

M.1.D Race of Champions Super Stocks

ANY CAR, TEAM AND/OR DRIVER THAT DOES NOT MEET THESE SPECIFICATIONS AND/OR EQUIPMENT REQUIREMENTS WILL BE SUBJECT TO PENALTIES AS DETERMINED BY THE Race of Champions OFFICIALS. Any new components, including engine components, body designs, frame designs and/or components of any type utilized in competition must be approved by Race of Champions Officials prior to being introduced into competition.

The following rules have been established and may be adjusted further from time-to-time in the interest of competition and definition.

NOTICE

ALL MODEL, ENGINE OR EQUIPMENT CHANGES OR MODIFICATIONS NOT SPECIFICALLY ADDRESSED IN THIS RULE BOOK BY RACE OF CHAMPIONS MUST BE SUBMITTED, IN A COMPLETED FORM/ASSEMBLY, TO RACE OF CHAMPIONS FOR CONSIDERATION OF APPROVAL ON OR PRIOR TO NOVEMBER 1, 2021 UNLESS OTHERWISE AUTHORIZED BY RACE OF CHAMPIONS, TO BE CONSIDERED FOR COMPETITION FOR THE 2022 SEASON. THE APPLICANT WILL BE NOTIFIED OF APPROVAL OR REJECTION FROM RACE OF CHAMPIONS. RACE EQUIPMENT WILL NOT BE CONSIDERED AS HAVING BEEN APPROVED BY REASON OF HAVING PASSED THROUGH INSPECTION AT ANY TIME OR ANY NUMBER OF TIMES UNOBSERVED OR UNDETECTED. ANY RACE EQUIPMENT WHICH DOES NOT CONFORM TO SPECIFICATIONS OR TOLERANCES CONTAINED IN THE RACE OF CHAMPIONS RULE BOOK, OR IS NOT OTHERWISE APPROVED BY RACE OF CHAMPIONS, MAY NOT BE USED IN COMPETITION IN 2020. ALL SUBMITTED RACE EQUIPMENT MUST BE ACCOMPANIED BY COMPUTER AIDED DESIGN (CAD) FILES AND/OR MECHANICAL DRAWINGS AND REQUISITE FEE AS DETERMINED BY RACE OF CHAMPIONS.

m.1 Engine

1. Engines / Engine Options

- a.) All engine components must remain within their respective and designated engine package. Engine components exchanged between manufacturers and/or a specific engine designation will not be permitted.
- b.) A maximum of 360 cubic inches for any engine will be permitted. A maximum overbore of .060 will be permitted.
- c.) Only stock OEM production type GM Chevrolet type 350 cubic inch or Ford 351 (Windsor or Cleveland) cubic inch blocks will be permitted. The DART Engine Block part number #3116111 SHP will be permitted. Aftermarket type engine blocks will not be permitted.
- d.) Angle cutting of the block deck will not be permitted.
- e.) The engine block must be securely mounted to the frame.
- f.) Tilted blocks will not be permitted.
- g.) All bolt holes and bores must remain in the stock OEM location.
- h.) The maximum engine set back for all frames will be the number one (#1) spark plug hole in line with the centerline of the lower ball joint.
- i.) The engine displacement may be increased by increasing the bore size. The formula for determining the cubic inch displacement of the engine will be: Bore X Bore X .7854 X Stroke which will equal the cubic inch displacement of each cylinder. The cubic inch displacement of each cylinder added together will determine the total cubic inch displacement for the engine.
- j.) The maximum compression ratio permitted for any engine will be 10.0 to 1. When calculating the compression ratio a tolerance of one (1) cubic centimeter will be added to the volume for the area around the top of the piston down to the top of the piston ring that will be sealed with grease.
- k.) In the event that the compression ratio must be confirmed in a circumstance that requires calculation the following formula will be utilized; Bore X Bore X .7854 X Stroke equals the volume for each cylinder at Bottom Dead Center (BDC) in cubic centimeters. The cylinder head pour volume minus (-) the known volume of the cylinder head plate plus (+) the cylinder head gasket volume plus (+) 1.00 cubic centimeters for sealing the piston ring plus (+) the cylinder block volume minus (-) the known volume of the block plate equals the chamber volume. (Compress ratio = Cylinder Volume (+) Chamber Volume).

2. Crankshaft

- a.) Only a standard magnetic steel or cast iron production design crankshaft will be permitted. The crankshaft must be a minimum of 48lbs. The crankshaft journals, journal size, construction and/or appearance must remain as manufactured. Undersizing of crank journals will not be permitted.
- b.) A tolerance of (+/- .020) on the crankshaft rod journals will be permitted.
- c.) Any standard OEM production stroke dimension will be permitted.

3. Connecting Rods
 - a.) Only solid magnetic steel connecting rods (OEM or aftermarket) will be permitted.
 - b.) Sportsman type connecting rods measuring a minimum of 5.700" inches and a maximum of 6.000" inches will be permitted for Chevrolet engines. The minimum weight for the aftermarket 5.700" connecting rod will be a total of 575 grams. The minimum weight for the aftermarket connecting rod will be a total of 600 grams.
 - c.) The maximum Ford connecting rod length will be 6.000" inches.
 - d.) A maximum length of 6"-inches will be permitted.
 - e.) Deburring, removal of flashing, polishing, abrasive cleaning or any attempt at weight removal will not be permitted.
 - f.) Stainless steel, aluminum, titanium and/or any other materials that are considered exotic materials will not be permitted.

4. Pistons
 - a.) Only stock OEM production type flat top and dished round pistons will be permitted. Dome pistons will not be permitted.
 - b.) Only pistons with three (3) functioning ring grooves will be permitted. All three (3) rings must be in place.
 - c.) Ceramic, plastics and/or any other type of exotic type material pistons will not be permitted.
 - e.) Coatings of any type will not be permitted.

5. Cylinder Heads
 - a.) Only 23 degree cast iron unaltered stock production OEM cylinder heads (or listed part number replacement) as listed from the manufacturer will be permitted:
 - 1.) Chevrolet Vortec (L31) part number 10239906 (any variation of this will need approval from Race of Champions Officials).
 - 2.) Chevrolet Vortec (L31) part number 12558062 (any variation of this will need approval from Race of Champions Officials).
 - 3.) World Products Ford Windsor JR part number 053030
 - 4.) World Products Replacement part number 42660
 - 5.) World Products Replacement part number 42670
 - 6.) The DART S/S Vortec SBC Iron Cylinder Head, part number 10024370 may be used as a cylinder head for repair. This cylinder head will be reviewed and has been approved beginning with the 2022 season.**

NOTE: The cylinders heads listed may have limited availability and may become unavailable for retail in the future. Previously approved cylinder heads will be permitted for competition, however may be removed from the list and inspected as necessary to maintain that the correct cylinder is being used for competition based on the part number submitted for competition.
 - b.) GM / Chevrolet Vortec Bowtie and/or Vortec type aftermarket, Ford Boss, Ford N Style, Ford angle plug, Chrysler Hemi, Pontiac Ram Air, Chevrolet bowtie, DART or DART type, Brzezinski or Brzezinski (UnderCover) type, High Performance or aluminum cylinder heads and/or components will not be permitted.
 - c.) Porting of any type for any purpose will not be permitted.
 - d.) The cylinder heads must remain stock as manufactured, including but not limited to internal and external measurements. Port matching, blending, porting, polishing, removal or addition of material to cylinder head will not be permitted.
 - e.) Hand grinding and/or acid dipping will not be permitted.
 - f.) The manufacturer specification and intake runner CC size must remain unaltered as specified for all approved cylinder heads with no tolerance.
 - g.) All valves must remain identical in appearance and construction as a stock OEM type valve.
 - h.) Only magnetic steel valve springs and/or push rods will be permitted.
 - i.) Only 1.5 or 1.6 roller rockers will be permitted. Roller lifters will not be permitted. Roller rockers and stud girdles will be permitted. Shaft rocker arms and/or shaft mounted roller rocker arm systems of any type will not be permitted.
 - j.) The following are the maximum valve size (Intake and Exhaust) permitted for specific cylinder heads:
 - 1.) Chevrolet and/or Ford: Intake Valve 2.020 / Exhaust Valve 1.600
 - k.) The cylinder head must remain in the stock OEM location. Repositioning and/or relocating the cylinder head on the engine block will not be permitted.
 - l.) The valve centerline and guide angle in relationship to the cylinder heads must be remain in the stock OEM position.
 - m.) Porting and polishing by the removal or grinding of the original casting in runners will not be permitted. Epoxy fillers, welding, spray welding and/or any other coating or materials on or in the cylinder heads will not be permitted.
 - n.) External painting will be permitted.

- o.) Air directional devices of any type on any valve surface will not be permitted.
- p.) Only magnetic steel push rods and valve springs will be permitted. Titanium and/or any other exotic type material will not be permitted.
- q.) Titanium valve spring retainers will not be permitted.
- r.) The maximum compression permitted will be 10.0:1

5 - B. GM / CHEVROLET PERFORMANCE CRATE ENGINE OPTION:

NOTE: In the interest of preserving the opportunity of an affordable entry into asphalt type competition, the Race of Champions reserves the right to create, introduce and/or specify the GM / Chevrolet Performance Crate Engine Option as the only option in the Race of Champions Super Stock division.

- a.) Only the Chevrolet Performance / GM Performance "602" Crate Engine will be permitted for competition.
- b.) The GM / Chevrolet Performance "602" Crate Engine will not receive a weight break unless otherwise posted in a bulletin and/or the Race of Champions rule book.
- c.) **Any Chevrolet Performance and/or GM Crate engine and all components must remain in their original configuration and form as purchased and/or delivered from the factory. Any alterations to the engine will not be permitted. The Engine must remain as manufactured by General Motors. Overbore(s) will not be permitted. Repairs may be permitted with written permission from Race of Champions Officials.**
- d.) **All engines are to remain sealed from the factory. The original factory seals must remain unaltered, Tampering, removal, modifications of any type and/or broken factory seals will not be permitted. The GM Engine must remain unaltered in any way.**
- e.) **The GM Crate Engine seals (bolt-type) must remain unaltered. Race of Champions Officials may require specific sealing and verification of all seals on any Chevrolet Performance and/or GM Crate Engine. Tampering with and/or alteration of any seals will not be permitted and is subject to immediate penalty and/or suspension.**
- f.) **Only GM replacement parts of any type will be permitted for any type of replacement and/or repair work. Only GM Crate Engine specific valve springs may be used for replacement and/or repair.**
- g.) **The maximum RPM of the Chevrolet Performance and/or GM "602" engine will be 5,800 as controlled by part number# MSD 883647.**
- h.) **GM Crate Engine repairs must be authorized by Race of Champions Officials. GM Crate Engine repair procedure works as follows:**
 - 1.) **Contact the Race of Champions administrative office.**
 - 2.) **A repair location will be specified and instruct the driver/owner where to take the engine to get an estimate.**
 - 3.) **Based on the estimate and the detail of the repair, officials will determine if the repairs may be made or if a new engine must be purchased.**
 - 4.) **If a repair is approved, a specified inspector will inspect the engine and work with the engine repair facility throughout the duration of the repair to ensure that the engine maintains the Chevrolet / GM Specifications.**
 - 5.) **Upon completion of the repair(s) the engine will be 'resealed' before being released for competition.**
 - 6.) **All parts including the gasket repair kit(s) must be stock OEM Chevrolet Performance replacement parts. The receipt(s) generated from the GM / Chevrolet Performance Dealer and/or parts department must be retained and a copy presented to Race of Champions Officials for verification.**
 - 7.) **Overbores will not be permitted. If a cylinder has scoring and/or needs repair it must be communicated to Race of Champions officials before being sleeved to maintain the original bore size.**
 - 8.) **Valve jobs will not be permitted.**
 - 9.) **If the cylinder head requires resurfacing and/or valve seats, a new cylinder head must be purchased. Machine work of any type will not be permitted to the cylinder heads.**
 - 10.) **Bead blasting and/or any polishing and/or any alteration to the intake manifold and/or cylinder heads will not be permitted.**
 - 11.) **The distributor advance curve and/or all parts must remain stock as manufactured.**
 - 12.) **All engine information regarding repairs and/or engine introduction must be retained and turned into Race of Champions Officials, to track and manage engine database, including the driver, serial number, repair, type of repair and/or what type of service was performed to any engine.**

13.) If any repair estimates come back to the Race of Champions Officials that meet and/or exceed 60% of the actual price of a new engine, a new engine must be purchased. The engine that was damaged will no longer be eligible for competition.

k.) Only the Chevrolet Performance "602" Engine may use an unaltered Holley stock (part number 0-4412C), (500 CFM). Exceptions to this rule will not be permitted. The carburetor must be securely fastened to the intake manifold in the stock location with one .0625(1/16th) or smaller gasket. Spacers or drop in spacers, alterations, physical changes, machining, reshaping or tampering with any part of the original parts, internal or external will not be permitted. Only genuine Holley replacement parts will be permitted.

m.) In the event a "Crate" engine is found illegal and has been tampered with, a one (1) calendar year, suspension will be issued from the date of infraction for the first offense. An indefinite suspension will be issued for any offense after the first.

n.) Race of Champions **Officials reserve the right to technically inspect, exchange and/or confiscate any GM Crate Engine at any time. Failure to surrender the engine and/or submit the engine for inspection equals disqualification from the event and/or suspension.**

o.) The intended direction of the Chevrolet Performance / GM Crate Engine program is to maintain a cost-effective, affordable racing program. Rebuilding, balancing, blue printing and/or any other alteration made in an attempt to influence the integrity of this program will not be permitted. The judgment and determination of any such decision will be at the sole discretion of Race of Champions Officials.

6. Cam / Lifters / Timing Chain

a.) The camshaft, bores and lifters must remain in the original stock OEM location.

b.) Any hydraulic or solid camshaft will be permitted.

c.) Only magnetic steel lifters with a stock diameter will be permitted.

d.) Roller lifters will not be permitted.

7. Ignition

a.) Only stock point type distributor or electronic ignition systems will be permitted. Ignition components of any type in the driver's compartment will not be permitted. An aftermarket HEI stock replacement type distributor will be permitted. The MSD HEI Part Number #8635 will be permitted. Aftermarket coils that fit in the traditional stock OEM location will be permitted.

b.) Ignition boxes and/or multi-spark type ignition systems will not be permitted.

c.) The distributor must mount in the OEM stock location. Rotation and firing order must remain in the stock OEM firing order for the engine. GM Firing Order: 1-8-4-3-6-5-7-2

d.) Adjustable timing controls will not be permitted.

8. Intake manifold

a.) Only the following intake manifolds will be permitted competition:

- i. Chevrolet Edelbrock #2101
- ii. Chevrolet Edelbrock #7101
- iii. Chevrolet Vortec #2116
- iv. Chevrolet Vortec #7116
- v. Ford #M-9424-C358
- vi. Ford #M-9424-C302
- vii. Ford Edelbrock #2121
- viii. Ford Edelbrock #2181
- viiii. Ford Edelbrock #2750
- x. Chrysler Edelbrock #2176

b.) Alterations and/or modifications of any type to the intake manifold including porting, acid dipping, polishing deburring, removal of flashing, abrasive cleaning, painting, milling, cutting, drilling, enlarging bolt holes, matching, welding or any other type of alteration will not be permitted.

c.) Welding and/or epoxy and/or filling of any type will not be permitted.

d.) Painting and/or coating and/or the application of coating will not be permitted.

e.) Identification and/or part numbers on the intake manifold must remain unaltered in their stock OEM position.

f.) The intake must be sealed without gaps and/or air introduction to the engine block and carburetor. Any type of gap will not be permitted.

9. Carburetor

- a.) Only the Holley 4412 500 CFM or the 4412 500 CFM CT will be permitted for competition. The 4412 500 CFM and 4412 500 CFM CT are separate carburetors and the interchanging of parts from one to the other will not be permitted. Only Holley manufactured materials, replacement parts as designated by the part number will be permitted.
- b.) Alterations of any type, grinding, polishing, machined, coating and/or other wise; internal or external to the carburetor base and/or any of its components will not be permitted.
- c.) The carburetor must be mounted in the standard position on the intake manifold. Sideways mounting of the carburetor will not be permitted.
- d.) The venturis must remain unaltered.
- e.) Removal of the casting ring will not be permitted.
- f.) The base plate must remain unaltered.
- g.) The throttle shafts must remain unaltered. Machining, polishing, cutting and/or thinning of the throttle shafts will not be permitted.
- h.) The throttle plates (butterflies) may be drilled for idle holes only. Alteration to the shape, thinning, knife edging, rounding, tapering and/or any other type of alteration to the throttle plate will not be permitted.
- i.) Changing and/or tuning of the power valve, pump cam and/or accelerator pump and/or jets will be permitted, but must be Holley components and manufactured for the carburetor; OEM. Aftermarket and/or components that fit the carburetor that are not Holley OEM components for the part number of the carburetor will not be permitted.
- j.) Removal of the choke horn will not be permitted. Removal of the choke plate and choke linkage will be permitted. The gasket ring must remain unaltered from the manufacturer.
- k.) The carburetor boosters must maintain their stock OEM size and must remain in their original mounting location in the main carburetor body. Any alteration to the booster, the booster bridge, including but not limited to the raising or lowering of the booster height, will not be permitted.
- l.) Alterations that permit additional air to be introduced below the opening of the venturis such as altered gaskets, base plates and/or drilling holes into the carburetor will not be permitted.
- m.) Epoxy fillers of any type will not be permitted.
- n.) Only mechanical throttle type linkage will be permitted. Two (2) throttle return springs must be utilized. Cable type and/or any other type of throttle linkage will not be permitted.
- o.) A toe strap is mandatory.

10. Carburetor Spacer / Adaptor Plate

- a.) A single one piece carburetor spacer will be permitted. The spacer may only be aluminum or phenolic plastic material. Other materials will not be permitted. Taper and/or beveled shapes will not be permitted. The spacer must conform to the base of carburetor and use two (2) paper gaskets. The maximum thickness for either gasket will be .065"-inches.
- b.) The carburetor spacer must remain in the same position as the original carburetor mounting position on the intake manifold.
- c.) Wedge shaped mounting surfaces will not be permitted. The top and bottom surfaces must remain parallel.
- d.) The carburetor spacer must have two (2) holes a maximum of 1.750"-inches with a straight bore (perpendicular to the top and bottom surfaces) and match the base of the carburetor.
- e.) Any type of air flow modifications will not be permitted.

11. Air Cleaner

- a.) Only one (1) round paper type (dry) air cleaner will be permitted. Openings on the top of the air cleaner will not be permitted. **Plastic type (K&N) type bottom air cleaner housing components will be permitted.** Plastic type (K&N) type top and bottom air cleaner housing components will not be permitted.
- b.) All air that enters engine must pass through air cleaner. Any type of device that directs and/or ducts air to or from the air cleaner will not be permitted. Air induction, ducts, baffles, tubes, funnels, hats and/or any other device that controls air entering the carburetor will not be permitted.
- c.) The filter must be mounted in the center of the carburetor. A maximum one (1) inch spacer will be permitted between the carburetor and the air cleaner.
- d.) Performance enhancing additives and/or chemical and/or freezing or cooling of, on and/or in the air cleaner and/or any of the air cleaner components will not be permitted.
- e.) Cold air boxes will not be permitted.

13. Oiling System

- a.) Only wet sump type oiling systems will be permitted. Dry sump type systems will not be permitted.
- b.) Only internal oil pumps driven from the distributor will be permitted.
- c.) Only standard type magnetic steel oil pans will be permitted.
- d.) Oil deflecting to individual rod and/or main journals will not be permitted.

- e.) Partitions of any kind in the oil pan will not be permitted. Oil pans must be approved prior to entry into competition by Race of Champions Officials.
- f.) Beginning January 1, 2017; A one (1) inch inspection plug must be placed in the bottom of oil pan for visual and mechanical inspection. The inspection plug must be a minimum of 1 1/4" inch located 9 1/2" inches from the rear of the block face to the centerline of the inspection hole and 1 1/4" inches from the oil pan rail. Obstructed views from the inspection hole to the crank and rods will not be permitted. If the view is obstructed from the inspection hole, removal of the oil pan will be required.
14. Engine / Car Electrical System / Ignition System
- a.) Only stock OEM type HEI type ignition systems will be permitted. Ignition components of any type in the driver's compartment will not be permitted. Aftermarket coils that fit in the traditional stock OEM location will be permitted.
 - b.) Ignition boxes and/or multi-spark type ignition systems will not be permitted.
 - c.) Adjustable timing controls will not be permitted.
 - d.) Only the MSD soft-touch rev limiting system will be permitted.
15. Alternator
- a.) The alternator system, if used, must be working within specifications and mounted on the front of the engine in the stock OEM location.
16. Starter
- a.) The self-starter must be in working order. After the race is underway, cars may be started by hand pushing on pit road and/or in the pit area only. Cars may not be hand pushed onto and/or on the race track during competition. In the event that any car is hand pushed onto or on the track during competition that car will be immediately disqualified from the event.
17. Battery
- a.) Only Race of Champions approved batteries with a maximum nominal voltage of 12 volts will be permitted. Each battery(s) must be of the standard automotive type.
 - b.) The battery must be located between the frame rails. The battery must be completely encased. If located under the hood, the battery must have a suitable cover. The battery must not be forward of the radiator or rear of the rear end housing of the car. The battery location must be acceptable to Race of Champion Officials.
18. Engine Cooling System
- a.) The radiator must appear and work like an OEM radiator and be centered in front of engine. Copper, brass or aluminum radiators will be permitted. An additional dust screen used in front of the radiator, approved by Race of Champions Officials will be permitted.
 - b.) Cooling or icing type chemicals in the engine compartment will not be permitted.
 - c.) The coolant must flow in same direction as production engine.
 - d.) External portable machines that provide cooling of the cooling system will not be permitted.
 - e.) The radiator overflow pipe may be relocated and must use a minimum one (1) gallon overflow can.
19. Water Pump
- a.) Only OEM type water pumps, turning in the same direction of crankshaft rotation and in the approved location, will be permitted.
 - b.) Coolant flow must be in the same direction as the approved production engine.
20. Engine Exhaust System
- a.) The exhaust systems and components must be acceptable to Race of Champions Officials and meet the following minimum requirements.
21. Exhaust Headers
- a.) Exhaust headers or stock OEM steel exhaust manifolds will be permitted.
 - b.) The exhaust must exit neatly behind the driver. Excessive holes and/or leaks within the exhaust system will not be permitted.
 - c.) The exhaust header(s) must be a basic round tube exhaust header-type. Materials used in the exhaust header must be magnetic steel with the primary tube size of a maximum 1 3/4" inch and a minimum of 1 5/8" inch. Schoenfeld stock replacement exhaust headers will be permitted.
 - d.) The exhaust headers may exit over the top of the bell housing.
 - e.) Adjustable exhaust headers, try-y type, collector type, 180 degree, merge type, pyramid type, exhaust headers will not be permitted.

- f.) Inserts in the exhaust headers or collectors will not be permitted.
- g.) Exhaust systems will not be permitted in the driver's compartment.
- h.) Cross over pipes will be permitted on the exhaust pipes. "X" "Y" or two (2) into one (1) exhaust systems will be permitted.
- i.) The maximum exhaust pipe diameter will be 3" inches.
- i.) Thermal wrap on the exhaust headers will not be permitted.
- j.) Coatings of any type will not be permitted inside and/or outside the exhaust headers.

22. Drive Train

- a.) All drive train systems and drive train system components must be approved by the Race of Champions. Prior to being used in competition, all drive train systems and drive train system components must be submitted, in a completed form/assembly, to the Race of Champions for consideration of approval and approved by the Race of Champions. Each such part may thereafter be used until the Race of Champions determines that such part is no longer eligible. All drive train fasteners and mounting hardware must be made of solid magnetic steel.

27. Clutch

- a.) Only mechanical foot pedal, cable or hydraulic operated clutches will be permitted. Pneumatic assisted clutches will not be permitted.
- b.) Any single disc OEM production type clutch assembly with a minimum 10-1/2" inch diameter steel hub disc will be permitted. The clutch assembly (clutch and flywheel) must weigh a minimum of 30 lbs. Lightweight or high performance clutches will not be permitted.
- c.) The clutch assembly must be bolted to the flywheel located inside the bell housing.
- d.) Only a single disc / pressure plate design type clutch assembly will be permitted for competition. The disc clutch housing assembly and cover must be made from aluminum or magnetic steel. The clutch cover must be the push-type design.
- e.) Only stock OEM production type solid magnetic steel or aluminum pressure plates, and magnetic steel floater plates, without any holes will be permitted.
- f.) The clutch must be mounted inside the bell housing.
- g.) Clutches must be a positive engagement design. Slider or slipper clutch designs will not be permitted.
- h.) Any single disc OEM production type clutch assembly with a minimum 10-1/2" inch diameter steel hub disc will be permitted.

28. Bell Housing

- a.) Only aluminum or magnetic steel bell housings acceptable to Race of Champions Officials will be permitted.
- c.) It is recommended that a 3/4 inch hole be drilled in the top of the bell housing directly over the starter ring gear to manually turn the engine for checking the compression ratio limit. This will be the only modification permitted on the approved aluminum bell housings.
- d.) Holes and/or other modifications that, in the judgment of Race of Champions Officials, have been made with the intent of weight reduction will not be permitted.
- e.) For all engine block-mounted starters, the starter mounting position must remain on the right side for Ford and General Motors engines.

29. Transmission

- a.) Transmissions must be standard production OEM type design. Three (3) or four (4) speed standard transmissions will be permitted. All gears must be in working order and may not be altered and/or removed. Jericho, Richmond, T-10 or any other high performance type, racing purpose built transmission will not be permitted. The transmission must be from an approved manufacturer. Race of Champions Officials may use a transmission provided by the respective manufacturer as a guide in determining whether a Competitor's transmission conforms to the specifications of the Rule Book. **In the event that a competitor has a three (3) or four (4) speed transmission with gears removed to create a two (2) speed transmission, the manufacturer / rebuilder of the transmission must submit the transmission for inspection and review prior to approval into competition. An added weight penalty will be required for this type of transmission upon approval.**
- b.) Two (2) or three (3) speed automatic transmissions will be permitted. All gears must be in working order. Turbo 350, 6 or 8 cylinder Powerglides that maintain stock OEM production dimensions and/or components in working order will be permitted. Automatic direct drives will not be permitted.
- c.) Automatic transmissions must have a stock torque converter with stock dimensions. The torque converter may not be bypassed. The minimum diameter of the torque converter will be 10"-inches. The torque converter must not be hollow and must have and maintain stock working internal components.

30. Drive Shaft

- a.) The drive shaft, universal joints and yokes must be magnetic steel and similar in design to standard OEM production type drive shaft components. Only a one-piece magnetic steel drive shaft with a minimum outside diameter of two (2) inches and a minimum thickness of 0.090 inch or a minimum outside diameter of 2-1/2 inches and a minimum wall thickness of 0.065 inch will be permitted. All drive shafts must be painted white.
- b.) Two (2), 360 degree solid magnetic steel brackets, without holes or slots, not less than two (2) inches wide and 1/4 inch thick, must be placed around the drive shaft and be welded or fastened to the crossmember of the car. As an option the rear drive shaft bracket may be bolted directly to the torque arm using a minimum of two (2) high quality 3/8 inch minimum diameter bolts.

m.2 Fuel, Fuel Cells and Fuel Systems

- a.) Only VP Racing Fuels (VP110/Purple) racing gasoline will be permitted for competition.
- b.) A designated VP Racing Fuels "Crate Fuel" may be permitted for competition.
- c.) All cars must have maximum 22 gallon fuel cell enclosed in a magnetic steel container mounted securely in the rear of the car. The bottom of the fuel cell must not drop below the centerline of the rear axle housing with the car at the specified ride height.

m.3 Muffler and Sound Reduction Devices

- a.) Mufflers must be used in competition.
- b.) Several tracks have a locally enforced decibel rule, which preempt any particular muffler rule. Some tracks may have a maximum sound level rule of 95 decibels at 100 feet. This rule will be enforced by local government agencies. Such decibel rules preempt utilizing the required mufflers in sub-section m.3.

m.4 Traction Control Devices

- a.) All electronic and/or computerized wheel spin and/or ignition retardation and/or acceleration limiting and/or traction control devices of any type will not be permitted.
- b.) Adjustable ping control devices, dial a chip controls, timing controls and/or automated throttle controls will not be permitted.
- c.) Remote control components of any-type will not be permitted.
- d.) Data acquisition systems will not be permitted.

m.5 Chassis / Frame

- a.) Interchanging of suspension components between manufacturers will not be permitted with respect to the manufacturer of the vehicle. The suspension must conform to the manufacturer of the chassis unless otherwise specified. Positive identification of the make, model and year of the chassis will be required for the purpose of inspection.
- b.) Any stock, unaltered metrick, g-body, Ford or full frame chassis, 1965 or newer will be permitted. The stock, unaltered Chevrolet Camaro or Pontiac Firebird will be permitted without receiving a left side weight penalty.
- c.) The mounting points for all front suspension components should remain stock OEM in appearance. The upper control arm mounting perch may be moved and/or fabricated. The lowering of any front end pivot points and/or mounting locations will not be permitted.
- d.) The full "Johnson" tube chassis (front and rear clip) will be permitted. All suspension components must remain mounted in their stock OEM production and manufactured locations.
- e.) A Camaro style front clip will only be permitted on a Camaro matching the year, make and model of the frame type.
- f.) The rear frame rails may be replaced with 2"-inch x 3"-inch rectangular tubing from the center of the rear axle housing to behind the fuel cell. The fuel cell must be enclosed by 1"-inch x 1"-inch square tubing.

m.6 Weight

- a.) All cars must be weighed prior to the feature event (total and left side weight).
- b.) All cars must weigh a minimum of 3,200 lbs pre or post race with a maximum of 56% left side weight.

c.) The left side weight percentage must be maintained at all times throughout the event. If at any time the left side weight percentage is exceeded a penalty as per section "K" of the Race of Champions rule book may be issued.

m.7 Body

a.) Only stock appearing steel, fiberglass, aluminum or composite bodies will be permitted. Sheet metal and body panels may be fabricated, replaced and/or repaired out of steel, aluminum or composite materials. The body must remain neat in appearance. Sharp edges and or loose metal will not be permitted. Dirt and/or bodies with the intent of creating downforce and/or purposely redirecting the airflow over the body will not be permitted.

b.) Fiberglass, aluminum or composite hoods and replacement body components will be permitted. Side rails, which are positively secured to the vehicle without sharp edges, will be permitted. **The hood must enclose the air cleaner, 360 degrees, around the air cleaner.**

c.) Side windows, window naca-ducts, a-post, b-post and c-post windows made from lexan will not be permitted.

d.) Side skirts, front spoilers and front valance will be permitted. The body must not extend any lower than bottom of the frame rail (five (5) inches) from the ground.

e.) A rear spoiler with the maximum height of six (6) inches will be permitted. Bracing on the spoiler will be permitted. The maximum width of the spoiler must not extend outside the edge of the quarter panels.

f.) A full front windshield made from lexan must be used.

g.) Aftermarket stock car bodies will be permitted. The ABC type and/or Super Late Model type downforce configuration of any type and/or separate components will not be permitted. AR Bodies 'Muscle Car' (Retro) style Ford Mustang, Chevrolet Camaro and/or Dodge Challenger will be permitted. AR Bodies Super Stock or Sportsman bodies will be permitted.

m.8 Suspension

1. Suspension

a.) All suspension systems and components must be approved by Race of Champions Officials. Prior to being used in competition, all suspension systems and components must be submitted, in a completed form/assembly, to Race of Champions Officials for consideration of approval and approved by the Race of Champions. Each such part may thereafter be used until the Race of Champions determines that such part is no longer eligible. All suspension fasteners and mounting hardware must be made of solid magnetic steel.

b.) The rear suspension must remain stock OEM production four (4) link type as designed and located for the year make and model as the vehicle being entered into competition. **Stock and/or aftermarket type (rod end) mounts, mounted solid and centered as a replacement for the stock mount will be permitted, provided the stock location is maintained.**

c.) The rear suspension and mounting points must remain in their stock OEM production location for the year make and model as the vehicle being entered into competition. **Magnetic steel, rubber and/or mono ball mounting bushings will be permitted. Rear lower frame mounts may be replaced with fabricated and/or aftermarket brackets, due to the challenge in maintaining and poor conditions of existing OEM mounts, replacing and rebuilding any stock OEM production mount.**

d.) Watts linkage type of rear suspensions will not be permitted.

e.) All three (3) link, panhard bar type rear suspension designs and/or late model rear type suspensions will not be permitted.

f.) **Upper and lower links in the stock four (4) link rear suspension must retain a stock OEM appearance and location when practical. In order to meet the frame height rule, the upper mounts may be moved and fabricated. The upper links may be adjusted from the stock OEM production dimensions in length. Components may be replaced with radius type rods to permit alignment of the chassis. The rear upper control arm mounts and mounting points may be replaced with fabricated and/or aftermarket brackets**

2. Coil Springs

a.) All coil springs must be constructed using round magnetic steel wire, wound in a clockwise direction. Ovate and flat wire will not be permitted. The coil spring wire diameter must be the same size from the top to the bottom of the springs. All of the coils in a spring must be active. The coil springs at all four (4) wheels must be active and permit suspension movement.

b.) Coil Front and Rear Springs

- (1) Coil springs must mount inside the lower A-frames spring bucket and the stock OEM location in the rear spring bucket(s).
 - (2) Coil springs must be heavy-duty magnetic steel and must be constructed with both coil ends closed and ground.
 - (3) Only one (1) spring per wheel will be permitted.
 - (4) Racing type springs may be used and must be of the same design as the stock OEM production springs and must mount in the original position and location.
 - (5) Unless otherwise authorized by the Race of Champions Officials, coil spring rubber inserts will not be permitted for qualifying or prior to the start of the Race. After the completion of one (1) green flag lap in a Race, one (1) coil spring rubber insert, not to exceed one (1) full coil of the front coil spring, acceptable to Race of Champions Officials, will be permitted.
 - (6) Progressive or digressive rate springs will not be permitted.
 - (7) Coil springs may be cut and/or modified.
- c.) Coil springs over the shock absorber will not be permitted.
 - d.) Weight adjust threaded rods and plates will be permitted on each spring (jacking bolts). The rear spring pockets may be moved and fabricated to allow for the installation of the jacking adjuster bolts and hardware.
3. Sway Bars (Anti-Roll Bars)
- a.) Front sway bar(s), when used, must be for the purpose anti-roll only. The front sway bars must freely rotate in their mounts. The movement of the front sway bar arms must not be prevented or restricted beyond that of normal use as an anti-roll bar.
 - b.) Only stock OEM production type sway bars will be permitted.
 - c.) The Howe manufactured style sway bar will be permitted.
 - d.) Sway bars utilizing a spline mount will not be permitted.
 - c.) Rear sway bars (anti-roll bars) will not be permitted.
4. Shock Absorbers
- a.) Only one shock absorber per wheel will be permitted for competition.
 - b.) The shock absorber must be from a production shock absorber manufacturer and available to all participants for purchase with a listed "racer" list price of a maximum of \$125.00. Only the QA-1 part number 26A Series Shock Absorber with a "racer" list price of a maximum of \$139.95 will be permitted as an exception.
 - c.) The shock absorber must meet and maintain the manufacturer's assembly and design. Any alteration from the original shock absorber manufacturer original assembly, including valving will not be permitted.**
 - d.) The shock absorber mounting position may be modified from the stock OEM production location to allow for clearance and installation of the front and rear weight jack adjuster bolts.
 - e.) It is the responsibility of the crew chief, not the Race of Champions, to ensure the shock absorbers are used in accordance with the manufacturer's instructions and specifications.
5. A-Frames
- a.) The upper A-frames, lower A-frames and ball joints must be acceptable to Race of Champions Officials and meet the following minimum requirements.
 - b.) Johnson chassis style lower control arms will be permitted.
 - c.) Aftermarket upper and lower production type control arms will be permitted. Replacement control arms will be permitted.
 - d.) Fully adjustable upper control arms will not be permitted regardless of the year make and model of the chassis.
 - e.) Stock OEM production type, production type replacement ball joints or after-market type ball joint replacements will be permitted.
6. Spindles / Wheel Bearings / Hubs
- a.) The spindles, wheel bearings, and hubs must be acceptable to Race of Champions Officials and meet the following minimum requirements:
 - b.) The spindles must be stock OEM production type spindles and used with the specified manufacturer. Interchanging of manufacturers will not be permitted.
 - c.) The Speedway Motors GM Metric 3-piece spindle part number 910-34501 will be permitted.
 - d.) Racing spindles will not be permitted. Drop spindles will not be permitted.
 - e.) Aftermarket hubs will be permitted. Wide five racing hubs will not be permitted.
7. Tread Width Requirements

a.) All cars must maintain the following tread width requirements. A minimum front and rear tread width of 80 inches. The tread width will be determined by measuring the left outside tire sidewall surface to the right outside tire sidewall surface at spindle height.

8. Wheelbase Requirements

- a.) The minimum wheel base will be 108"-inches when measured on either side of the car.
- b.) When measuring the wheelbase, the maximum allowable difference must not exceed one (1) inch plus or minus (+/-) on the opposite side. Any device or procedure which has the ability to dynamically change the wheelbase beyond normal travel parameters will not be permitted.

9. Ground Clearance Requirements

Ground Clearance Requirements

- a.) The frame rail and sheet metal ground clearance will be a minimum of five (5) inches when measured at the frame behind the front tires and in front of the rear tires. All ground clearance requirements will be measured with the driver in the car.

10. Car Height Adjustment / Handling Devices

- a.) The only device permitted for adjusting the height of a car will be the front and rear coil over spring units (jacking bolts).
- b.) Any device(s) for adjusting the handling characteristics or the car's height, which can be activated by the driver, will not be permitted inside of the driver's compartment.
- c.) Electrical, pneumatic, hydraulic, remote control, or any other devices, which change the handling characteristics or height of the car, will not be permitted.
- d.) Devices and/or procedures to, or used to, reduce or hold the car lower than the normal stiffness of the springs will not be permitted.
- e.) Car height adjustments will not be permitted on the left front suspension during a Race unless approved by Race of Champions Officials.

11. Steering Components

- a.) All steering components must be approved by the Race of Champions. Prior to being used in competition, all major steering components must be submitted, in a completed form/assembly, to the Race of Champions Officials for consideration of approval and approved by the Race of Champions. Each such part may thereafter be used until the Race of Champions determines that such part is no longer eligible.
- b.) Rack and pinion steering will not be permitted.
- c.) The center-link, pitman-arm and idler arm must remain stock OEM production, non-adjustable and/or the specified replacement part as specified for the year, make and model. Howe and/or All-Star adjustable steering items will not be permitted.
- d.) All cars must be equipped with a magnetic steel steering shaft.
- e.) The inner tie rod ends must remain stock OEM production. The tie rods and outer tie rod ends may be replaced. Any alteration to any steering component must be approved by Race of Champions Officials.
- e.) Tie rods, drag links and steering component parts must be heavy-duty. Holes and/or other modifications in steering components that, in the judgment of Race of Champions Officials, have been made with the intent of weight reduction, will not be permitted.
- e.) The center top of the steering post must be padded with at least two (2) inches of resilient material acceptable to Race of Champions Officials.
- f.) A quick-release steering wheel coupling with a magnetic steel housing acceptable to Race of Champions Officials should be used. The steering wheel coupling should meet the SFI 42.1 specification and display a valid SFI 42.1 label on the outside surface. The magnetic steel housing must not be covered with plastics or coatings.
- g.) The use of universal joints in the steering shaft must be acceptable to Race of Champions Officials. It is recommended that a minimum of two (2) universal joints be used forward of the firewall.
- h.) Steering wheels must have solid, magnetic steel spokes.

13. Brake Components

- a.) Stock OEM production type brakes will be permitted. Stock OEM production type disc brakes with magnetic cast iron or cast steel round rotors on the front and rear of the car will be permitted. Only metal brake calipers will be permitted.
- b.) Brakes must be operational on all four (4) wheels at all times. Valves of any type will not be permitted in the brake lines that will reduce or cut off the flow of brake fluid to a single wheel.
- c.) Inboard brakes will not be permitted.

- d.) Only one (1) brake caliper per wheel using only two (2) brake pads per caliper will be permitted. Brakes must be mounted in the stock OEM location. Brake calipers and mounting must be acceptable to Race of Champions Officials.
- e.) Brake pads must have a magnetic steel backing plate.
- g.) **Brake rotors must be used as manufactured.** Brake rotors must be acceptable to Race of Champions Officials.
- h.) Two (2) master cylinders may be used. Master cylinder(s) and reservoir(s) should be mounted on the engine side of the front firewall. The master cylinder(s) must be metal and must be the pushpiston type. Only single-stage master cylinders will be permitted. Only one (1) bore size, per master cylinder, will be permitted. Pull type master cylinders will not be permitted.
- i.) Holes and/or other modifications in the brake pedal arm that, in the judgment of Race of Champions Officials, have been made with the intent of weight reduction will not be permitted.
- j.) Only mechanical, hand operated, cable driven brake bias adjustment systems out of the reach of the driver will be permitted.
- k.) Inline brake proportioning systems will not be permitted.
- l.) Electronic wheel speed sensors or brake actuators will not be permitted.
- m.) Power assisted braking systems will not be permitted.
- n.) Quick disconnect fittings on the brake lines will not be permitted.
- o.) Brake pad retraction devices will not be permitted.

15. Rear Axle

- a.) The rear axle must be acceptable to Race of Champions Officials and meet the following requirements:
- b.) The GM 10 bolt 7.5, 8.5 and Ford 9"-inch type (in any manufacturer) locked rear ends will be permitted. Aluminum and/or any composite type and/or exotic type material center sections will not be permitted.
- c.) Ratchets and/or lockers (Detroit Locker, Gold Track, Gleason) of any type from any manufacturer will not be permitted.
- d.) Full floater rear ends will be permitted. Aluminum or magnetic steel spools will be permitted.
- e.) Full floating magnetic steel axles will be permitted for competition.
- f.) Only magnetic steel axle tubes will be permitted.
- g.) All rear ends must be a four (4) link suspension type mounted in the stock OEM production location with stock OEM type rear suspension components for the year, make and model of the vehicle. Steel or rubber bushings in the four (4) link suspension mounting will be permitted. Interchanging of rear end components and mounting locations of the year, make and model will not be permitted.
- h.) Panhard and/or track bars will not be permitted.
- i.) Heating pads and/or blankets will not be permitted for warming the rear end assembly.
- j.) Race of Champions Officials may, at its discretion, require that all cars compete with a final drive gear ratio specified by Race of Champions Officials for each Event.
- k.) For purposes of checking a pre-determined final drive gear ratio, when jacked up both rear wheels must rotate in the same direction with each traveling the same rotational distance.

m.9 Roll Cage

1. Roll Cage

- a.) The main roll cage and center design and construction must be of the standard stock car type and be approved by Race of Champions Officials.
- b.) The main roll cage must be constructed with a minimum outside diameter of 1-3/4"-inch .090"-inch wall thickness seamless tubing welded completely.
- c.) Radical and/or one off type roll cage designs will not be permitted.
- d.) Sharp and/or unfinished bars, plates and/or metal and/or any exposed metal of any type will not be permitted.

m.10 Tires

- a.) The following tire rule(s) will apply. Only the used Hoosier tires as supplied will be permitted for all scheduled events.
- b.) Chemical alteration, treatment, defacing, mechanical and/or any type of treatment that adjusts the chemical composition of the tire will not be permitted.
- c.) The tire must meet the specified Race of Champions Officials durometer reading when the tire is cold and/or hot. The specified durometer that each tire must meet will be made known at each event.

m.11 Wheels

- a.) Only steel wheels with a maximum diameter of 15"-inches and only a width of 8"-inches will be permitted for competition. Wheels manufactured specifically for racing will be permitted.
- b.) The offset of the wheel must be within one (1) inch from side-to-side of the vehicle.
- c.) A maximum of 80"-inches of treadwidth will be permitted when measured from outside-to-outside of the sidewall of the tire.
- d.) A straight line marked in visible ink will be required on the rear tires across the wheel and on to the side wall of the tire.

m.12 Safety

NOTE: Unless otherwise specified within Section M.1.D, the rules shall remain as published in section M.1.A. Only specified Race of Champions Super Stock (formerly Big 10) rules will appear in section M.1.D

- a.) All safety items are subject to approval by Race of Champions Officials.

m.13 Other

NOTE: Unless otherwise specified within Section M.1.D, the rules shall remain as published in section M.1.A. Only specified Race of Champions Super Stock (formerly Big 10) rules will appear in section M.1.D

m.14 Series Decals and Patches

NOTE: Unless otherwise specified within Section M.1.B, the rules shall remain as published in section M.1.A. Only specified Race of Champions Super Stock (formerly Big 10) rules will appear in section M.1.D