

2012 4-Cylinder Rules

In keeping with Hickory Motor Speedway's attempt to improve competition and increase car count we will be combining several type mini stocks into one division. To determine which of the below rules is for you please read the following and then proceed to your section of the rulebook below.

If your car as at least one of the following you are a Pro-4 car:

- Adjustable Panhard bar
- Coil over shocks
- Tube frame
- Fabricated upper and lower A-arms.
- Offset Chassis
- Ported and polished cylinder head
- Rear disk brakes
- Quick change rear-end
- Ford 2500 Crankshaft

If your car has at least one of the following you are a Modified Mini Stock:

- Late model type front sway bar
- Screw jacks
- Tube front frame section in front of firewall.
- Aftermarket shock tower & suspension parts

If your car has none of the above then you are a Pure Mini.

Head and neck restraint devices are RECOMMENDED for use at HMS.

The following are the SFI-approved Head and Neck Restraint Devices/Systems that are currently acceptable to NASCAR:

- HANS Device Professional Series Fixed or Sliding Tethers
- HANS Device Extra/Economy Series Fixed or Sliding Tethers
- HANS Device Sport Series Fixed or Sliding Tethers
- Hutchens Device Hybrid

FIRE CONTROL – All Cars

All cars must have an on board fire extinguisher, dry powder or DuPont FE-36 or equivalent type agent. Driver must be able to reach fire extinguisher or the control knob on unit. No extinguisher may be taped to the roll bars or brackets. When the car is on the track, it is mandatory that the driver wear a fire resistant driving suit. Fire resistant gloves are recommended.

At all times during an Event (practice, qualifying and competition), drivers should connect their helmet to a Track-approved head-and-neck restraint device/system. The head-and-neck restraint device/system when connected, should be configured, maintained, and used in accordance with the manufacturer's instructions.

IT IS THE RESPONSIBILITY OF THE DRIVER, NOT NASCAR, TRACK OFFICIALS, OR THE PROMOTER, TO INSURE THAT HIS/HER DEVICE/SYSTEM IS TRACK APPROVED, CORRECTLY INSTALLED, MAINTAINED AND PROPERLY USED. ANY ITEMS NOT COVERED IN THE ABOVE RULES WILL BE AT OFFICIALS' DISCRETION.

\$1000 fine for tire soak

\$100 fine for antifreeze

All cars must purchase one set of tires at the beginning of the season. Tires will be Goodyear D-2833. No air bleeders allowed.

CARBURETOR - ALL CARS (from NASCAR LMSC Rulebook 2006)

The Holley 2300 two (2) barrel carburetor, list number 7448 and the Holley 2300 HP two (2) barrel carburetor, part number 80787-1, with a venturi size of 1-3/16 inches and maintaining a throttle bore maximum size of 1-1/2 inches (see B. below for Holley carburetor rework guidelines.) The Holley 2300 two (2) barrel carburetor, list number 7448 and the Holley 2300 HP two (2) barrel carburetor, part number 80787-1, are the only 350-CFM carburetors that will be permitted on all models. The venturis must maintain a round (circular) cross section. Only Holley replacement or service parts can be used in any carburetor rework. Carburetors and/or carburetor components machined from billet materials will not be permitted.

Holley 2300 and 2300 HP two (2) barrel Carburetor Rework Guidelines

Carburetor Main Body

Reshaping, polishing, grinding, or drilling of additional holes will not be permitted. The maximum size for the air bleed holes in the top of the carburetor body will be 0.080 inch for all four (4) holes. Screw in air bleed jets will not be permitted in the 2300 main body. Screw in air bleed jets will be permitted for the 2300 HP main body, but they must be epoxied in place. For the Holley 2300 HP main body, the amount of holes and passages must remain as manufactured. Additional and/or plugging holes or passages will not be permitted in the Holley

2300 HP main body.

The choke may be removed, but all screw holes must be permanently sealed.

Choke Horn

Choke horn must not be removed.

Carburetor Boosters

The booster type must not be changed. The Holley booster part number 45R-107-1, with the casting number 45R-107 and part number 45R-312R, with the casting number 45R-312 are the only boosters that will be permitted. The Holley casting numbers must remain legible on the top of all booster stems. Size or shape must not be altered. Height and location of the boosters must remain as manufactured. All boosters must maintain a minimum outside diameter of 0.616 inch. The addition of material will not be permitted to the boosters with the exception of a small amount of epoxy that may be used to assist in securing the booster stem to the main body of the carburetor.

Carburetor Venturi

The venturi area must not be altered or reshaped in any manner. The venturi must maintain a circular (round) cross section. The casting ring must not be removed. The location of the venturi must remain as produced by the manufacturer.

Alterations that, in the judgment of Track Officials, were made to allow additional air to be picked up below the opening of the venturi such as altered gaskets, base plates, and drilling holes into the carburetor will not be permitted.

Carburetor Throttle Body (base plate)

The carburetor throttle body must be used as provided by the manufacturer. The positioning of the throttle bores in the carburetor throttle body must be the same as provided by the manufacturer. The throttle bores must be completely round. The throttle bores must be straight without taper from top to bottom. The throttle bores must remain perpendicular to the top and bottom of the carburetor throttle body. The throttle body (base plate) must not be altered in shape or size. All vacuum holes must be threaded and plugged.

(Throttle Plates (butterflies))

Stock throttle plates (butterflies) must not be thinned or tapered. Idle holes may be drilled in butterflies. Screw ends may be cut even with the shafts, but the screw heads must remain standard.

Throttle Shafts

Shafts must remain stock and must not be thinned or cut in any manner.

Carburetor Metering Blocks

Only Holley metering blocks can be used. Surfacing of the metering blocks for improved gasket seal will be permitted. The only metering blocks permitted for the Holley 2300 HP carburetor (80787-1) will be the Holley, part numbers 11938N, 11886 (390HP) and 12323 (screw in emulsion bleed jets) metering blocks. To order metering block part number 12323 (screw in emulsion bleed jets) the sales number is 134-276. For the Holley 2300 HP approved metering blocks, the amount of holes and passages and the location must remain as manufactured with screw in emulsion bleed jets in each jet passage, however, hole sizes may be altered in the jets. Blanks without holes may be used. Additional holes or passages will not be permitted in the Holley 2300 HP approved metering blocks. The Holley metering block, part number 12323 (screw in emulsion bleed jets) will not be permitted in the Holley 2300, list number 7448.

Accelerator Pump

The accelerator pump discharge nozzle must not be changed. The retaining screw must not be drilled for a discharge passage.

Power Valves and Floats

May be altered

PRO-4 Type Car Rules

COMPETING MODELS

Competing models for cars and station wagons eligible are 1971 and later:

American Motors Spirit	Ford Thunderbird
Buick Skylark	Mercury Bobcat
Chevy Beretta	Mercury Capri
Chevy Chevette	Olds Starfire
Chevy Monza	Plymouth Arrow
Chevy Vega	Toyota Celica
Ford Mustang I & II	Toyota Corolla
Ford Pinto	Ford Taurus

1. After-market bodies approved for competition. If a fiberglass top is used, a 20-gauge steel panel must be welded over the driver's compartment, on top of the roll cage, from the front to the rear, and from side to side. If a fiberglass driver's door is used, a 22-gauge (minimum) plate must be installed either over or between driver door bars.
2. All bodies must match the chassis and motor manufacturer (Ford to Ford, GM to GM).
3. Other makes and models may be eligible, but must first be approved by the Technical Director.
4. No front-wheel-drive cars allowed.
5. Wheelbase must be from 96" to 101".

OVERALL CAR WEIGHT

1. Minimum Weight 2,200 lbs.
2. Car must weigh minimum of 1 lb. Per/cc of engine displacement. Right side weight minimum 45% plus 60 lbs.
3. Car weight includes driver before and after race. All lead weight must be painted white with car number on weight. Only gas and water may be added after race to make weight. – as specified in HMS Race Procedures.
4. Minimum weight with driver will be based on manufacturer stock displacement after overbore. Exact displacement with overbore and total car weight and right side weight must be shown on hood. Example: 2340/1113.

DETAILED BODY REQUIREMENTS

1. Bodies must be stock appearing.
2. Cars must maintain a roof height of forty-four (44) inches as measured at the highest point with the driver in the car. Roof line must be acceptable to officials.
3. Window opening must measure at least fourteen (14) inches.
4. Rear spoiler may not exceed four (4) inches in height and must be self-supported. Spoiler must be at least 1/8" thick. Front spoiler must be perpendicular to track with four-inch ground clearance.
5. Doors must be welded closed.
6. NO air ducts, scoops, etc.
7. At least two (2) positive fasteners must be used on each hood and deck lid.
8. Car must maintain steel front and rear firewalls. Firewalls must completely seal off driver's compartment.
9. Hatchback models are required to have an approved rear firewall.
10. Fuel cell area must be completely sealed off from driver compartment.
11. Front inner fender may be removed; rear wheel housing may be replaced with 22 gauge steel sheet metal or better, of same size.
12. Excessive tire tread must not be visible from top.
13. Wheel opening must be rolled and follow shape of body.
14. Maximum tread width of 64.5", measured from inside of one wheel to outside of other wheel at bead.
15. All glass must be removed. Windshield must be Lexan.
16. Windshield must have at least three (3) straps, 1/8" x 1" minimum inside. Windshield must be retained by six (6) 3" x 1" x 1/8" safety clips.

17. Rear window must be installed and have two (2) straps 1/8" x 1" minimum inside.
18. Cars with "C" pillar may run quarter windows. Must be Lexan with No writing, decals, etc.

HEIGHT

1. Cars must have 4.5" ground clearance at lowest point on car.

ENGINE ELIGIBILITY

1. Maximum displacement 2500 cc, before overbore.
2. .060 overbore maximum.
3. Block assembly must be "OEM", except GM may use Super Duty Block on 151 cu. inch engine only.
4. GM 151 engine allowed on all GM cars.
5. Engines may be balanced.
6. Actual displacement must be claimed and displayed on hood.

ENGINE/TRANSMISSION LOCATION

1. All engines utilizing GM 151 blocks or Chrysler 2.5 (Jeep) block; center of number-one spark plug hole must be in line with the center of the upper ball joints.
2. All engines utilizing Chrysler 2.2 or 2.5 (small) block; center of the rear factory transmission mount shall not extend past the mid-point of the wheelbase.
3. All other engines; rear of transmission tailshaft housing shall not extend past the mid-point of the wheelbase.

CYLINDER HEAD

1. Stock "OEM".
2. Any non-titanium valve may be used, but must be located and oriented in stock manner.
3. Stock production heads only. Porting and polishing allowed.
4. Valve size up to 1.890 intake and exhaust 1.60.
5. No angle-milled heads.
6. Any valve springs may be used.
7. NO aluminum heads allowed on GM 151 engine.
8. Three-angle valve jobs permitted same as NASCAR LMSC specs.
9. Stock (OEM) or after market aluminum intake manifold allowed. Internal machining allowed. No high rise intakes allowed.

CARBURETOR SPACER AND AIR CLEANER

1. Up to 2" spacer allowed with one gasket .065" thick on top and bottom. (Open plate or 2 hole carburetor)
2. All cars must use a round paper air cleaner, maximum of 180 degrees, the same height as the air filter, allowed. NO ducting to air filter allowed.

CRANKSHAFT

1. Stock "OEM" crankshafts only. Balancing and machining ok, NO lightening of crankshaft allowed. Casting numbers must not be removed. No interchanging crankshafts between manufacturers.
2. Any steel rod allowed. Maximum 5.7" rod length. Any rod bolt allowed.
3. Any piston allowed. Full-floating pins allowed.
4. 2.5 Crankshaft in 2.0 block add 20 lbs to right side.
5. All 2.5 crankshafts or modified crankshafts in 2.3 block must weigh 2500 lbs

CAMSHAFT

1. No roller camshafts permitted.
2. Any camshaft permitted, with the exception of a roller cam, dial in pulley permitted.
3. After market roller rocker arms permitted.

ENGINE COOLING SYSTEM

1. Electric fans allowed
2. Any radiator allowed in stock position.
3. No Antifreeze permitted.

EXHAUST SYSTEM

1. Any header allowed.
2. Two three (3) inch diameter (maximum) exhaust pipes.

3. Exhaust pipe must exit underneath the car or through the right side door area behind the driver's compartment. Any exhaust pipes inside car must be boxed in for safety.

ELECTRICAL SYSTEM

1. Any non-magneto ignition allowed.
2. Battery must be enclosed in a steel box.
3. No electrical connections or devices in trunk.
4. Master Battery Switch Labeled on/off switch must be located on the center of the dash board within the driver's reach. The switch must be wired to the battery cable in a manner that would cut off all power to the car.
5. Only one (1) standard automotive 12-volt battery will be permitted.

TRANSMISSION

1. Only standard production OEM type 3 or 4 speed transmission will be permitted.
2. All forward gears and reverse gear must be in working order.
3. Only steel angle cut forward gears will be allowed. No square cut gears.
4. No drop cluster transmissions allowed.
5. No 5 speed transmissions with gears removed allowed.
6. No automatic transmissions allowed.
7. Shifter boot meeting SFI 48.1 sealed to the floor required.

CLUTCH , FLYWHEEL and DRIVESHAFT

1. Flywheel must maintain a minimum weight of thirteen (13) pounds.
2. No aluminum flywheels allowed.
3. No center-mass flywheels allowed.
4. No multi-disc clutches allowed.
5. Bell housing must have an inspection hole in the lower section of the bell housing so the flywheel and clutch may be inspected.
6. Stock type 4 finger clutch required. Clutch disc with springs NOT ALLOWED. Clutch mechanism must be rated 10,000 RPM minimum.
7. Driveshaft must be made of steel minimum of 2 inches.
8. Driveshaft must be painted white
9. 2 360 degree solid magnetic steel brackets, with no holes or slots, not less than 2 inches wide and ¼ inch thick, must be placed around the drive shaft.
10. Steel bellhousing or scattershield must be installed on top, left, and right side of firewall constructed of 1/8 inch thick steel or ¼ inch belting.

REAR END

1. Stock or quick-change rear ends allowed.
2. Axles tubes must be magnetic steel.
3. Any gear ratio allowed.
4. Cambering of rear ends not allowed.

TIRES

1. Thirteen (13") inch diameter tires only allowed.
2. Maximum 9" wheel width allowed.
3. All four wheels must be of the same size and offset.
4. Goodyear is the only tire permitted. Tires must be purchased at the track. Must purchase of set of tires per year.
5. Steel or aluminum wheel spacers may be used to gain tire clearance, but may not be over one-half (1/2") inch thick. One per wheel only

FRAMES

1. Roll bar diameter 1 ¾" as specified in the NASCAR Rule Book.
2. Side rails must be a minimum of 2" x 3" rectangular steel with a .120 inch thick wall.
3. Front snout and rear clip must be a minimum of 2" x 2" square steel with a .090 inch thick wall.
4. Rear clip must angle down from its highest point to the rear bumper.
5. Floorboard in driver's compartment must be 1/8" steel plate, plus the area directly in front of the driver's feet, plus the area immediately to the right of the driver's feet. Cars utilizing original factory floorboard in these areas do not need steel reinforcement plates.

SUSPENSION

1. Screw Jacks allowed on all four corners.
2. All other suspension parts must be installed in such a manner that adjustments must be made from outside the driver's compartment.
3. Coil-over shocks allowed.
4. Any stock design springs.
5. Tubular upper and lower A-frames allowed. Lower control arms must be the same dimensions on both left and right side of the car.
6. Front and rear loop may be set in rectangular tubing to the top of the floor pan.
7. Rack and pinion steering allowed.
8. Stock design coil spring suspension allowed on all cars.
9. Rear coil spring upper mounts must be located and welded on the chassis directly above the lower mounts.

BRAKES

1. Only single piston disc brakes with stock type calipers allowed on front.
2. Either disc or drum brakes allowed on rear.
3. Rotors must be magnetic steel.
4. Floating brake calipers will not be permitted.
5. Brake recirculation systems will not be permitted.

SHOCKS

1. **Shocks will be controlled by a \$150.00 per shock claimer rule. Any competitor finishing within three (3) positions of the claimer may claim the shocks from that event. The claim must be made in writing within 20 minutes after the event accompanied by the cash. Anyone not allowing their shocks to be claimed will forfeit the purse for that event and may be fined.**
2. Shock absorbers must provide a resultant force dependent upon piston velocity and must be acceptable to Track Officials. Shock absorbers and components must be acceptable to Track Officials and must be available to all competitors from the shock absorber manufacturer. All non-revalvable shock absorbers must be used as supplied from the manufacturer.
3. Nitrogen-gas pressurized shock absorbers must be mono-tube, deflective disc valve type with an integral gas reservoir. Only a single piston is permitted in the main body with one (1) shim stack on the compression side, and one (1) shim stack on the rebound side, and only a single floating piston is permitted in the integral gas reservoir. Steel deflective disc valve shims must seal the primary metering faces of the single piston in the main shock body.
4. Adjustable shock absorbers permitted.
5. For all shock absorbers utilizing a gas reservoir, the maximum outside diameter of the gas reservoir must not exceed 2.600 inches.
6. Shock absorber shaft diameter must not exceed 0.630 inch and the shaft must not have any sleeves or spacers that could limit the travel of the shaft into or out of the main body.
7. Shock absorbers and internal components are subject to inspections.
8. Shock absorbers must be used as manufactured by the shock absorber company.
9. Track Officials may use a shock absorber provided by the respective manufacturer as a guide in determining whether a competitor's shock absorber conforms to the specifications in the Rule Book.
10. A maximum of one (1) shock absorber per wheel will be permitted.
11. Coil over shock absorbers will be permitted.
12. External shock absorber reservoirs will not be permitted.
13. Remote or electronically controlled shock absorbers will not be permitted.
14. An external schrader valve to pressurize the shock absorber with gas will be permitted.
15. Quick disconnect shock mounts will not be permitted. The shocks must be attached with nuts and bolts.
16. Heating pads and/or blankets will not be permitted for warming the shock absorbers.
17. It is the responsibility of the driver, not the Track Officials, to ensure the shock absorbers are used in accordance with the manufacturer's instructions and specifications.

FUEL SYSTEM

1. Fuel cell mandatory.
2. NO electric fuel pumps allowed unless stock for make and model.
3. Cars with electric pump must have either a mercury cut-off switch with a steel braided line from pressure side of pump to the carburetor, or low oil cut-off switch.
4. Fuel lines running through driver's compartment must be encased in steel tube.
5. Track fuel only, with no additives.

ROLL CAGE

1. Four point roll cage mandatory. 1 3/4, 90M minimum tubing.
2. Full roll cage with loop permitted
3. Roll bar padding must be used in driver's compartment.
4. NO straight door bars will be permitted. All door bars must be approved by HMS officials.

MODIFIED MINI STOCK COMPETING MODELS

Competition will be open to 1962 and later models of American or Foreign four passenger sedans sold in the United States. No Cosworth Vegas. No Mid Engine or all wheel drives.

BODY

Stock OEM configuration steel front fenders, roof and rear quarter panels will be considered "stock". May fabricate stock appearing metal doors and trunk lid. After market nose, tail and hood allowed. Metal, fiberglass or plastic. May interchange body on chassis make and model. Full after market bodies allowed. Full after market bodies and bodies interchanged chassis vs. make model. No addition to total weight. No open rear sections, minimum rear bumper cover height is 18 inches. No open wheel bodies. Bodies must be of a stock car type appearance. Hood and deck lid must have positive magnetic steel type fasteners. Inner body panels may be removed but must be safe and neat appearing. Headlight and tail light openings must be covered.

ROOF HEIGHT

After market body must maintain a minimum of 44 inches in height when measured 10 inches back from the center of the windshield.

SPOILERS

Rear spoiler can be a maximum of 5 inches and no wider than the rear deck.

DASHBOARD

All cars must use a complete metal dash.

SUSPENSION

OEM factory suspension only for make and model of chassis being used. No full tube cars with aftermarket suspensions. Upper A-frames may be cut. Adjuster cups or wedge bolts permitted. Lower control arms must be stock for year, make and model of car. May not use longer, later model Mustang 6 cyl A-arm on earlier models. All mounting points on the front lower unit must be in stock location. OEM spindles must be used and not altered except for adding bracing. Mono-Balls are permitted in the suspension. Neoprene and solid bushings are allowed. May use sliders, wedge bolts or extended shackles on leaf springs. Rear control arms must be stock OEM type. Stock type coil over strut kits may be used on cars that came with spring over strut design. EX: Toyota Corolla. Strut towers may be removed.

SWAY BAR AND STEERING

Any front anti-sway bar mechanism allowed. No Late Model sway bars with arms. No rear anti-sway bars. Must use heim joints on sway bar linkages. Must use OEM steering rack and/or linkages. OEM Ford pack and pinion may be used on other makes. May use heim joints where steering rod ends meet spindle steering arm for bump-steer correction.

SHOCKS AND STRUTS

After market type shocks and struts are acceptable, no coilovers allowed.

FIREWALLS

Firewall required and must fully shield driver from the engine compartment. Rear firewall may be stock or fabricate. No less than 24 gauge steel and must separate driver from the fuel cell.

FLOORPAN

Factory floor pan must extend from the front firewall to the rear firewall. May fabricate wheel wells and crush panels but they must be metal if part of either firewall. Floor pan may be patched. Must be steel patchwork of at least 24 gauge. Floor pan may be minimally altered to accommodate exhaust systems extending through the firewall, but safety will be at the discretion of the officials. Front and rear chassis may be connected with tubing that protrudes through floor pan. Tubing may replace rocker panels.

CHASSIS

All chassis to suspension control arm mounting points must be of OEM dimensions. And relative heights. Including, Front A-arms, rear upper and lower trailing arms, steering rack and pan hard bar. Uni-body design chassis may be tied together. No under slung rear chassis. No full tube chassis. Original chassis rails must be in tack from front cross member mounting to centerline of rear axle. After market tubing clip extensions must mount cross-member, suspension parts and steering rack in OEM location, and the majority of the front clip and

rear chassis rails must still be present to measure relative to. Considerations will be made for wrecked and repaired chassis at the tech-mans discretion. Stock front cross member must be used.

WHEELBASE/TREAD WIDTH

Wheelbase must match year of car being used. 64 inch tread width maximum. 101 inch wheelbase length maximum allowed.

GROUND CLEARANCE

Race height 4 ½ inch minimum with driver, checked at pinch weld or chassis. Whichever is lower. Ride height will be checked down length of left side of car between wheels. Minimum nose valence height is 4 inches.

ROLL BARS, SAFETY AND CONSTRUCTION GUIDELINES

Refer to NASCAR LMSC guidelines for minimum requirements.

ENGINE

OEM 4 cylinder engines. No 3 / 4 / 5 valve or double overhead cam engines allowed. No rotary engines. Cars may interchange with all gasoline engines and parts within same make under the following guidelines. With the exception of the Dodge 2600 cc engine which is permitted.

BLOCK

No aftermarket blocks. No o-ringing of block or block to head allowed. Must use head gasket. Cylinder walls may be sleeved for repair. No excessive machining to fit parts from other models. All parts within the block must be of the same make.

PISTONS

May use any stock or after market cast or forged piston. Must have same configuration as stock. Nissan 22 engine must use stock type dish pistons. Flat top pistons allowed only in engines that came that way. Toyota engines may use dome pistons which conform to all stock dimensions. Must match the head that is being used. Flat part of any piston may not protrude out of block. 0.065 inch max overbore permitted on all engines except for 3TC, where 59 mm is allowed. Pistons must be installed same as stock.

RODS

Any magnetic steel after market rod permitted. No hollow rods. Maximum rod length 5.7 for Fords. Only Toyota engines may use H-Beam style rods.

CRANKSHAFT

Stock OEM crankshafts only. No aftermarket crankshafts. Crankshafts may be polished between #5 main and #4 rod journal only for viewing of possible cracks. Not for lightening. No machining to crankshafts except to journals. Lightening only to balance and by means of drilling, No grinding. OEM stock stroke crankshafts. 0.015 stroke variation from stock. May use later model 2.3 liter Ford crankshafts in early model 2.3 blocks. No excessive machining to fit crankshaft to block. Crankshafts must be matched with their relative bore size. No 2500 cc crankshafts matched with a 2000 cc bore size. 3TC crankshafts allowed in 2TC blocks.

CAMSHAFTS

Any single camshaft permitted. Any lifter solid or hydraulic permitted. After market or high performance cam pulleys permitted. Stock ratio roller rocker arms permitted on GM engines only.

CYLINDER HEADS

Only manufacturer stock production heads which bolt to engine block being used. No excessive machining to fit head to block. No aftermarket cylinder heads permitted.

NO Esslinger aluminum stock type reproduction heads permitted. Heads do not have to match the block but all parts must be from same make. No porting and polishing of head allowed. No blending of valve job with rotor tool to head casting. Bowl cuts will be in accordance with LMSC guidelines with no blending to port. Multi-angle valve job will be permitted.

VALVES

Stainless steel valves permitted. Neck down valves permitted. Ford millimeter stem size valves permitted. Swirl polished valves permitted. Valve head diameter must match cylinder head being used, no over sized valves. Valves will be 1.75 or 1.5. Over sized valves add 100lbs to minimum weight. Listed right side and front minimum weight remains at 1035, total weigh 2400lbs.

VALVE SPRINGS

Any valve spring allowed. Flat spring dampers allowed stock diameter.

CARBURETOR SPACER

A one piece or two inch aluminum carb spacer(s) (adapter) maximum 2 inches in thickness may be installed between intake manifold and carb. Any hole design and blending in spacer allowed. No more than 2 inches.

INTAKE MANIFOLD

Stock and after market intakes allowed. May machine port and polish stock intakes. After market intakes must remain as from manufacturer, only machining to accept carburetor/spacer is allowed. Any gasket.

AIR CLEANER

Any round pleated paper air cleaner no hats, ducts, o-baffles. Must not protrude through hood. No opening in hood or cowl. Hood must seal to fenders and cowl. Bottom of air cleaner cannot be above choke horn.

ENGINE/ELECTRICAL SYSTEMS GENERAL

Only stock OEM starters permitted. Stock appearing for make and model block being used. No magnetos or MSD boxes. No crank-fire ignitions. Racing coils permitted. Mel's ignitions permitted.

BATTERY

Must be 12V. The battery must be installed in an enclosed metal box complete with cover, located in front of the rear axle housing or behind the driver's seat. The battery box must be mounted inside the frame rails and cannot extend below the bottom of the frame rails. The battery mounting position must be acceptable to Track Officials. Any battery that would be installed during the race must be installed in a battery box.

ENGINE COOLING SYSTEMS GENERAL

Any water pump belt driven from the crankshaft permitted. Stocked production radiators only or cheap aluminum racing radiator allowed. Minimum of one (1) quart overflow catch can required. All radiator overflow hoses must exit to the right side of windshield. Toyota may reroute water line to intake. Stock type or electric fans may be used stock type must have fan shroud over top of fan. After market pulleys permitted.

ENGINE LUBRICATION

Must use stock lubrication system for block being used DEM or after market oil pans permitted. No cranks scrapers/wipers. Windage trays permitted. No dry sump systems.

ENGINE EXHAUST SYSTEM

Any stock or after market exhaust permitted. Must have pipe which exits side of car. Exhausts exiting through the firewall allowed at tech officials discretion as to safety or arrangement. No header wrap allowed. Crankcase to exhaust evacuation system permitted.

CLUTCH

Stock type clutch disc and pressure plate only, minimum 8.5 inches diameter disc. After market discs allowed must be OEM pressure plate and match block being used. Clutch disc without springs are recommended. Multi-disc clutches NOT allowed. Clutch mechanism must be rated 10,000 RPM minimum.

FLYWHEEL

After market flywheels permitted, must be stock diameter for block used. No aluminum flywheels permitted. Minimum flywheel weight 13 lbs.

BELL HOUSING

Steel bellhousing or scattershield must be installed on top, left, and right side of firewall constructed of 1/8 inch thick steel or ¼ inch belting.

TRANSMISSION

Must use standard OEM three (3), four (4) or five (5) speed manual transmission with all gears in working order. No automatics.

DRIVE SHAFT

Only stock drive shaft permitted. Must be painted white. Two (2) 350 degree drive shaft loops of ¼ inch thick and two (2) inches wide solid steel required located six (6) inches to twelve (12) inches from each universal joint. No aluminum drive shaft.

REAR AXLE

Must be stock, standard production assembly. May interchange makes and models. MUST use stock mounts for chassis being used and rear end must be in the stock position. Any differential allowed. No quick change rears allowed. Non-adjustable pan hard bars allowed. Must mount in stock location with stock brackets and bushings and must be mounted with the horizontal center line of the axle housing. Panhard bars on cars that did not come with them no adjustable pan hard bars. No independent rear axle assemblies allowed. No cambered rear ends. Zero (0) degree camber with rear axle level.

BRAKES

No double master cylinder adjustable arrangements. Must be stock OEM parts. Flow control valves must be out of reach of driver.

WHEELS

Eight (8) inch maximum width permitted. Any offset allowed, must be same on all four wheels. Must be 13 inch wheel.

FUEL SYSTEM

Track fuel required. Minimum fuel cell capacity is eight (8) gallons. All fuel cells must meet the standard safety requirements and be encased in a minimum 24 gauge steel box. Electric fuel pumps permitted only when used with a Mercury cut off switch connected to the oil pressure switch. Fuel pump must be mounted in the engine compartment. No electric fuel pumps allowed in the trunk

OVERALL CAR WEIGHT

All cars must weigh one (1) pound per cc. Minimum weight for any car is 2200 pounds. Minimum right side weight is 45% of total plus 25 lbs. Engine cc's must be posted on the right side of hood followed by right-side weight. Example 2340/1078.

TRUE MINI STOCK

COMPETING MODELS

Year models 1975-2005 American or import autos. No station wagons, Jeeps, convertibles or trucks.

CAR WEIGHT

All cars must maintain a minimum weight of 2150 pounds. All weights are with driver in car. Added weight must be painted in white in block form of no less than five pound blocks (no pellets). Added weight must be securely bolted in place. No weight may be added to the outside of the frame rails or ahead of the front spindles or behind the rear axle or inside the driver's compartment. Dislodged weight cannot be returned to car for weighing after race. All cars must maintain a weight of 1 pound per CC of engine size total weight minus 50 lbs with 45% right side weight. Engine size in cubic centimeter (CC) must be displayed on the hood of the car on the right side. Total weight/right side weight. Example car is 2300 cc. Weight would be 2300 - 50 = 2250. Right side would be 2250 X .45 or 1012. The hood would show 2250/1012.

GENERAL BODY REQUIREMENTS

Body must maintain original dimensions as from manufacturer. Floor pan, trunk floor, front and rear inner wheel wells must remain stock, and in stock location. Fabricated floor pans, trunk floor, front and rear inner wheel wells not permitted. Manufacturer of body and engine must be the same GM in GM, Ford in Ford, etc. **After market Stock Appearing Bodies are permitted in 2009. Bodies must be stock appearing in all respects. No fiberglass (fiberglass hoods are ok), aluminum or plastic bodies permitted. Hoods must fit.** Front spoilers must maintain a minimum ground clearance of 5 inches. Front spoiler must be a minimum of 5 inches from the leading edge of the front bumper. Rear spoilers may be a maximum of 5 inches and no wider than deck lid.

WINDSHIELD

All cars must be equipped with a full front windshield. Windshield must be in stock location. Windshield must be Lexan, minimum 1/8th inch thick. Two steel support bars must be installed behind windshield, 1 inch wide by 1/8th inch thick.

REAR WINDOW

Rear window is optional. Rear window must be installed in original position if used. Only clear polycarbonate glass may be used in the rear window opening. The polycarbonate glass must be the same thickness and formed to the same shape as the original equipment glass. No tint permitted. The rear window must be secured with a minimum of two metal straps on the outside not less than 1/8 inch by one inch wide evenly spaced, and

bolted to the roof at the top and the deck support panel at the bottom. The inside of the rear window must be supported by at least two (2) metal braces permanently mounted without any adjustments.

SIDE WINDOW/WINDOW SCREEN

All side window glass must be removed. A nylon mesh screen must be installed in the left side door glass opening. The window screen must be a rib type made from 3/4 inch wide, maximum one (1) inch nylon material with a minimum one (1) inch square opening between the ribs. The minimum window screen size shall be 22 inches wide by 16 inches high. All window screen mounts must be a minimum 1/2 inch steel rod on the bottom and a minimum one (1) inch wide by 3/16 inch flat steel or a minimum 1/2 inch diameter steel rod on the top with mounts welded to the roll cage. The window screen, when in the closed position, must fit tight and be secured with a quick release type latch at the top in front only. Only clear polycarbonate glass may be used in the quarter window.

HEADLIGHTS/PARKING LIGHTS

Headlight and parking light openings must be covered.

REAR VIEW MIRRORS

Rear view mirror will be permitted. Wink type three-dimensional mirror permitted with a maximum width of 26 inches. Rear view mirror cannot extend outside of the car.

DASHBOARD

All cars must have a complete dashboard. Fabricated dashboard allowed.

FIREWALL

Firewall must remain stock and remain in stock location. Fabricated firewalls not allowed. A rear firewall of not less than 22 gauge magnetic steel must separate the driver from fuel cell. The firewalls must be sealed and welded in place.

DOORS

Door panels must be a minimum 20 gauge steel, remain in the stock position and have the original contour. Doors must be attached in an approved manner.

FENDERS AND QUARTER PANELS

Fenders and quarter panels may be trimmed for tire clearance only. The inner fenders may be trimmed 3" and a crush panel installed to fill Gap between the inner fender and the quarter panel or front fender. Original contours of the factory body must be followed.

GRILLE

Grilles may be covered with unpainted screen wire attached to the grille only. Screen wire must be porous. Closed grilles will not be permitted for racing. Grille may be taped for qualifying. Grille opening must be no wider than radiator. No ducting of air past radiator into engine compartment. All air that enters the grille area must pass through the radiator core.

HOOD/ROOF

Hood must maintain stock. Configuration may not be altered for air cleaner or engine clearance. Hood must lay flat and fit with no holes or bubbles in the center. Hood must be sealed front and rear to prevent the introduction of outside air into the engine compartment. Roof must be stock for make and model of car.

REAR DECK LID

Rear deck lid must be in operating condition. Trunk around fuel cell must be complete.

BUMPERS

Front and rear bumpers must remain in standard location for make and model of car.

ENGINE

ENGINE LOCATION

Engine must remain in stock location. No adjustable engine mounts allowed.

GENERAL ENGINE SPECIFICATIONS

Four cylinder engines only. No Cosworth or rotary engines allowed. All engines must be used in the model of car for which they were manufactured. No factory or after-market high performance components will be allowed in the engine or drive train.

ENGINE BLOCK

Block must be standard factory production with standard external measurements in all respects. Internal polishing, porting and/or relieving will not be permitted.

CYLINDER HEADS

Cylinder heads must be standard production. B. Single and dual wire springs are ok. No porting, polishing, cutting, grinding or modifying of heads permitted. Area under valves must remain factory stock. Only two valves per cylinder allowed. No angle milling of heads allowed. Valves must be the same size and dimensions as stock and be made of steel. Head may be surfaced to insure a flat surface, but excessive cutting in order to decrease combustion chamber size is not allowed.

CRANKSHAFT

Only stock steel or cast production crankshaft permitted. Journal size on main and rods bearings must be stock. Maximum tolerance .040 inches. Must maintain factory stock no lighting of crankshaft.

PISTONS

Only flat top and dish pistons permitted. After market pistons okay. No part of piston may extend above the block. Toyota factory dome piston are ok.

RODS

Rods must be steel; all measurements must remain identical for make and model of the engine. This includes journal and wrist pin size. Rods must be solid with no holes. No billet rods allowed.

CAMSHAFT

Only steel camshafts permitted. Maximum lift optional. Adjustable timing gears optional.

LIFTERS

Stock solid or hydraulic steel lifters permitted. Lifter diameter and height must be standard for make of engine being used. No roller or mushroom type lifters allowed.

ROCKER ARMS

Stock rocker arms only. No roller rockers allowed.

INTAKE MANIFOLD

Only stock non-high performance intake allowed. No porting or polishing allowed on intake.

CARBURETOR SPACER/ADAPTOR PLATE

Spacer/ adapter plate may be maximum 1 inch magnetic steel or aluminum. Spacer/adapter plate must be bolted to the stock intake. Spacer adapter plate may be bored to width and length of the throttle bore. All blending must be in the 1 inch or less spacer only. No blending can extend into The intake. No other portion of the runner may be ported or polished. Carburetor should mount on the intake per the original axis.

AIR CLEANER AND AIR FILTER

The air filter element may not be sprayed or soaked with any type of chemicals or liquids. Only stock or approved round air cleaner allowed. No funneling of air to carburetor allowed. The top and bottom of the air filter housing must be solid and the same diameter. No lips or rounded edges are permitted. The air filter housing must be the same size as the air filter element. The air filter housing must be centered and level on the carburetor. The bottom of the air filter housing must be lower than the top of the carburetor choke horn. No tubes, tunnels or any device which may control the flow of air is permitted inside of the air cleaner or between carburetors. No fresh air induction allowed. No velocity stacks allowed.

WATER PUMP

Only stock water pumps allowed. Only standard production steel v-type or serpentine type belt and pulleys permitted.

FAN

No flat or freewheeling fans allowed. Electric fans permitted.

ENGINE OILING SYSTEM

The oil pans may be extended a maximum of 2 inches by cutting the bottom of a stock pan adding a two inch extension and welding the original sump back to the extension. Baffles and Windage trays may be added as long as it is a permanent part of the oil pan. No crankshaft scrapers allowed. No accusump systems or external oil pumps allowed. No external oil coolers allowed. No crankcase evacuation allowed.

EXHAUST SYSTEM

Headers may be used. All exhaust pipes must be routed beneath the transmission and exit to the outside of the car behind the driver and in front of the rear wheels. No thermal wrap allowed on exhaust system.

ELECTRICAL

IGNITION

Only stock type distributor permitted. Only stock type coils permitted. Mel's ignition is ok (No ignition amplifiers allowed).

BATTERY

One (1) standard automotive 12 volt battery, not to exceed 13.5 volts, will be permitted. The battery must be installed in an enclosed battery box, complete with a cover, located behind the front spindle in front of the firewall, or inside the interior of the car behind the driver's seat.

ELECTRICAL SYSTEMS

All electrical switches must be operable and must be located within reach of the driver, except the labeled on-off master switch which must be located on the front of the dash panel in the center. The on-off master switch must be wired to the battery cable in a manner that would cut off all electrical power to the car.

DRIVE TRAIN

CLUTCH

Clutch assembly must remain stock. Clutch disc without springs are recommended. Hydraulic slave cylinders allowed.

FLYWHEEL

Flywheel must be stock. Flywheel must be original in configuration in all respects for make and model of car. No aluminum flywheels allowed. Minimum flywheel and clutch assembly weight allowed is 28 lbs.

STARTER

The self-starter must be in working order and in the stock location. Only standard factory OEM type starters will be permitted.

BELLHOUSING

Steel bellhousing or scattershield must be installed on top, left, and right side of firewall constructed of 1/8 inch thick steel or ¼ inch belting. A 2 inch inspection hole must be drilled in bottom rear.

TRANSMISSION

Only standard production manual transmissions allowed. All forward and reverse gears must be in working order. No quick change transmissions allowed. No automatic transmissions allowed.

DRIVESHAFT

Drive shaft and universals must be standard to production type. Drive shaft must be magnetic steel and painted white. Only one piece driveshaft's allowed. It is mandatory that two 360 degree magnetic steel brackets, no less than 2 inches wide and 1/4 inch thick and be placed around the driveshaft and welded to the cross member of the car, one in the front 1/3rd of the driveshaft and one in the rear 1/3rd.

REAR AXLE

Rear end housings must remain stock. No quick change rear ends allowed. No cambered rear ends allowed. Rear ends may be interchanged between automobile manufacturers. **No adjustments on rear axle housing permitted. (Adjustable Heim Joints).**

FRAMES

GENERAL FRAME SPECIFICATIONS

Factory production full frames or unibodies maybe used. Unibodies may be used provided front and rear frame rails are tied together using 2 by 3 inch tubing minimum wall thickness .120 and extending a minimum of 10 inches into the existing rails and securely welded. Frames or unibodies cannot be interchanged between manufacturers. All frames or unibodies must retain original manufacturer's components. No offset or tube frames allowed.

SUSPENSION

COIL SPRINGS

Heavy duty springs may be used provided they are similar in design to the original equipment. No coil over suspension or coil over eliminators allowed. No weight jacks allowed. No hydraulic or mechanical weight shifting devices allowed.

SWAY BARS

Stock sway bars only. After market sway bars are not permitted. Sway bars must mount in stock location using stock components. Stock sway bar link assembly on one side. Other side may be adjustable.

SHOCK ABSORBERS

Only standard shock absorbers with only one (1) shock absorber per wheel will be allowed. Heavy duty racing shock absorbers are not allowed. Inflatable shock absorbers are not allowed. Externally adjustable shock absorbers are not allowed. Cars with front struts must maintain front struts. Front and rear shocks and struts must mount in stock location using stock components only. A steel plate may be welded on the top side of the front strut tower for reinforcement only.

A-FRAMES/CONTROL ARMS

All suspension parts must mount in stock location. Lower control arms must be stock for car but may use heavy duty ball joint. Lower control arm may be reinforced for safety. Both lower control arms must remain same length. Maximum camber 5 degrees. No adjustable panhard bars allowed. No after-market Panhard bars allowed. No traction bars or additional linkages allowed.

SPINDLES, WHEEL BEARINGS AND HUBS

Spindles must be forged steel. No fabricated spindles permitted. No modifications to spindles permitted. Cars with front struts must maintain front struts. All suspension parts must mount in stock location.

WHEELBASE

Original wheelbase for make and model must be retained. Allowable wheelbase 90 to 103 inches. When measuring wheelbase one side, left or right, must be stock. Maximum allowable tolerance cannot exceed plus or minus ½ inch.

GROUND CLEARANCE

Frame rails and all sheet metal clearance with driver in car is 4 ½ inches. Ground clearance may not vary more than 2 inches left to right or front to rear. Front spoiler clearance 5 inches. Exhaust pipe clearance 3 inches. Minimum fuel cell height 9 inches.

STEERING

All cars will be equipped with a magnetic steel steering shaft. Center top of steering post must be padded with at least 2 inches of resilient material. A quick release metal coupling on steering wheel is mandatory. The use of universal joints and collapsible steering section in steering shaft must be acceptable to NASCAR Officials. No heim's or rod ends allowed on steering components such as tie rods, center links, etc.

BRAKES

BRAKE COMPONENTS

All components must be stock for the make and model of car being competed in. Front disc brakes allowed only on make and model of cars that they came on from the factory. No disc brakes allowed on rear of the car. No dual master cylinders allowed. No inside the car brake adjusters allowed. No lightening of any brake parts allowed.

WHEELS

Only 13 inch steel wheels allowed. Wheels may be reinforced. Maximum wheel width is 8 inches Minimum allowable backsparing is 3 inches. All track tires and wheels must be the same size and offset. Maximum tread width 62"

FUEL CELL

The use of a commercially manufactured fuel cell is mandatory. The maximum fuel cell capacity, including the filler spout and overflow shall be 22 gallons. An 8 gallon fuel cell is recommended.

FUEL CELL CONTAINER

Fuel cell must be encased in a container not less than 22 gauge steel. Fuel cells must be fitted in the container so that the maximum capacity including the filler spout does not exceed 22 gallons. The fuel cell and the fuel cell container shall be installed in accordance with the following requirements: Fuel cell and fuel cell container must be attached to the floor or in a recessed well. Fuel cell must be installed as far forward as possible, but behind rear wheels, in the trunk compartment equal distance between frame rails. Fuel cell installed in a recessed well must be secured with steel tubing not less than 2 lengthwise and two crosswise evenly spaced across the top. Tubing must be made of 1 inch by 1 inch square steel tubing bolted flat to the floor pan with no spacers. A reinforcement support frame must be constructed using 1 inch by 1 inch by .065 inch square steel tube. The support frame must be constructed using 2 tubes that are welded to and extend from the left side to the right side frame rails. Three tubes must be equally spaced across the recessed well. These tubes must be welded to the cross support tubes and extend down the front sides, rear sides and under the fuel cell container and recessed well. When mounting the fuel cell through the trunk floor an additional container of 22 gauge steel must be welded solid to the trunk floor for instillation of fuel cell container. A 1 inch square steel tubing reinforcement frame must be welded to the floor pan from frame rail to frame rail. The bottom of the fuel cell container must have a minimum ground clearance of 9 inches. A protective bar, minimum 1-1/2 inches in diameter and .083 inch wall thickness must enter below the rear frame section behind the fuel cell. This protective bar must be as wide as the frame rails and extended as low the bottom of the fuel cell with 2 vertical uprights evenly spaced between the frame rails and attached to the rear cross member. Two support bars one located on each corner must angle upwards and be welded to the rear frame rails. Fire wall of steel not less than 22 gauge steel thickness must be located between trunk and driver.

FUEL PUMP

Mechanical fuel must be used on engines where a fuel pump boss exists. Electric fuel pump may be used if no boss exists for a mechanical pump. Recommended oil pressure switch for fuel pump shut off.

SEATBELTS

A quick release belt no less than 3 inches wide is mandatory. Both ends of lap belt must be fastened to the roll bar cage with high quality bolts not less than 3/8's inch in diameter. Shoulder harness must be no less than 3 inches wide and must come from behind the driver's seat. Where the harness crosses the rollcage, it must pass through a steel guide welded to the rollcage that will prevent the harness from sliding from side to side. A center (crotch) belt must be securely mounted to the lower seat frame at the bottom and to the lap seat belt on the top. Where the belts pass through the seat edges, it must have a grommet installed, be rolled, and/or padded to prevent cutting of the belt. All seat belts and shoulder harness must connect at the lap belt with a NASCAR approved quick release buckle. All seat belts and harness must be 3 years or newer.

SEATS

Bucket seat with headrest is mandatory. Seat must be factory manufactured. Seat must be aluminum a minimum if 1/8 inch thick. Lightening of the seat in any way will not be allowed. Seat must be properly installed and acceptable to NASCAR Officials. Adequate padding for the seat and headrest is mandatory.

ROLLBARS

Round magnetic steel tubing 1-3/4 X .090 inch seamless roll over bars are compulsory for the roll cage and must be acceptable to Track Officials. Aluminum and/or other soft metals are not permitted. Roll bar connections must be welded. See diagram at the back of the NASCAR Whelen All American Series rulebook. A magnetic steel plate, 1/8 inch thick must be installed over the left side door bars and welded or bolted in place using a minimum of four (4) 1/2 inch magnetic steel bolts. The plate must begin in line with the back edge of the driver's seat, and extend forward a minimum of six (6) inches beyond the front edge of the driver's seat not including any add-on leg supports. The plate must extend from the top left side door bar to the top of the left side frame rail. Plate may be installed in sections provided there are no remaining open spaces. All roll bars within the driver's reach must be covered with an impact absorbent material acceptable to Track Officials.