



## 2022 604 Crate Late Model Rules

### **1. Event Procedures:**

#### ***Unacceptable Behavior:***

**A-** Fighting or drinking at the event by any driver or crew member will NEVER be permitted. Automatic disqualification will occur on the night of the event;

**B-** If a driver or crew member enters another's pit area, that team will be considered the aggressor in the situation and will be subject to the harshest of punishments. DRIVERS are responsible for all of their team members.

**C-** Poor sportsmanship may also result in suspension or fine. Any poor sportsmanship on the track or roughness will result in the removal of the driver performing the act and disqualification for the night.

**D-** Refusal to obey officials could result in suspension, fine.

**E-** If a driver gets out on the track for any reason other than safety, he or she will be disqualified. If a driver's crew goes on the track, the driver will be disqualified.

**F-** Driving in the pit area must be done at a reasonable pit road speed (Courtesy laps will not start until the driver is in his/her pit area.). Drivers will be subject to penalty for driving too fast.

**G-** If a driver intentionally hits another driver's car under caution, hot laps, or in the pits,

### **2. Technical Rules:**

**A. Engines:** GM part number 19258602 or 88958602 and GM part number 19318604 or 88958604 are the only engines that will be permitted to participate in the series.

**B-** All engines and parts must be as from factory and all components thereof. All engines are to remain sealed from the factory. These engines are sealed at the intake manifold, cylinder heads, front cover, and oil pan with special GM twist-off bolts or with the cup style seals.

**C-** Any "unauthorized" changes will result in disqualification, no points, fines, and other. This includes, but is not limited to, harmonic balancers, valve springs, push rods, rocker arms, aftermarket valve covers etc. Tampering, removal, or modifications of any type and/or broken, tampered factory seals will not be permitted and will result in immediate disqualification from the event. The engine may be impounded immediately for further inspection.

**D-**The only exception will be if a repair or rebuild is required. The repair/rebuild must be authorized by the American Crate All-Star Series, at which time the engine may be repaired or possibly rebuilt per the guidelines set forth in the GM Technical Manual #88958668 or any subsequent revision of this manual. Crate engines must not be altered, modified, or changed from factory specs.

**E-** Engines **MUST** be sealed in all of the above stated locations with either the **original** New GM seals, ACAS (say All-Stars) Seals (Blue), FASTRAK seals, SECA seals, or Nesmith Crate racing gen IV (green), gen V (black) seal tags, RUSH and UCRA std. Any other series seal that allows no changes within the bolts may be considered legal. (No RM, UCRA .020, counterfeit or eBay bolts will be allowed.) The NGS reserves the right to tear down any engine following any event. GM Twist off bolts and Crate Racing yellow (gen III seals) will continue to be permitted at Weekly events.

**F-** The sealed engines must remain intact and not be tampered with; any seals that have been tampered with, removed, modified, and/or broken will make the engine illegal and result in immediate disqualification from the event (loss of points and money). The engine may be impounded immediately for further inspection. Modifying any internal engine parts or changing the parts from stock as delivered sealed from the factory will result in disqualification for the night's event (loss of points and money).

**G-** The permitted GM factory sealed crate engines must not be altered, modified, or changed from the GM specifications in the GM Technical Manual #88958668 or any subsequent revision of this manual; no changes at all are allowed to the engine - intake, manifold, valve covers, heads, front cover, oil pan, harmonic balancer, or any other part or parts on or in the engine.

**H- We will allow Clevite P series rod, main and cam bearings. Aftermarket valve cover gaskets and breathers will be allowed.**

**I-** Engine Setback: 25 ½ inches (measured from center of ball joint to front of engine plate).

### **3-Engine Protest Rules:**

**A-a.** Top 5 main event finishers may protest any Top 5 finisher in front of them. The protested driver may counter protest within 5 minutes of being notified of protest. All protests must be made to ACAS officials by the driver. Driver must have cash in hand. Claim fee must be paid within 5 minutes of protested car crossing scales.

**B-** Engine Claim Rule: Drivers may claim another's GM 604 for \$6,200. When claiming an engine, the driver will only receive it as delivered from GM with no accessories, distributor, wires, carburetor, pumps etc.

**C-** Complete Engine Protest Rule: The protest fee is \$1,200. The winner of the protest receives \$1,000, NGS receives \$100, and the NGS selected technical inspector receives \$100. If the engine is found illegal, the protester will receive their money back, and the protested driver will have to pay the \$1,200 fee to get the protested engine back. In the case of a full engine protest

**D- Valve Spring Specifications: No PAC Springs**

3A10a. Valve Spring Protest: Protesting of the Valve Spring is \$200 and must follow the same procedures as protesting an engine. ACAS will provide protested driver with a Valve Spring. If found legal, legal valve spring will also be returned to the driver. Please see rule 3A9.

**E-** (Valve Spring Penalties based on 365-day period from time of infraction.)

**1st Offense:** \$200.00 fine, loss of points, loss of prize money, and 25-point deduction to year end points total.

**2nd Offense:** \$350.00 fine, loss of points, loss of prize money, and 50-point deduction to year end points total.

**3rd Offense:** \$500.00 fine, loss of points, loss of prize money, and suspension to be set at ACAS discretion.

Valve Spring Specifications – Old (non-beehive)

Description 88958602 88958603 88958604

Valve Spring P/N 10212811 12551483 12551483

Valve Spring P/N -set of 16 n/a 12495494 12495494

Diameter (+/- .010") (A) 1.250" 1.340" 1.340"

Free Height (+/- .015") (B) 2.021" 2.154" 2.154"

Installed Height (Ok to shim to proper height) (C) 1.70" 1.780" 1.780"

Pressure @ Installed Height (+/- 5 lbs) (D) 80 lbs. 110 lbs. 110 lbs.

Open Height (E) 1.270" 1.300" 1.300"

Open Pressure (+/- 10 lbs) (F) 195 lbs 270 lbs. 270 lbs.

Coil Bind (G) 1.20" 1.21" 1.21"

Wire Diameter .177" .178" .178"

Blue Beehive Valve Springs:

Valve Spring Specifications – New (Blue) Beehive Valve Spring

Description Engine

CT 400 Engine 88869604

Valve Spring P/N -16 12499224

Valve Spring P/N 12625033

Diameter Top (+/- .010") 1.060"

Diameter Bottom (+/- .010") 1.270"

Free Height (+/- .015") 2.122"

Max solid height 1.210

Min Installed Height (Ok to shim to proper height) 1.780"

Pressure at installed ht ( + 5 lbs tolerance ) 98lbs

Open Pressure (+/- 13 lbs) 267 lbs.

Wire diameter (Ovate) (.168" x .211")

Retainer. 19303149 11.9g

Keeper. 19302868 3.9g

#### **4-. Weight:**

GM 602 Car and Driver (2200) and GM 604 Car and Driver (2300).

**A-** The top 5 cars will weigh after each feature before going to victory lane or the trailer. If a driver chooses to weigh outside the top 5 and is light, he will be disqualified.

**B-** After qualifying every car must cross the scales. The top three must cross after the heat. All transfer cars plus one from the B-main and top five after the feature will also cross the scales.

#### **5-. Carburetors:**

One four-barrel carburetor only of any brand is allowed. The engine must be naturally aspirated.

**A-** Carb spacers for 604 (must be flat on top and bottom) - 1" spacer maximum with a .040 tolerance

**B-** Carb spacers for 602 (must be flat on top and bottom) - 2" spacer maximum with a .040 tolerance

**C-** One gasket per surface .070 maximum.

#### **6-. Transmission:**

Bert, Brinn, or Falcon type transmissions allowed. It must have a working clutch with forward and reverse gear. Drive shafts should be painted white with car number. This is a safety issue! Drive shaft loop is highly recommended. Air shifters not allowed. Carbon fiber, aluminum, or steel drive shafts permitted.

#### **37-. Fuel:**

Drivers must claim the type of fuel they are using for a comparison test.

**A-** Fuel tests may be performed during post-race tech or sent to the labs for testing. Any suspicious fuel will then be sampled and lab tested. Additives that will be tested for but not limited to are nitromethane, propylene oxide, alcohol (all types), aldehydes, aminobiphenyl, benzene, borane, benzidine, beryllium compounds, bromine compounds, butadienes, chlorinated compounds, chromates, dioxane, MTBE, ethyl acrylate, ethylene oxide, hydrazine compounds, dioxane, methylenedianiline, naphthylamine, nitrogen compounds, styrenes, toluidine, and xylydine. Any of these compounds that are not included in fuel claimed or in correct amounts matching benchmarks will be deemed illegal.

**B-** A hydrometer test may be done with a .770 Max for E85. .750 Max for gasoline.

**C-** E85 may be water tested with an 85% CONTENT plus or minus 3%

**D-** Fuel protests cost \$150 and will be sent to the lab. See tire penalties below. The same penalties will apply to fuel found to be wrong.

**E-** Fuel Systems: Mechanical fuel pumps only. No electric fuel pumps of any type will be allowed. No nozzles, etc. may be connected to the fuel system at any point. Only one fuel system per car is permitted.

#### **8- Evacuation Systems:**

Evacuation systems are not allowed. This means any type of vacuum system; includes vacuum from that of breather system and/or any other means of pressure evacuation from crankcase.

### **9-Oil Pump/Pressure:**

Oil pumps must be as they come from the factory with the correct engine/oil pump combination (therefore the 602 Oil Pump is not legal on a 604). The original stock GM spring may not be altered from the factory with no additional shims. Wet sump only. No external oil pumps (even if considered "wet"). Remote oil filters and lines are permitted. One remote oil filter is allowed. One oil cooler is allowed. For a 604, anything over 48 lbs at 1800 rpm after qualifying may be subject to additional inspection. Lifters may not be altered in any manner and must be as they are from the factory.

### **10-Distributor:**

Any electronic ignition is allowed. No crank trigger, no distributor-less multicoil, no magneto systems, also no traction control devices are allowed.

### **11-. Starter:**

Cars must all have a starter that is in proper working order.

### **12- Water Pumps:**

Water pumps may be cast iron or aluminum. No electric water pumps or fans will be permitted.

### **13- Headers:**

Collector type headers are required. You must have four tubes into one collector. No merge collectors. No tri-y headers.

### **14- Exhaust:**

Mufflers are permitted but are not required unless the event is at a track where the track has a noise ordinance.

### **15-. Brakes:**

All cars must have operational 4-wheel braking systems. An electric or manual proportioning valve is permitted. Carbon fiber, titanium, or other exotic materials are not legal. Brake rotors must be magnetic

### **16- Electronic Devices:**

No electronic devices thereby enhancing adjustment of a car is allowed.

**A-** Traction control is NOT legal.

**B-** Remote-control devices are not allowed at any time.

**C-** No electronic devices controlling shocks are allowed.

**D-** Exotic materials (titanium, carbon fiber, tungsten, etc.) are illegal.

**E-** Carbon fiber drive shafts are legal (for safety purposes)

**F-** No electronic devices that transmit voice or data are allowed at any time.

**H-** Adjustable restrictor plates are not allowed.

**I-** No data systems will be allowed. The same penalties that apply to tire infractions will apply here.

**J-** No cell phones or any other electronic devices are allowed in the car or on the driver during any racing event. Driver may be inspected after the event during postrace technical inspection



**K-** Go Pros or other similar cameras will be the only type of electronic devices permitted at all on the car and this is only as long as it doesn't interfere with either the transponder or Receiver.

**L-** Receivers: It is the driver's responsibility to have a working Receiver. It is NOT THE RESPONSIBILITY of the series to make sure a driver has working batteries. If a driver's Receiver is not working or he is not wearing it, he will be put off the track.

**M-** Transponders: Any transponders owned by the driver are their own responsibility. If a driver forgets to attach his transponder or it malfunctions, he will not be scored. If a rental transponder from the NGS malfunctions, he will be scored/allowed to qualify again.

### **17- Driver's Compartment Safety:**

Window nets, gloves, fire suits, and helmets (with fire resistant interior) are required.

**A-** Seat belts cannot be more than two years old (There will be a 25-pound penalty if they are.).

**B-** American Crate All-Star Series Strongly Urges the use of a Hans or Hutchinson (or similar) Device.

**C-** Drivers must use a quick release steering wheel.

**D-** Batteries cannot be in the driver's compartment and must have insulated cable ends or plastic covers to prevent fueling fires.

**E-** Drivers must have either (1) a working fire suppression system or (2) a signed waiver with a working fire extinguisher..

**F-** A master cut off switch, within reach of the driver, for the car is required.

**G-** A full containment seat is recommended, or an aluminum or carbon fiber seat with a bolt on head rest will be allowed.

### **18- Wheels:**

Maximum 14" steel or aluminum wheels with bead locks are permitted. Carbon fiber or titanium is not legal..

### **19- Tires: OPEN**

### **20- Springs:**

Only coil springs will be allowed. No pneumatic springs, hydraulic springs, or air springs will be allowed. A shock that produces more than 75lbs of rod force when compressed to the center of the shock mounts measurement at the car's static ride height is considered a spring and is illegal.

**A-** Coil springs must be made from magnetic steel.

**B-** Stacked springs are allowed.

**C-** Progressive springs are allowed.

**D-** Spring preload adjustments for coil springs must be made using mechanical adjusting nuts on the shock body. No air dumps or hydraulics.

**E-** Other than spring damping by the shock absorber, pneumatic, hydraulic, or electrically controlled adjusting devices, (static or dynamic) that affect spring preload or race car heights will not be permitted; air dump devices are not allowed.

**F-** Spring rubbers are allowed

### **21-. Bump Stops:**

Bump stops are permitted. Bump springs are permitted. No pneumatic or hydraulic bump stops will be permitted.

### **22- Shocks:**

One shock is allowed per wheel (except on the left rear where two shocks will be allowed, one in front of the rear end and one behind the rear end). The shocks must be mounted vertical to the axel tube, not horizontal. Shocks, at any position on the race car including lift bar or torque arm shocks, must be made of magnetic steel or aluminum. Thru rod style shocks will not be allowed. Remote reservoirs are allowed. Each shock may have a maximum of two external adjustment mechanisms. The external reservoir can have one external adjustment. The adjuster mechanism cannot be hidden by the rod end. Any and all adjusters must be on the shock body, on the shock rod, or on the remote reservoir. NO cockpit adjustment is permitted.

**A-** NO remote adjustment of shocks is permitted, including electronic adjustment of any kind.

**B-** Shock absorbers cannot contain any internal spring that functions as a load bearing suspension spring, internal coil bump spring above or below the working piston, nor internal bump stop of any kind.

**C-** Shock covers are permitted, but they must be removed for tech inspections.

### **23-. Rear Ends:**

Any standard quick-change rear end. No open type (sprint car) rear ends are allowed.

### **24-. Rear suspension:**

Standard 4 bar or swing arm rear suspensions only. No spring rods allowed. One shock per wheel except left rear is allowed. Chain limiters are allowed.

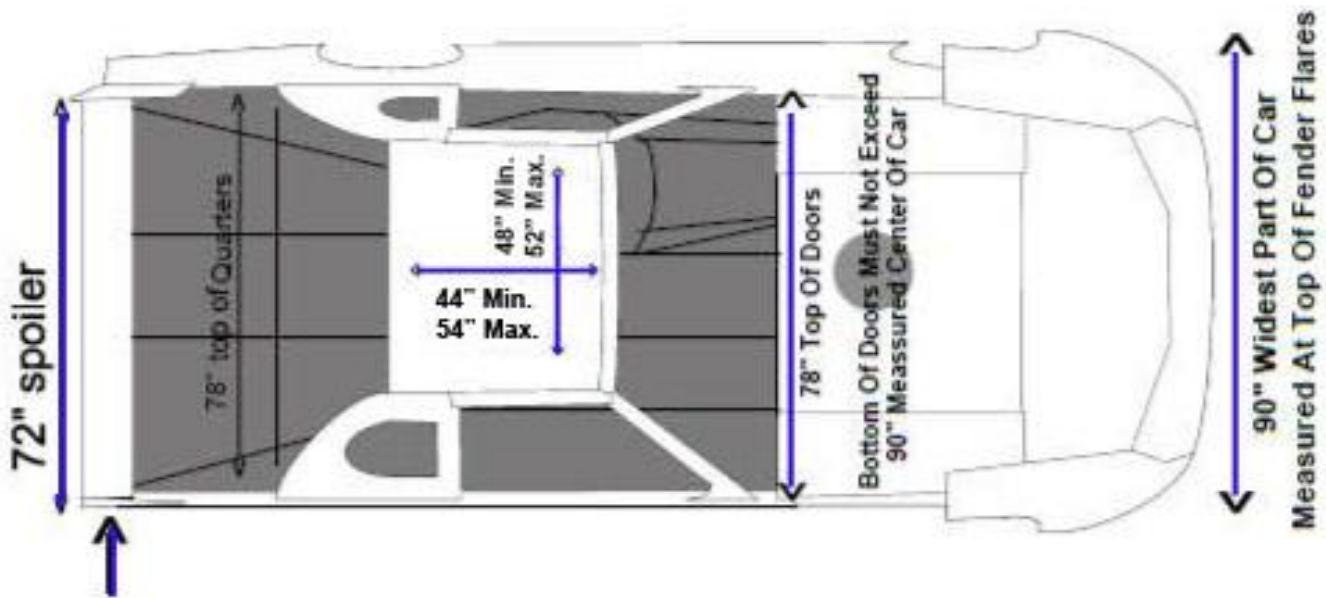
### **25-. Transponder Mounting:**

track will determine how and where to mount the transponder.

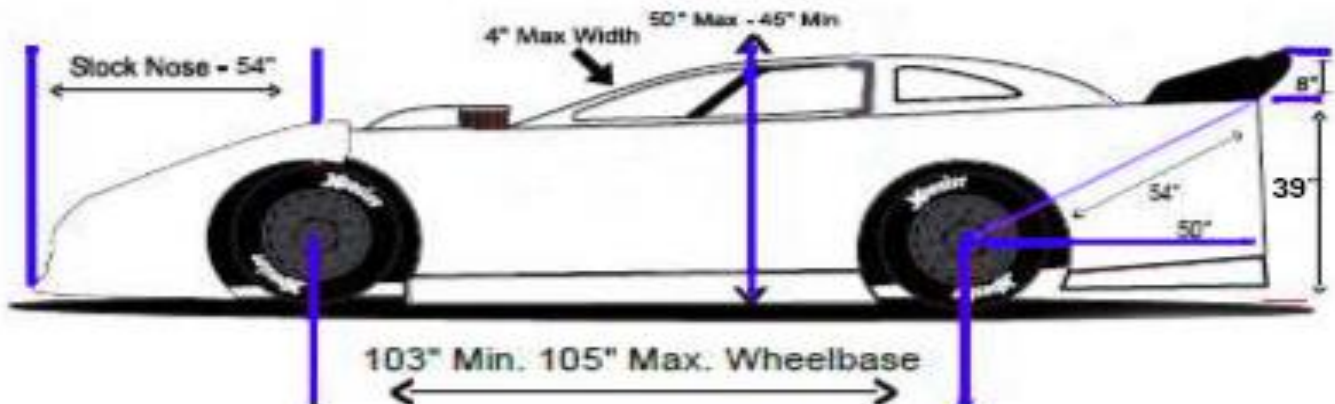
**26-. Bodies:**

A-. Rear Deck height measured from ground to the top of the T-Bar is 39" Maximum with driver in car. Rear Deck Height will be measure prior to qualifying if it's off it may be fixed, but only the first lap of qualifying will count. Bottom right front Bumper to ground Maximum 15" high.

3X2. See diagram below for remaining body rules.

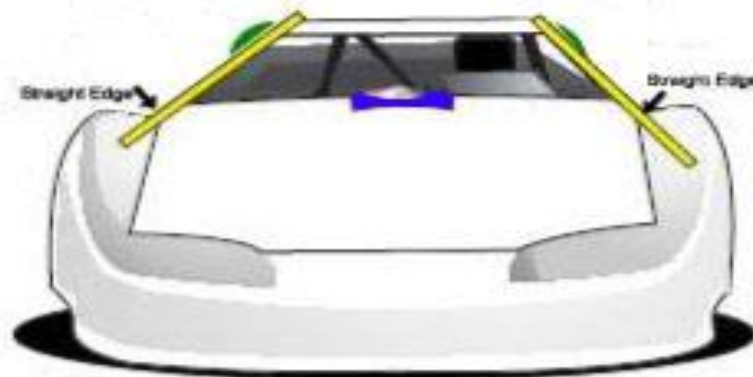
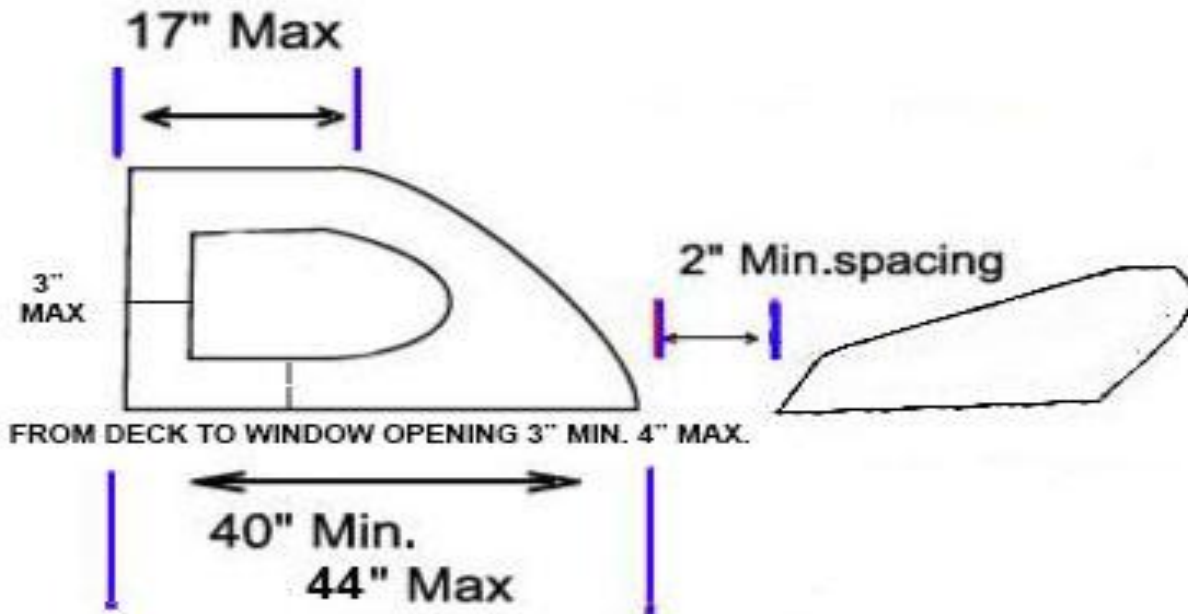


All body components 3" Min. above ground.  
All body measurements are maximum unless otherwise specified.





FRONT ROOF SUPPORTS 4" MAX. WITH 12" FLARE MAX. AT BOTTOM.  
REAR ROOF SUPPORTS OR "C" PILLARS WITH WINDOW OPENINGS  
ALLOWED BUT MUST BE SAME SIZE OPENING ON LEFT AND RIGHT SIDE,  
AND CANNOT BE OFFSET. CURVED OR ARCED ROOF SUPPORTS ALLOWED.  
3" MAX. ARC ALLOWED AT WIDEST POINT, CHECKED WITH STRAIGHT EDGE  
EXTENDED FROM ROOF EDGE TO DOOR EDGE.



REAR DECK HEIGHT MEASURED FROM GROUND TO TOP OF T-BAR IS 39" MAXIMUM WITH DRIVER IN CAR. THE MEASUREMENT OF THE SPOILER IS A TOTAL OF ALL MATERIAL INCLUDING ANY TURNS UP OR DOWN AND INCLUDES SUPPORT BRACE

