rated SA2010 or SA2015 full-face helmet required.
4. Series recommends the use of a head and neck restraint system, but is not required.
5. All cars must have a fully charged fire 2 lb. extinguisher mounted within reach of the driver. Series recommends a 5 lb. halon system.
6. All cars must have a kill switch within easy reach of the driver, and clearly marked "Off" and "On".
7. All cars must have a quality fuel cell with roll over valve (check valve) in fuel cell vent.
8. Minimum three(3) inch wide, two(2) inch if using head and neck restraint, SFI-Approved five point safety belts, mounted securely to the roll cage. (Recommend belts be no more than two years old.)

9. Seats must be securely fastened to frame and or roll cage.
10. Any pre-race technical/safety inspection and car or equipment is deemed unsafe by officials will result in not being allowed to compete. Official's decisions are final!
11. All track specific general safety rules or requirements will apply at all times to all participants(i.e. window nets, gloves, door plates, head and neck restraints, etc.) at that track.
12. NO two-way radios, cell phones, or other communication devices will be allowed. RaceCeiver is the ONLY communication device permitted. Drivers caught with any other communication device will be disqualified for that event (heat or feature).
13. Mirrors are allowed at discretion of track rules.
14. ALL weight/lead must be painted white and include the car number. Weight must be securely fastened to the car with a minimum two (2) ½" diameter bolts. No weight may be attached to the back bumper. Losing weight in any race (i.e. heat, b-main, feature) will result in disqualification for that event.
15. Cars must have legible numbers on both sides and on the roof.

### Weight Rules

1. Car must weigh **3,200** pounds with driver after the race.

### Tires, Wheels, and Brake Rules

1. 8" maximum wheels with .25" tolerance.
2. 14" or 15" – must be the same all the way around.
3. No aluminum wheels.
4. NO DOT racing tires. Any 70, 75, or 78 series street legal DOT series radial tires – NO direction or competition tires.
5. 8" towel city racing recap OK, but must punch minimum of 55.
6. **Tires subject to lab samples at independent lab for softening or alteration. NO chemical treating or conditioning of tires!**
7. May run beadlocks, but must face outside.
8. May run offset rims and wheel spacers.
9. Stock brakes and master cylinders. **Must have 4 wheel working brakes after race.**
10. OEM brake calipers only – no aluminum.
11. Dual master cylinder ok – adjusters ok.

### Fan and Radiator Rules

1. Radiator must remain in stock location.
2. Aluminum radiator with fabricated brackets ok.
3. NO electric fans.

### Exhaust/Header Rules

1. Headers are legal, but must exit parallel to the ground.
2. NO tri-y headers. NO H-pipes, and NO X-pipes.
3. No turn down on pipes(straight only).
4. No merged collectors. **Standard 4 pipes into one collector REQUIRED.**
5. No mufflers.

### Fuel and Fuel Cell Rules

1. Fuel cell must be mounted securely inside trunk with firewall between driver and fuel cell.
2. MUST run pump gas or racing fuel. No Nitrous, oxygenated racing fuel or fuel additives.
3. Fuel Protest – Drivers may protest fuel. Protest fee is \$150. Acceptance Fee is \$150. Fuel samples must be sent to Blue Ridge Labs for testing.
4. Blue Ridge Labs is the official test facility for Crate Racin' USA and all lab results and official's decisions are Official and FINAL. Fuel will be tested for oxygenates, oxygenated racing fuel, and fuel additives.

### Body Rules

1. Visual protest only.
2. Cars must be neat in appearance.
3. No late model type noses or fender flares.
4. Must remain stock unless otherwise stated.
5. 1968 or newer American made car.
6. No station wagons, trucks, jeeps or convertibles.
7. No strut cars.
8. Rear of car must be closed. No holes or flaps.

9. Car must have a deck lid.
10. May make front fenders, doors, and rear fenders. Aluminum doors and fenders ok.
11. No side spoilers.
12. Spoiler may not exceed 60" wide and no taller than 6". No spill plates, and no straps or spoiler supports of any type allowed.
13. Cannot exceed 48" from ground to the top of the rear spoiler. **Deck height – maximum 42".**
14. May run any replacement roof, but must be a minimum of 48" x 50". NO slant roofs. **Roof MUST be steel or aluminum.**
15. 13" minimum door and rear glass opening. For safety, MUST have 13" wide window opening on both left and right side in case driver needs to exit in an emergency.
16. Interior may be boxed in.
17. Front and rear bumpers required. Rubber nose is ok, but must be stock appearing. No cow scoop.
18. Bumper cannot exceed past the quarter panel or must run a bumper cover.
19. Breather must be boxed in on all 4 corners, and cannot exceed 2" high. May NOT pull air from inside the car.
20. Front inside wheel wells can be cut or removed for clearance, but not excessive.
21. ALL firewall holes must be covered. Must have stock firewall in original location, and firewall must extend to doors.
22. Must have stock floorpan in original location. Floorpan must extend to rear of driver's seat. Floorpan must go from frame rail to frame rail.
23. May replace dash with sheet metal. Interior metal must not be higher than dash.
24. Gutting hood and trunk are ok.
25. May use Lexan in rear side windows.

### Wheelbase and Frame Rules

1. Frame must match make and model of car – 1" +/- tolerance allowed.
2. No shortening of frame. Must be stock. No x-ing or cutting of frame.
3. Length between spring eyes must be stock.
4. Wheelbase must match make and model – 1" tolerance.
5. Engine must remain in stock location. Aftermarket mounts ok.

### Engine Rules

#### 1. Bottom End

- a. Any OEM stock size engine – 363 maximum - .060 over over bore maximum.
- b. Repaired engine parts must be approved.
- c. ARP Rod bolts OK, but must remain stock size – 3/8.
- d. One piece rear seal block ok.
- e. No high performance engines or special order parts.
- f. Stock engine blocks only.
- g. Must use stock replacement, low compression piston. Cannot cut top of piston.
- h. No flat top, 4 eyebrow piston – must be dished.
- i. Speedpro H423 DCP or H423 NCP replacement piston OK. No metric ring package.
- j. Pistons must be at least .009" in block.
- k. No bottoming of lifters.
- l. Stock crankshaft.
- m. No knife edging or lightening, etc.
- n. Cast crank must weigh 48 lbs.
- o. No stroke or destroke.
- p. Journals may be turned no more than .060" **Stock replacement bearings only.**
- q. Rod width may not be less than .940. No powder rods. **Stock replacement bearings only.**
- r. Stock timing chain gear set or Cloyes C-3023X adjustable timing chain. No offset key ways.
- s. Balancer – 6 3/4 by 1" – no machining.
- t. May run racing pulleys – NO serpentine pulleys. V-belt racing pulleys ok.
- u. Aluminum water pump allowed.
- v. Aftermarket fuel pump & **fuel rod** ok.
- w. Aftermarket power steering ok.
- x. Two(2) piece timing covers ok.
- y. No remote oil filter or evac systems.

#### 2. Heads

- a. Any open chamber head ok, but must meet the following criteria.
- b. NO aftermarket heads.
- c. May run stock replacement screw in studs or pin them.

- d. May run aftermarket valve cover.
  - e. Heads cannot be less than 72 cc.
  - f. No angle milling.
  - g. Stock or stock replacement valve for make and model. Steel valves only. Stock stem diameter.
  - h. Valve springs can be Z28 springs.
  - i. **Comp 742 retainers or stock allowed.**
  - j. No cutting under 45 – no competition valve job – no 3 angle valve job.
  - k. Shims can be used under valve springs at a limit of .060 per spring.
  - l. May use offset locks, but not with shims.
  - m. Rocker arms must be stock or stock replacement. 1.5 maximum. No self aligning rocker arms.
  - n. No porting or polishing.
  - o. No Vortec parts.
- 3. Intakes**
- a. Stock, cast iron. No aluminum intakes.
  - b. No Holley pattern factory intakes.
  - c. Must have vacuum fitting behind carburetor.
- 4. Carburetor**
- a. Stock 2 or 4 barrel, conventional style only. No super bowls or individual cylinder tuning.
  - b. No modifications except choke flap removal.
  - c. No removal of choke horn.
  - d. 600 Holley – part #1850 ok. Must be box stock with Mr. Gasket adaptor part #1932. May use two(2) .070 gaskets maximum.
  - e. **No heat shields around carburetor. Dust shield mounted to air filter base ok.**
- 5. Cam**
- a. Stock timing chain or Cloyes C-3023X adjustable timing chain.
  - b. .390-.410 lift
  - c. 112 lobe separation +/- 1 degree
  - d. Advancing or retarding the cam in car with adjustable timing ok.
  - e. Cloyes C-3023X only – no cam buttons.
  - f. Stock cam or stock replacement cam only.
  - g. Duration for intake + 2 degrees / - 10 degrees.
  - h. .006 – 256 degrees
  - i. .050 – 195 degrees
  - j. .200 – 95 degrees
  - k. Duration for exhaust +2 degrees/ - 10 degrees
  - l. .006 – 261 degrees
  - m. .050 – 202 degrees
  - n. .200 – 106 degrees
  - o. Must have 18" vacuum at 1000 RPM
  - p. Hydraulic cam and lifters only.
  - q. Cams CS-274 sealed power and CCS-2 Melling and Comp Cam 12-105-3 are a stock produced cam and will be looked at with a little more variance. All custom ground cams will be required to meet the above specifications.
- 6. Flywheel and Clutch Assembly**
- a. Stock steel flywheel – 14 pounds minimum
  - b. Stock type clutch and pressure plate – minimum 10.5" (pressure plate 12 pound minimum).
  - c. May use hydraulic clutch.

## **Protest, Claim Rules and Procedures**

### **1. Visual Protest**

- a. Visual protests must be done within 5 minutes of completion of the Heat Race or Qualifying.
- b. Visual protest fee - \$50 (non-refundable).
- c. Driver must finish in Top 5 to do a visual protest, and can only protest car in front of you. No reverse protests!
- d. If a car is found wrong as a result of visual protest, that car will be disqualified and have to start at the rear of the Heat Race or Feature Event(whichever is next).
- e. Items found illegal in a visual protest must be corrected or weight penalty could be added for Heat Race or Feature.
- f. Major violations could result in the car having to move up to a higher division.
- g. Visual items CAN NOT be protested after the Feature.

### **2. Engine and Tire Protest**

- a. Bottom End - \$500
- b. Protest Any 2 Items - \$300
- c. Cam Protest - \$300, Track retains \$100
- d. Transmission Protest - \$250. Acceptance fee - \$100. Track Keeps \$100
- e. Refusal to tear down three(3) times during the season will result in driver being disqualified from competing in the division for the remainder of the season.
- f. Tire Protest - \$125. Acceptance fee - \$125. Track keeps \$125.

### 3. Shock Protest Rule

- a. Driver can only protest shocks from the car that finishes directly ahead of them.
- b. Driver MUST finish in the Top 5 to protest shocks.
- c. Driver can protest a maximum of two shocks, any combination of front and rear.
- d. Shocks must be legal, certified CRUSA shocks.
- e. Shocks may be sent to CRUSA for verification at Tech Official's discretion. Driver protesting shocks will be responsible for cost of shipping shocks to CRUSA and cost for verification.
- f. Series Officials may confiscate and send shocks for verification at any time.
- g. Shock protest = \$50 per shock, \$25 acceptance fee. Track retains \$25 per shock.

**ALL Official's Decisions are FINAL, and Official's reserve the right to increase penalties, levy fines, and enforce suspensions at their discretion.**

### Ignition Rules

1. Stock type ignition.
2. Stock type distributor only. No billet, no circuit board distributor.
3. No high performance distributor or high performance parts.
4. No altering firing order.
5. No boxes.

### Transmission Rules

1. Must be stock with all working forward and reverse gears.
2. May run 350 or 400 turbo automatic with OEM working torque converter, stock type and 11" minimum.
3. May run transmission cooler.
4. No power glides.
5. Aftermarket throw out bearing ok.
6. No lightening of gears.
7. Three(3) speed straight drive, cast iron transmission with all working gears.
8. Straight drive transmission cars must have blow proof bell housing or scatter shield – 1/8 steel.
9. May use hydraulic clutch.

### Drive Shaft Rules

1. Must be stock for model of car or may run 2" driveshaft.
2. No carbon fiber and no aluminum drive shafts.
3. "U" or square type safety loop on front of drive shaft assembly is required.

### Rear End Rules

1. GM 10 or 12 bolt GM housing rear-end.
2. 9" Ford or 9" Ford floater ok. 9" Ford mounting points must be stock type with NO adjustability. 4 1/2" maximum – 3 1/2" minimum from center of the axle tube to center of trailing arm bolt. (ANY ADDITIONAL HOLES MUST BE BLOCKED OFF).
3. Rear shocks must be in stock location on top. Bottom mount can be moved. 2" tolerance from stock location on bottom mount.
4. May run aftermarket axles. No ball spline axles.
5. Any gear ratio allowed.
6. Locked or limited slip rear ends allowed.
7. Full spools ok (no scalloped).
8. No gun drilled axles.
9. No gun drilled rotors or scalloped rotors.
10. No lightening of any parts.
11. All components must be made of steel.
12. Disc brakes ok – doesn't have to match model of car.

13. Can cut top of trailing arms for pinion angle.

#### **Suspension Rules**

1. NO traction control devices of ANY type allowed.
2. Suspension must be stock **unless otherwise stated**
3. May run racing springs with adjustable buckets.
4. **Front shocks must be in stock location. May move 3 inches maximum for travel, no angle change. Rear shocks must be in stock location on top, bottom mount can be moved – 2” tolerance from stock location on bottom mount.**
5. **No heim joints on any shocks.**
6. Top A-frame can be cut or move top mounting perch.
7. No adjustable blocks – 4” of lowering blocks maximum.
8. Tube type A-arm on top only ok – non adjustable – screw in ball joints on top ok. Ball joint must be mounted on top of A-frame (no QA-1) non rebuildable (1/4 inch tolerance).
9. Can use heavy duty OEM steering and suspension parts.
10. Leaf or coil springs can be changed to stronger leaf or coil of the same type.
11. Cutting of coil spring allowed – rear shims on coils are ok.
12. Adjustable or non-adjustable spring buckets ok.
13. Adjustable buckets in rear ok.
14. All mounting/hook up points on chassis must be in stock location.
15. Top trailing arm may be cut for pinion angle only.
16. Leaf spring cars may adjust perches for pinion angle.
17. May adjust rear shackles.
18. Aftermarket bushing in A-frames and trailing arms ok but may not swivel.
19. **Effective May 1, 2021 (Date amended 3/31/2021) - MUST Run Crate Racin’ USA Certified and Labeled Bilstein AK1043 front shocks and AK1044 for Monte Carlo cars, or AK 1054 rear shocks for Camaro/Leaf Spring. NO EXCEPTIONS! Discounts available for member drivers. Contact the CRUSA Office at (678)719-8888 for order information.**

#### **Fines, Penalties, and Suspensions:**

1. **Pre-Race Technical Violation(s):** Any technical violation(s) discovered during pre-race technical inspection, the driver will be notified of violation(s), and car must be fully in compliance before allowed to compete.
2. **Chemical Alteration of Tire(s):** Any driver found to have chemically altered a tire will be subject to the following penalties:
  - a. **Disqualification from event and no CRUSA points or Thunder Bomber Shootout points.**
  - b. **Forfeiture of tire if deemed illegal.**
  - c. **Penalties could be increased.**
3. **Legality of Part(s):** Any question concerning legality of part(s) by CRUSA or track technical inspector, the part(s) in question will be confiscated and sent to Chevrolet Performance or CRUSA for further inspection. The finish for this race will be held until legality of part is determined. Points, monies, and finish will be adjusted in the event of a disqualification. Any parts deemed illegal will be confiscated. Failure to allow confiscation of any part will be penalized the same as an inside the sealing system engine infraction and penalized accordingly.
4. By entering and/or competing in any Crate Racin’ USA sanctioned event, drivers, car owners, and team members waive any right to file an appeal. All official’s decisions are final.
5. All decisions of series officials and/or the promoter regarding the application or interpretation of the rules, and the scoring of finishing positions shall be non-litigable. All participants agree that they will not initiate any legal action against Crate Racin’ USA, LLC, the promoter, or officials to challenge any decision, to seek monetary damages, to seek injunctive relief, or to seek any kind of legal remedy. Any such legal action pursued by a participant which violates this provision, the participant (driver) and/or owner expressly agrees to reimburse Crate Racin’ USA, LLC for all its attorney fees and costs in defending against such legal action.
6. By signing the annual membership/registration agreement, participants agree that they will comply with the written rules and procedures of Crate Racin’ USA, LLC. If the participant breaches this membership/registration agreement, he or she will be liable for actual and liquidated damages sustained by Crate Racin’ USA, LLC.

#### **Code of Conduct and Conduct Penalties:**

1. Drivers, car owners, and teams are to always conduct themselves in and orderly and professional manner while competing at any CRUSA sanctioned event. Series director will judge incidents of conduct accordingly and use the following criteria to asses any penalties upon a driver, car owner, or race team as necessary.
2. Driver will be notified of penalties that have been levied by the series director. All series director’s decisions are final.
3. Series director may choose to levy monetary fines, suspension from sanctioned events, and deduct points as deemed necessary by the rules infraction or actions taken by a driver at any time. Series and tracks reserve the right to enforce or

levy fines, points penalties, require changes, or suspension from competition for any actions deemed detrimental to the sport, series, or track. This includes, but is not limited to, social media posts, and/or derogatory or distasteful statements/slogans/photos/graphics on cars or any other driver related material visible to the public (i.e. helmets or driver's suits, trailer or transporter, etc.).

4. Series will adhere to, and uphold any suspension levied on a driver by a specific track. If a driver has been suspended or barred from entering the property, that will be upheld by the series. Series and sanctioned event do not overrule a track's decision to refuse entry to any driver, car owner, or crew member.
5. NOTE: These rules are not intended to eliminate competition or accidental contact. However, they are intended and may be used to penalize deliberate contact and/or over-driving or deemed deliberate acts of aggression towards other drivers.
6. No driver will be allowed to compete/participate while under the influence of any alcoholic beverage or illegal/controlled substances. If a driver is found to be participating in such a manner, that driver will be immediately suspended and removed from competing.
7. Any competitor that verbally abuses a series or track official by using profane and/or disrespectful language is subject to a fine of \$100 for the first offense. A \$300 fine, one-race suspension, and loss of points for the second offense. After a second offense, driver is subject to 30-day or longer suspension and loss of points as determined by officials.
8. Any physical confrontation, either on the track or in the pit area, will result in the aggressor(s) being suspended for one race, loss of points, and \$300 fine for the first offense. A second offense will result in the driver being suspended for the remainder of the seasons, and a \$500 fine.
9. Any driver who enters another driver's pit area, or approaches another driver's car on the speedway, will be deemed the aggressor. Away from either driver's pit area, both drivers will be considered aggressors. Drivers should be aware that they are responsible for any member of their race team, and the above penalties will apply to the driver concerned even if the driver is not directly involved.
10. In the event of a felony conviction of a driver, team member, or team sponsor, disciplinary action could be a minimum of a 365-day ban from the series beginning with the date of the conviction or the date of the completion of any incarceration to said conviction, whichever date shall last occur.
11. Disciplinary action may also include, but is not limited to, the right of the series organizers and officials to suspend either temporarily, or permanently, any driver, team member or sponsor, whose actions, in the sole opinion and discretion of the series organizers and officials, may have resulted in, or may result in harm or detriment to Crate Racin' USA.
12. Any incidents occurring during the last five events of the season, may result in penalties being applied to the beginning of the following season.
13. Any incident(s) that are judged to be deliberate acts of aggression, whether on or off the track, under green or caution, will result in disqualification and a monetary fine to be determined by series' officials.
14. Series officials reserve the right to increase the above penalties, by either adding additional money, suspension time, or points loss, depending on the severity of the incident.
15. Series officials reserve the right to revoke a competitor's membership at any time. All official's decisions are final.
16. Any threat of, or legal action taken or levied against the series by a driver/race team, will immediately result in that driver's indefinite suspension from competition in any/all Crate Racin' USA sanctioned divisions and events.
17. Any disqualification, other than a weight violation, will result in no points and no money for the event. Weight violation will move the driver to the end of the finish order.
18. The decisions made and disciplinary actions taken by the series and officials hereunder shall not be appealed by the driver, team member, or team sponsor affected thereby.
19. ALL OFFICIAL'S DECISIONS ARE FINAL.

#### **ATTENTION CAR OWNERS AND DRIVERS:**

Please remember that we are here and can race because of the fans, promoters, and sponsors. If they don't benefit, we won't benefit. While we understand that this competition involves substantial financial stakes, there is no excuse for bad or unruly behavior which would tend to bring the series, tracks, or sponsors into disrepute.

**PLEASE NOTE:** By entering, qualifying, and/or competing in a Crate Racin' USA event, you are accepting these rules and regulations as being those under which you are prepared to race. Any driver entering and competing in a Crate Racin' USA event acknowledges and accepts the following: Crate Racin' USA and its assigns may use the drivers names, pictures, likeness, and performance in any way, medium, or material, including without limitation by and through, television, radio, air wave: cable and satellite broadcasts, film productions, videotape reproductions, audiotape reproductions, transmissions over the internet, and public and private on-line services authorized by the Crate Racin' USA and the like, before, during, and after the event, for promoting, advertising, recording or reporting in the event or any other Crate Racin' USA sanctioned event, and do hereby relinquish all rights there to for these purposes, provided however, that the car owner and driver shall retain the exclusive use of its or his/her name, picture and likeness in connection with product endorsements and the sale of products, services, concessions, and merchandise.