



## 2014 Limited Late Model Division

(updated 2/5/2014)

- 1—FORD---Mustang, Fusion, Taurus, Thunderbird
- 2---CHEVROLET---Monte Carlo, Monte Carlo SS, Impala SS, Lumina, Camaro
- 3—PONTIAC---Grand Prix
- 4---TOYOTA---Camry
- 5---DODGE---Charger, Intrepid

All body types must be on the car as by manufacturer (AR Bodies and Five Star) specifications.

All bodies must meet safety regulations.

### **OVERALL CAR WEIGHT (total/right side)**

- 1---ZZ4 engine: 3,075 total - 1,375lbs right side with driver – 390 carb no spacer
- 2---Hickory Little Motor: 3,075 total - 1,375lbs with driver. ALL Hickory Little Motors with Vortec Heads will be required to run a 350-2300 carb. / straight plug heads 500 carb 62cc, this engine may require different carburetor and/or restrictor plate in lieu of competition director's discretion. The lower end of these engines must meet Hickory Little Motor specs only to be legal for LLM.
- 3---Late Model Stock Motor: 3,075lbs total / 1,375lbs right side with driver – 350 carb
- 4---8602 Crate Motor: 3,075lbs total / 1,375lbs right side with driver – 390 carb no spacer
- 5---Ford 347 JR Crate Motor: 3,075lbs total / 1,375lbs right side with driver – 390 carb, no spacer
- 6---GM 604 crate: 3,075lbs total / 1,375lbs right side with driver – (450 Carb) (500 top 350 base plate)

When cars are weighed after a race, only water in the radiator, 2 qts. Of oil in the engine, and fuel as determined by race officials may be added. No Wheels or tires may be changed.

Any non-approved modifications to ANY motor may result in confiscation of entire motor including, but not limited to intake, starter, valve covers, rocker arms, springs, etc.....

### **Ford 347JR Crate Motor**

This is the ONLY Ford crate motor approved for the Series.

There can be NO changes or modifications made except to Ford factory tolerances. – 390 carb

GM 604 crate motor will be allowed with 450 carburetors

## **ZZ4 Crate Motor (PN#88958603)**

- 1-Engine must be stock out of the crate except for the following:
- 2-Valve covers may be changed
- 3-Oil pan may be changed. Late Model Stock rules apply.
- 4-Valve springs must be stock for ZZ4 engine
- 5-Polylock rocker arm nuts will be permitted
- 6-Carburetor Holley HP80507-I 390 CFM, stock out of the box. You may change the jets and power valve only.
- 7-The bottom air filter housing must be lower or equal to the top of the carburetor vent tubes.
- 8-No spacer plate allowed. Carburetor must be bolted directly onto the intake manifold.
- 9-One paper gasket only max thickness .065 each.
- 10-Offset air cleaner may be used for distributor clearance.
- 11-No spacer plate between air cleaner base and carburetor.
- 12-Same as LMSC, except offset allowed for distributor clearance.
- 13-Stock vibration dampener only!
- 14-Any non-approved modifications may result in confiscation of entire motor including but not to intake, starter, valve covers, rocker arms, springs, etc...

## **Hickory Little Motor**

**As of 2012 all Hickory Motors with Vortec Heads will be required to run 350-2300 carburetor.**

- 1-Must be standard factory production engine.
- 2-OEM crank shaft only.
- 3-Stock stroke only.
- 4-No deburring or polishing of crankshaft permitted.
- 5-Balancing only.
- 6-Stock, standard balancer only.
- 7-600 gram piston/pin combo min.
- 8-500 gram piston/pin add 50 lbs., 25 each side.
- 9-5.7 length rod Chevrolet, 6.0 lengths in Ford Chrysler.
- 10-Heads must be standard production. Chevrolet must be straight plug. Max valve size intake 2.02, exhaust 1.60. Ford/Chrysler same as LMSC.
- 11-No Titanium valves or parts.
- 12-Heads min 62cc.
- 13-Intake Chevrolet Edelbrock #2101, #2116, or GM casting # 12464340.
- 14-Ford Windsor Edelbrock #M9424-C358.
- 15-Holley 350 2BBL Vortec as per LMSC (2006) or Holley 500 2BBL. – straight plug
- 16-Cams may be solid or hydraulic but have a min. valve lift of no more than .475 measured at the valve retainer as engine was raced. No roller cams.
- 17-Roller rockers may be used.
- 18-Headers may be used. (2009) LMSC type only.
- 19-Exhaust pipes must be as (2009) LMSC>
- 20-HEI or MSD ignition allowed. No magnetos.
- 21-7 1/4" or 5 1/2" clutch allowed. Steel flywheels only.

### **350/350 Crate Motor (PN# 88958602)**

- 1-Engine must be stock out of the crate except for the following.
- 2-Valve covers may be changed.
- 3-Oil pan may be changed. LMSC rules apply.
- 4-Carburetor Holley HP80507-I 390 CFM stock out of the box. You may change jets and power valve only.
- 5-The bottom of the air filter housing must be lower or equal to the top of the carburetor vent tubes.
- 6-One paper gasket only max. thickness .065 each.
- 7-Offset air cleaner may be used for distributor clearance.
- 8-No spacer between air cleaner base and carburetor. Same as LMSC, except offset allowed for distributor clearance.
- 9-Stock vibration dampener only.
- 10-Any non-approved modifications will result in confiscation of entire motor including but not limited to intake, starter, valve covers, rocker arms, springs, etc....
- 11-Stock timing cover requirement.

### **Late Model Stock Engine**

- 1-Carburetor 350 CFM Holley 2300

### **General Engine Eligibility (from NASCAR rulebook\*)**

**The eligible engines must be production engines as determined, selected and approved by NASCAR. It is mandatory that all major components (engine block, heads, etc....) be produced by the manufacturer for sale to the public in a regular product offering. Each part must meet NASCAR approval. Each such part may thereafter be used until it is determined that such part is no longer eligible. General Engine Characteristics (from NASCAR rulebook\*)**

The following characteristics of the production engine must be maintained in any engine used in competition in a manner acceptable to Series Officials. All parts listed below must originate from approved stock production castings and forgings that have been machined according to the normal machining schedule utilized for standard production parts. All parts, except spark plugs, should utilize fractional English measurement system fasteners and dimensions (nonmetric). Coatings will not be permitted on any internal engine components, except rod and main bearings, camshaft bearings and pistons including but not limited to ceramic or Teflon.

### **A- ENGINE BLOCK:**

Material

Number of Cylinders

Angle of Cylinders

Cylinder Bore Centerline Spacing

Number of Main Bearings and Type

Integral or Separate Cylinder Sleeves

Location of Camshaft

Overall Configuration

**B- CYLINDER HEAD:**

Material

Number of Valves per Cylinder

Type of Combustion Chamber

Location of Spark Plug

Orientation of Spark Plug

Arrangement of Valves

Valve Location in Relation to the Cylinder Bore

Angle of Valves

Type of Valves Actuation

Number of Intake Ports

Number of Exhaust Ports

Center Distances of Intake Ports Referenced to the Cylinder Bore

Center Distances of Exhaust Ports Referenced to the Cylinder Bore

Shape of Intake and Exhaust Ports Mating Faces of Manifolds

Angle of Port Face Relative to Mating face of Head Block

Firing Order

**Engine Location (from NASCAR rulebook\*)**

A. All General Motors engines must be located so the center of the forward most spark plug hole on the right side of the engine block is in line or a maximum of one inch forward of the center of the right front upper ball joint. The Ford and Dodge engines must be located so that the front of the cylinder head is in line or a maximum of one inch forward of the center of the right front upper ball joint.

B. The center of the crankshaft must be on the centerline of the frame, front sub-frame, and tread width, front and rear.

**Engine Ground Clearance**

The engine ground clearance will be measured (with the driver) from the center of the crankshaft accessory drive bolt. A minimum of 12 inches and a maximum of 13 inches from the center of the crankshaft accessory drive bolt to ground must be maintained at all times.

### **Engine Mounts**

All engine mounts must be acceptable to Series Officials and meet following minimum requirements.

1. All engine mounts must be reinforced steel or aluminum.
2. All engine mounts must be securely bolted.
3. Adjustable engine mounts will not be permitted.

### **Engine Displacement**

The cubic inch displacement will be as follows:

1. Dodge: 360 cubic inch displacement plus a maximum of 0.035 inch overbore per cylinder. The 355 cubic inch displacement Dodge engines will not be permitted.
2. Ford: 351 cubic inch displacement plus a maximum of 0.045 inch overbore per cylinder.
3. General Motors: 350 cubic inch displacement plus a maximum of 0.060 cubic inch overbore per cylinder.
4. The manufacturer stock bore and stroke dimensions for the approved engines are as follows:

#### MANUFACTURER BORE STROKE

Dodge 4 inches 3.580 inches

Ford 4 inches 3.500 inches

General Motors 4 inches 3.480 inches

5. The formula for determining cubic inch displacement is as follows: Bore x Bore x .7854 x Stroke equals cubic inch displacement of each cylinder. The cubic inch displacement of each cylinder added together will determine the total cubic inch displacement of the engine. Unless Otherwise permitted by Series Officials, a maximum cooling down time of two hours from the official completion of the race will be permitted prior to measuring the total cubic inch displacement.

### **Engine Blocks**

All engine blocks must be acceptable to Series Officials and meet the following minimum requirements.

#### **Eligibility**

- A. All engines must be a product of the manufacturer of the make of the approved engine being used in competition. Aftermarket engine blocks will not be permitted.
- B. The engine block must retain all standard external dimensions with the exception of the maximum allowable overbore and the surfacing of the engine block deck. Angle cutting of the engine block deck will not be permitted. Removal of material from the engine block, with the intent of weight reduction, will not be permitted.
- C. Series Officials may use an engine block provided by the respective manufacturer as a guide in determining whether a competitor's engine block conforms the specifications of the Rule Book.

D. Aluminum engine blocks will not be permitted.

### **Internal Changes** (from NASCAR rulebook\*)

Internal polishing of the engine block will not be permitted. Deburring of the casting flash will not be permitted.

### **Pistons/Rods**

A. Any flat top three ring round aluminum piston with three rings in place will be permitted. Valve reliefs for valve clearance only may be cut into the pistons. The piston must not protrude above the top of the engine block surface. The use of coatings on pistons will be permitted.

B. Only magnetic steel piston pins maintaining a minimum diameter of 0.927 inch will be permitted.

C. Piston pin holes must be in a fixed location in the piston and connecting rods.

D. Only two-piece insert style connecting rod bearings will be permitted. Roller bearings will not be permitted.

E. Only solid magnetic steel connecting rods will be permitted. Hollow beam connecting rods will not be permitted. All rods must maintain the minimum/maximum rod lengths listed below:

<b><u>Manufacturer</u></b>	<b><u>Minimum</u></b>	<b><u>Maximum</u></b>
Dodge	6.000	6.250
Ford "Cleveland"	5.778	6.250
General Motors	5.700	6.250

F. Titanium and stainless steel connecting rods will not be permitted.

### **Oil Pans / Coolers**

The oil pans and oil coolers must be acceptable to Series Officials and meet the following requirements:

1. Oil pans must be made of magnetic steel.

2. The oil pans must be a wet sump type and manufactured using a standard production type pan with only a sump reservoir added to the bottom. All bolt and hole flanges must be visible. Kick-outs will not be permitted between the bolt on flange and the top of the added sump. Spacers, other than sealing gaskets, will not be permitted between the oil pan side rails and the engine block surface.

3. Engine oil coolers may be either an oil to air or an oil to water heat exchanger mounted forward of the engine firewall. Air ducts will not be permitted. All oil cooler installation must be acceptable to Series Officials.

### **Cylinder Head**

All cylinder heads must be approved and AL modifications must be approved. Approved manufacturer's identification and part numbers must remain unaltered on the cylinder heads being used in competition. Series Officials may use a cylinder head provided by the respective manufacturer as a guide in determining whether a Competitor's cylinder head conforms to the specifications of the rule book. Heating pads, blankets, or any other heating devices will not be permitted for warming the cylinder head.

## Eligibility

To be eligible, the cylinder heads must be acceptable to Series Officials and meet the following requirements:

1. Cylinder heads must be stock cast iron production only and approved by NASCAR, and are limited to two valves per cylinder.
2. Titanium valve springs will not be permitted. Only magnetic steel valve springs will be permitted.
3. Port matching or flow work will not be permitted.
4. Angle cutting of the cylinder head to the engine block timing surface will not be permitted.
5. The cylinder head stud or bolt holes must not be offset or drilled off-center for the purpose of moving the cylinder head in any direction.
6. "O" rings will not be permitted for sealing the cylinder head to the engine block.
7. A maximum of three valve seat angles plus the bowl cut will be permitted. When cutting the valve seat angles, stone or grinding marks will not be permitted above the bottom of the valve guide. All cutting reference to the valve job and bowl area must be centered off the center line of the valve guide. Radius cuts will not be permitted. Upon completion of the valve job, the bowl area above the valve seat to the bottom of the valve guide must still be the same configuration as far as shape and finish as it was from the manufacturer. Surfaces and /or edges where the cutter or stone has touched must not be polished. Hand grinding or polishing will not be permitted on any part of the head. When replacement valve guide bushings are installed, the valve guide boss must retain the same shape and configuration as it was from the manufacturer.
8. Only Chevrolet (current design) part number 101344392, casting number 140110334, and part number / casting number 12480034 cast iron cylinder heads with a 23 degree valve angle will be permitted in General Motors models. Only Dodge Mopar W2 current design (current design), part number P5249769, casting number 4532693, closed chamber with an 18 degree valve angle cast iron cylinder heads will be permitted in the Dodge models. Only Ford, part number M-6049-N351, cast iron cylinder heads with a 10 degree valve angle will be permitted in the Ford models.
9. All valves must be identical in appearance and construction as an OEM type valve. Titanium or exotic material valves will not be permitted. Coating of valves will not be permitted. Air directional devices will not be permitted on any of the valve surfaces. The valve stems must have a minimum diameter of 11 / 32 inch. The valve stem diameter may be undercut to a minimum diameter of 0.302 inch in the area of the valve stem from the head of the valve to the bottom of the valve guide. Hollow valve stems will not be allowed. The maximum valve sizes as measured across the face of the valve are as follows:

Dodge	Intake – 2.020	Exhaust – 1.625
Ford	Intake – 2.020	Exhaust – 1.600

## External Changes

External modifications will not be permitted. All cylinder heads are limited to a minimum 62cc combustion chamber for each cylinder. The combustion chamber may be machine cut, on the walls beside the valves only, to equalize the chamber cc. Any other machining or grinding will not be permitted. Removal of material from the cylinder head, with the intent of weight reduction will not be permitted.

## Internal Changes (from NASCAR rule book\*)

Internal polishing, porting and / or any other internal modifications will not be permitted.

## Crankshaft / Harmonic Balancer (from NASCAR rule book\*)

The crankshaft and harmonic balancer must be acceptable to Series Officials and meet the following requirements:

1. Only standard magnetic steel or cast iron production design crankshafts will be permitted. If aftermarket crankshafts are used, they must be designed and manufactured the same as an OEM crankshaft for the approved standard production standard. Stroke must not be increased or decreased. Balancing will be permitted. Material used to balance crankshafts must be permanently attached to crankshaft.
2. Only two piece insert style crankshaft bearings will be permitted. Roller bearings will not be permitted
3. Counterweights must be the same shape, may be polished, but they must not be knife edged, undercut, or drilled to lighten the crankshaft. The rod bearing journals may be drilled. The main bearing journals must not be drilled. When weighing crankshafts, the minimum weight listed below shall include the timing chain sprocket. The following dimensions are the minimum specifications for all crankshafts:

<u>Manufacturer</u>	<u>Main Journal</u>	<u>Rod Journal</u>	<u>Weight</u>
Dodge	2.500 minus 0.030	2.100 minus 0.030	50lbs
Ford	2.750 minus 0.030	2.100 minus 0.030	50lbs
General Motors	2.450 minus 0.030	2.100 minus 0.030	50lbs

## Harmonic Balancer

1. Harmonic balancer must be used and must be used as manufactured. Only standard OEM magnetic steel elastomer type harmonic balancers permitted. The use of "O" rings or other devices that deviate from the standard OEM elastomer rubber insert will not be permitted. Outer covers, lips, etc... to prevent the separation of the outer ring will be permitted provided they do not deviate from the standard OEM elastomer rubber insert.



2. Electronic switching devices or sensors will not be permitted on the harmonic balancer, crankshaft, or flywheel.

**Camshaft (from NASCAR rule book\*)**

A. Only magnetic steel camshafts will be permitted. The camshaft bearing journal size must be the same as the standard production design for the NASCAR-approved production engine being used.

B. Only standard production design timing chains will be permitted. Belt drive and gear drive systems will not be permitted.

C. Only standard production sleeve type cam bearings will be permitted and must be the standard inside diameter for the NASCAR approved production engine being used. The cam bearing bores in the block may be machined a maximum of 0.030 inch oversize from standard bore. Needle or roller bearings will not be permitted. The approved firing orders using approved cylinder identification are as follows:

Dodge 1-8-4-3-6-5-7-2

Ford 1-3-7-2-6-5-4-8

General Motors 1-8-4-3-6-5-7-2

E. The manufacturer's cylinder identification sequence is as follows:

**Dodge and General Motors**

(front)

1 2

3 4

5 6

7 8

**Ford**

(front)

5 1

6 2

7 3

8 4

F. The front engine cover material must be acceptable to Series Officials.

**Valve Lifters (from NASCAR rule book\*)**

A. Only solid magnetic steel or magnetic hydraulic valve lifters will be permitted. Roller tappets, ceramic valve lifters, mushroom valve lifters and any type of mechanical assistance exerting a force to assist inclosing the valve and/ or push rod, commonly known as rev-kits will not be permitted.

B. Only flat tappet straight barrel lifters will be permitted. Lifters must be the same diameter and length as the original equipment for the approved standard production engine.

C. Only magnetic steel one piece, pressed together valve push rods, without any moving parts, will be permitted.

D. The standard production design push rod guide plates will be the only guide plates permitted.

**Rocker Arms / Valve Covers (from NASCAR rule book\*)**

A. Only steel or aluminum rocker arms, one per valve, that are acceptable to Series Officials may be used.

B. Roller rocker arms will be permitted. Rockers arms for all General Motors and Ford cars must be an independent single stud type. Dual shaft rocker arms will not be permitted. Offset rocker arms will not be permitted with the exception of the Ford part number M-6049-N351, and the Dodge part number P5249769 cylinders heads intake valve only. Stud girdles will be permitted. All Dodge Model engines may mill the existing rocker arm single shaft support towers down and install a mounting plate that permits the rocker arms for a single cylinder to be mounted from the top for easy removal. All aftermarket rocker arm assemblies must be acceptable to Series Officials.

C. Valve covers must be made of steel or aluminum. Magnesium and other exotic materials will not be permitted.

### **Intake Manifold (from NASCAR rule book\*)**

A. The intake manifold must be approved by NASCAR. The approved manufacturers' identification in the form of cast iron part numbers must remain unaltered on the intake manifold.

B. Series Officials may use an intake manifold provided by the respective manufacturer as a guide in determining whether a competitor's intake manifold conforms to the specifications of the rule book.

C. Listed below are the only eligible intake manifolds for LMS car division competition. These intake manifolds must remain as manufactured. Port matching or flow work will not be permitted. Intake manifold must not be painted or coated. Only one standard flat gasket, a maximum compressed thickness of 0.075 inches, may be used between the cylinder head and the intake manifold. All Edelbrock part numbers are current design Edelbrock Performer Series Intake Manifolds. Older design intake manifolds with the same part numbers will not be permitted.

1-Chevrolet: Edelbrock-part number 2101.

2-Dodge: Mopar -Part number P5249572AB (this number appears on the intake manifold and is to be used to order this part.) This intake manifold must be used with a 9.200 inch deck height engine block.

3-Ford: Ford Performer Intake Manifold -Part Number M-9424-C-358

D. The intake manifold material must be aluminum. Magnesium or other exotic materials will not be permitted.

E. For all manufacturers approved intake manifolds, the front to rear center divider of the intake manifold may be machined to a minimum width of 1/8 inch at the top of the divider for clearance with the throttle bore holes in the adapter plate. The machining must be an angle cut from the minimum width on each side at the top of the divider and blended to the manufactured width on each side at a maximum blended depth of 1/2 inch down into the plenum area. This is the only machining that will be permitted to the intake manifold. The remainder of the intake manifold must remain as manufactured.

### **350 2300 Carburetor (from NASCAR LMSC rule book\*)**

The Holley 2300 2BBL carburetor, list # 7448 and the Holley 2300 HP 2BBL carburetor, part # 80787-1 with a venturi size of 1 3/16" and maintaining a throttle bore max. size of 1 1/2 " (see below for carburetor rework guidelines). The Holley 2300 2BBL carburetor, list number 7448 and the Holley 2300HP 2BBL carburetor part number 80787-, are the only two 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 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 be permitted 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 45R107-1, with casting number 45R-107 and part number 45R-312R, with the casting number 45R-312 are the only boosters 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 remain 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 series officials, were made to allow 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 plates)**

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 must not be thinned or cut in any manner.

### **Carburetor Metering Blocks**

Only Holley metering block may be used. Surfacing of the metering blocks for improved gasket seal will be permitted. The only metering blocks permitted for the Holley 2300HP carburetor (80787-1) will be the Holley, part #'s 11938N, 11886 (390HP) and 12323 (screw in emulsion bleed jets) metering block. To order metering block part # 12323 (screw in emulsion bleed jets) the sales # is 134-276. For the Holley 2300HP 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 2300HP approved metering blocks. The Holley metering block, part # 12323 (screw in emulsion bleed jets) will not be permitted in the Holley 2300HP, list # 7448.

### **Accelerator Pump**

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

### **Power Valves and Floats**

May be altered.

### **Air Cleaner / Air Filter (from NASCAR rulebook\*)**

1-Only round dry type, unaltered paper or dry type gauze air filter element maintaining a minimum 12 inches and a max of 14 inches in diameter will be permitted. The air element must maintain a minimum 1 ½" and a max of 4" in height. All air must be filtered through the air filter element. The air filter elements must not be sprayed or soaked with any type of chemicals or liquid.

2-Only a round, commercially manufactured, stamped or spun metal air filter housing will be permitted. Air filter housings must be acceptable to Series Officials. The top and bottom of the air filter housing must be solid and must be the same diameter. Lips or expanded edges will not be permitted. The center stud hole in the top other filter housing must not be recessed more than one inch. The air filter housing must be the same diameter as the air filter element. The air filter housing must be centered and set level on the carburetor. The bottom of the air filter housing must be lower than the carburetor choke horn. Tubes, funnels, or any device that may control the flow of air will not be permitted inside of the air filter or between the air filter housing and the carburetor.

### **Air Intake (from NASCAR rulebook\*)**

Cowl will not be permitted. Ducts, baffles, or air dividers will not be permitted on or leading to the air cleaner or element. Fresh air openings of any type will not be permitted in the hood or cowl area.

### **Engine / Car Electrical System (from NASCAR rule book\*)**

All ignition systems must be acceptable to Series Officials.

#### **Ignition System\***

1-Electronic distributors will be permitted. All electronic distributors must be stock type housings, equipped with a magnetic pick up, gear driven, and mounted in the stock location.

2-Single or dual point camshaft driven distributors will be permitted.

3-Only one ignition coil will be permitted and it must be mounted on the engine side of the firewall.

4-Only one ignition amplifier box will be permitted, if used, and it must be mounted on the right hand side on the front of the dash panel or on an ignition system mounting panel. Ignition amplifier boxes and RPM limiters that are analog only which do not contain programmable, computerized, or memory circuits will be permitted in standard ignition systems.

5-Modifications to ignition amplifier boxes will not be permitted. Series Officials may use ignition amplifier boxes provided by respective manufacturer as a guide in determining whether or not modifications have been made.

6-Computerized, multi coil, dual electronic firing module amplifier box, or crank trigger systems will not be permitted. Magnetos will not be permitted.

7-Adjustable timing controls will not be permitted.

8-Retard or delay devices will not be permitted.

9-External RPM limiters will not be permitted unless an ignition amplifier box is not used.

10-Accessories to regulate the power supply will not be permitted.

11-The ignition amplifier box must have a six pin female connector attached to its output leads of the Packard Electric type (MSD part #8170) to facilitate manual operation and testing of the ignition components during inspection. The wiring sequence must be the same as General Motors or Ford ignition amplifier.

12-A heavy red wire (positive to the battery) and a heavy black wire (negative to the ground) will be permitted. Any other wires will not be permitted to enter or exit the amplifier box.

13-All ignition wiring harnesses, switches, and connectors must be acceptable to Series Officials. All wiring must be point to point and each wiring connection must be easily traceable and removable from the car for inspection purposes. Ignition system wiring should remain viable and accessible. Taping wires together, heat shrink wrap, and/ or banded wire looms should not be used.

14-Series Officials may, at their discretion, inspect, test, and/ or destructively test ignition system components including ignition amplifier boxes, tachometers, distributors, etc.....

15-All connectors must allow for the application of a sealing device applied by Series Officials.

#### **Spark Plugs\***

Any make or brand of spark plug may be used. All spark plugs must thread into the cylinder heads using only M14 x 1.24 threads.

#### **Alternator\***

The alternator system when used must be mounted on the front of the engine in the standard location with the center of the alternator higher than the center of the water pump and must not exceed 14.9 volts of output.

### **Starter\***

The self-starter must be in working order and in the stock location. Only standard factory OEM type production starters will be permitted. After the race is underway, cars may be started by hand pushing in the pit area only but under no circumstances is any car permitted to be onto the racetrack from the pit area.

### **Battery**

1-Battery must be located between frame rails, between front and rear tires. Only one standard 12 Volt battery not to exceed 13.5 volts. No accessories to regulate power will be permitted.

### **Electrical Switch Locations\***

All electrical switches must be operable and located within reach of the driver, but not in the left side door area, except the labeled on/ off rotary-type master switch with "on" being in the clockwise direction, which must be located at or on the front of the dash panel in the center. The on / off switch must be wired to the battery cable in a manner that would cut off all electrical power in the car. Only one switch mounted on the dash panel and labeled "brake cooling fans" and "on / off" may be used to operate the brake cooling fans.

### **Accessories\***

1. Except as provided below, cars and drivers will not be permitted to carry on board computers, automated electronic recording devices, electronically actuated devices, micro-controllers, processors, recording devices, electronic memory chips, traction control devices, digital readout gauges and the like, even if inoperable or incomplete. Competitors will not be permitted to have or have had on his / her possession or in his / her car a device(s) at Event designed specifically to enhance the traction capabilities of the car, even if inoperable or incomplete.
2. Radios must be of two way voice communication type only, independent of the cars electrical system. Only one radio and one push to talk button will be permitted in each car.
3. For broadcasting and media related purposes only, Series Officials may allow or require selected cars to compete with broadcast telemetry or other positioning and informational systems. Unless otherwise authorized or required by Series Officials, the broadcast telemetry signal from these systems will be limited to the following parameters:
  - a. RPM (inductive pickup on the secondary wire only)
  - b. Transmission gear selection
  - c. MPH (taken from sensors on the driveshaft or rear wheel only)
  - d. Brake pedal application.
  - e. Throttle position indicator.
  - f. Camera positioning and video switching.

- g. All camera locations and styles must be acceptable to Series Officials.
  - h. All competitors shall cooperate with Series Officials in connection with the installation and operation of such broadcast systems.
4. Remote lap timing or speed sensing devices will only be permitted by authorized personnel only.
  5. The tachometer control or reset switches must be built into the unit. Remote switches will not be permitted.
  6. All electrical wiring harnesses, switches, and connectors must be acceptable to Series Officials. All wiring must be point-to-point and each wiring connection must be easily traceable and removable from the car for inspection purposes.
  7. Filming devices will not be permitted to extend beyond the pit wall.
  8. A timing/ scoring transponder bracket, if used, is recommended and must be installed on the right side of the rear sub frame side rail. Must be mounted per instructions from the transponder company.

### **Drive Train (from NASCAR rule book\*)**

The drive train system and components must be acceptable to Series Officials and meet the following requirements.

#### **Clutch\***

- 1-Only mechanical foot pedal, cable or hydraulic operated clutches will be permitted. Pneumatic assisted clutches will not be permitted.
- 2-The clutch assembly must be bolted to the flywheel located inside the bell housing.
- 3-Multiple disc clutches will be permitted up to a maximum of three discs. The disc clutch housing assembly and cover must be made from aluminum or steel. The clutch cover must be push type design.
- 4-The minimum clutch disc diameter is 5-1/2 inches.
- 5-Clutches must be a positive engagement design. Slider or slipper clutch designs will not be permitted.
- 6-Only solid magnetic steel discs and solid magnetic steel floater plates will be permitted.

#### **Flywheel\***

- 1-Only a magnetic steel flywheel, bolted to the crankshaft, will be permitted. Holes and /or other modifications to the flywheel that, in the judgment of the Series Officials, have been made with the intent of weight reduction, will not be permitted.
- 2-The minimum starter ring rear outside diameter permitted will be 12-7/8 inches for General Motors and Dodge, models and 13-1/4 inches for Ford models.

#### **Transmission\***

- 1-3 or 4 speed production transmission allowed. All forward and reverse gears must be working. No aluminum gears allowed.
- 2-No straight cut gears.

### **Drive Shaft (from NASCAR rule book w/change made\*)**

1-The drive shaft, universal joints, and yokes must be magnetic steel and be similar in design to the standard production type. The drive shaft must be made of one piece magnetic steel and must be  $2\frac{1}{2}$  to 3 inches in diameter.

2-Two 360 degree solid magnetic steel brackets, with no holes or slots, not less than 2 inches wide and  $\frac{1}{4}$  inch thick, must be placed around the drive shaft. The front bracket must be welded to the rear suspension cross member and the rear bracket must be welded or bolted, with a minimum of two minimum  $\frac{3}{8}$  inch diameter bolts on each side, to the horizontal tunnel bar.

### **Bell Housing (from NASCAR rulebook\*)**

1-Only special production all magnetic steel bell housing will be permitted.

2-The max distance from the machined surface at the back of the engine block to the machined surface at the front of the transmission case must not exceed  $6\frac{3}{8}$  inches including any spacers.

3-Bell housing must be the same design as an OEM-type production type bell housing. The bottom of the bell housing may be cut off horizontally a max of one inch below the bottom of the transmission. Cutting on the sides of the bell housing above this cut line will not be permitted.

4-Holes and/or other modifications that, in the judgment of Series Officials, have been made with the intent of weight reduction, will not be permitted.

5-The starter mounting position must remain on the right side for Ford and GM engines and the left for Dodge.

### **Rear Axle (from NASCAR rulebook\*)**

1-The axle housing must be centered between the frame rails (+/-)  $\frac{1}{2}$  inch.

2-Only the following differentials will be permitted:

A- Only Detroit locker ratchet type differentials will be permitted. When this type of differential is used, either wheel, when jacked up with the transmission engaged, must turn freely by hand for one full turn, 360 degrees, while the opposite wheel remains stationary. B- Locked rear drive axle assemblies (solid spool) will be permitted. When jacked up, both rear wheels must rotate in the same direction and the same rotational distance at all times. One wheel, when jacked up, must not rotate in any direction.

3-Only quick change rear end center sections with a max cross section height of 12 inches at the center of the rear axle and with a side bell minimum diameter of 12 inches and magnetic steel spur gears on the back side will be permitted. Only a magnetic steel lower jackshaft and drive shaft yoke will be permitted in the quick change rear end center section.

4-Full floating rear axle must be used, but must not alter the tread width or general appearance.

5-Only solid, one-piece, magnetic steel axle housings will be permitted. Axle housings must not be altered and must remain as manufactured. Weight must not be added internally or externally to the axle housings or suspension parts.

6-Only one-piece magnetic steel axles will be permitted. Crown type axles will not be permitted.

7-Cambered rear housings or real axle housings with toe will not be permitted. The method used to check camber and toe will be at the Series Official's discretion.

8-Only metal drive plates, the same thickness on the left and right side, will be permitted and the drive plates must be one piece with a single internal spline. Grease fittings will not be permitted on the drive plates or axle caps.

9-Rear axle support bars or alignment bars will not be permitted during competition. Alignment bar "brackets" will be permitted on the rear axle housing. These brackets will be permitted to be used for



attachment of alignment bars for straightening of axle housings but the alignment bars must be removed for competition.

10-External oil pumps and coolers will not be permitted.

11-heating pads, blankets or any other heating device will not be permitted for warming the rear end assembly.

12-9" Rear Ends Ok

### **Engine Cooling System (from NASCAR rule book\*)**

The engine cooling system and components must be acceptable to Series Officials and meet to minimum requirements set forth in the rules contained in this rule book. Icing, freon type chemicals or refrigerants must not be used in or near the engine compartment. Additional water lines must not be added to or from the water pump or intake manifold to the cylinder heads or engine block.

Portable cooling machines or cooling devices will not be permitted. Heating pads, blankets or any other heating devices will not be permitted for warming the cooling system.

### **Water Pump\***

A-Only aluminum or cast steel mechanical water pumps in the stock location, turning in the same direction of the crankshaft rotation, will be permitted.

B-Water pump impellers may be altered.

C-Coolant flow must be in the same direction as the approved production engine.

D-Only standard production V-type or flat type V-ribbed belts and pulleys will be permitted.

### **Radiator\***

1-The radiator must remain stock appearing and remain standard position not to exceed two inches from vertical.

2-Radiator dust or shaker screens will be permitted.

3-Radiator installation must be acceptable to Series Officials.

4-The radiator overflow tube may be located in the rear cowl area ahead of the windshield directed rearward or may be relocated to the rear of the car.

5-A rectangular shaped metal or flexible rubber and/or plastic type air box, the width of the radiator must be attached from the front of the bumper cover to the trailing edge of the radiator. The bottom and the sides of the air box must be straight and acceptable to the Series Officials. Installation of air directional devices, under pans, baffles, dividers, shields or the like will not be permitted in the grille or duct work back to the radiator. Any part or component of the car that has been installed or modified to enhance aerodynamic performance will not be permitted. All air that enters the grille area must flow through the radiator core.

6-All radiator cooling tubes must be operational. All cooling fins must be evenly spaced top to bottom and side to side and must remain at a 90 degree angle to side tanks. The spacing and width must be acceptable to Series Officials.

7-Radiator cores and tanks must be constructed from aluminum material. The radiator core must be a standard automotive fin and tube design accepted by Series Officials. Bar and plate radiator cores will not be permitted. Radiator tanks must be installed on the sides of the radiator core only.

### **Fan\***

1-Engine-driven fans, if used, must be operational and belt driven from the crankshaft. Free spin or clutch type fans will not be permitted.

2-Electric engine cooling fans are optional. When an electric fan is used, it must be mounted parallel to the radiator.

3-If engine-driven fan is used, it must be standard magnetic steel fan with a min of four (4) blades. Removal of the fan blades or fan belt will not be permitted.

a-The min diameter of the fan must not be less than 14 inches.

b-The fan blades must be a min of 3 ½ inches wide. Flat fan blades will not be permitted

4-The installation and location of the fan must be acceptable to Series Officials.

### **Fan Shroud and Ducts\***

When electric fan is used, shrouds or panels rearward of the radiator will not be permitted. When a standard steel fan is used, the shroud must follow the entire circumference of the fan and must not extend more than one inch rearward of the trailing edge of the fan blade. Flat panels or air dividers will not be permitted. Fan shrouds and ducts must not be used for aerodynamic purposes and must be acceptable to Series Officials.

### **Engine Lubrication (from NASCAR rule book\*)**

#### **Oil\***

Any oil is permissible. Combustion enhancing additives will not be permitted.

#### **Oil Pressure\***

Oil pressure may be regulated at the discretion of the owner or driver.

#### **Oil Filters\***

Oil filters and breather caps acceptable to Series Officials will be permitted. Oiling Systems\*

A-Dry sump or air over systems will not be permitted. During the running of the Event, oil must be added to the engine compartment. External oil pumps will not be permitted.

B-Oil drain line will not be permitted.

C-Inside valve cover oiling systems will not be permitted.

D-Quick disconnect fittings will not be permitted.

E-Heating pads, blankets or any other heating devices will not be permitted for warming the oiling system.

### **Engine Exhaust System (from NASCAR rule book\*)**

The exhaust systems and components must be acceptable to Series Officials and meet the following minimum requirements.

### **Exhaust Manifold\***

A-Exhaust Headers will be permitted. Must be manufactured using a magnetic steel primary tube size of 1-5/8 inches outside diameter, maximum 30 inches in length cut off square, no cones or pyramids will be permitted with a collector tube size of three inches outside diameter. The header collector pipe must not be reduced at any point between the primary tubes and the exhaust pipe. Primary tubes must exit down and turn to parallel, or angle down, in reference to the cylinder head, then turn down and turn to the rear into the collector pipe. The maximum thickness permitted on the header mounting flange will be 3/8 inch.

B-Stainless steel, stepped, 180 degree, merge, or crossover equalizer tube systems will not be permitted.

C-Spacers will not be permitted between the cylinder head and the exhaust manifold. Only one gasket, max 0.075 inch thickness, may be used between the cylinder head and exhaust manifold and / or header.

D-Thermal wrap will not be permitted.

E-Scavenge lines and / or hoses will not be permitted between the engine and exhaust system.

F-Internal coatings will not be permitted.

### **Exhaust Pipes\***

A-Exhaust pipes from the exhaust header collector must not be larger than four inches or smaller than three inches outside diameter but must be the same diameter the entire length. Only round exhaust pipes will be permitted, but may be flattened to an oval shape a minimum of 1-1/2 inches high. The circumference must be the same as the round exhaust pipe of the same diameter. Any device to reduce the interior diameter of the exhaust pipe will not be permitted. The exhaust pipe must exit the collector pipe and turn either right or left and may join into one pipe that must exit the car either beneath or on top of the frame rail. When the two exhaust pipes into one system is used, all exhaust pipes must be routed beneath the transmission and exit to the outside of the car, with a single pipe only, behind the driver and in front of the rear wheels. Any exhaust pipe exiting through the inside of the car must be completely sealed and not extend more than 1/2 inch outside the door. Frames, rocker panels and quarter panels must not be notched to accommodate exhaust pipes.

B-Exhaust pipes must be made of magnetic steel, fastened to the header collector and to the frame in a secure manner acceptable to Series Officials.

C-Thermal wrap will be permitted on the exhaust pipes under the driver compartment only.

D-Crossover pipes or merge systems will not be permitted.

### **Heat Shields\***

Heat shields will not be permitted.

### **Coil Springs\***

1-There will be NO coil binding, bump stops, or gels or anything similar allowed.

2-Nothing that will restrict chassis travel will be allowed.

## **Wheels\***

- 1-15" wheels only-5 lugs
- 2-All 4 wheels must have the same offset
- 3-All 4 wheels must be the same width of 10"
- 4-No bleeder valves permitted
- 5-Either 5x5 or wide 5 hubs allowed
- 6-At least 3 threads must be visible outside the lug nut on all 4 wheel studs.

## **Tires\***

Hoosier F-45 – Scuffs ECMS Tire Database

## **Suspension (from NASCAR rule book\*)**

1-All suspension systems, components, and parts must be acceptable to Series Officials. Unless otherwise authorized by Series Officials, non-ferrous suspensions parts will not be permitted. The following minimum requirements must be met:

### **A-Rear Suspension Trailing Arms**

1-Only a conventional two link truck trailing arm type or a three link passenger car type suspension will be permitted. Bushings for truck trailing arms that, in the judgment of Series Officials, allow excessive vertical or horizontal movement will not be permitted.

2-Truck trailing arms must be attached to the rear axle housing, with one solid "U" bolt on each side over the axle housing and through the truck trailing arm to the axle housing and to the chassis in the front with a steel or rubber bushing or mono balls, (must be the same on both sides), at the end of each truck trailing arm attached with minimum  $\frac{3}{4}$ " diameter bolts. The rear truck trailing arm mount, where the truck trailing arm attaches to the rear axle housing, must be the same on both the left and the right sides when measured from the outboard wheel mounting surface of the rear axle/ brake assembly to the alignment pin for the rear truck trailing arm. An eccentric-type adjuster may be used on only one of the front truck trailing arm mounting points for vertical and/or horizontal adjustments. Adjustable insert plates may be used on the other front truck trailing arm mounting point for vertical and/or horizontal adjustments. The maximum horizontal adjustments will be limited to  $\frac{3}{4}$  inch. Truck trailing arms using Heim joints spherical rod ends) will not be permitted. The front truck trailing arm mountings brackets must be one piece, welded magnetic steel. Hydraulic or spring loaded mounting points or links will not be permitted. The front truck trailing arm mounting brackets must be an equal distance from the longitudinal center line of the main frame rails.

3-Mounting points on the axle housing must be evenly spaced and welded to prevent movement and must be equal distance from the longitudinal center line of the rear frame rails. Truck trailing arms when measured from the center of the front mounting bushing to the center of the rear axle tube, in a straight line, must be within  $\frac{1}{4}$  " of

equal length with a minimum length of 45 inches. Pickup truck OEM trailing arms may be cut down to a minimum 2 inches wide by 3 inches high.

4-I-Beam style truck trailing arms may be used. They must be constructed using 2 C-channels of a minimum of one inch in width by 3 inches in height magnetic steel with a minimum wall thickness of 1/8 inch meeting the ASTM A-500 specification, welded back to back, creating a vertical wall of two, 1/8 inch minimum wall thickness with a complete overall size of two inches in width by three inches in height. Box tube truck trailing arms will not be permitted. Adjustable truck trailing arms will not be permitted. Any spacers used between the rear axle housing and the truck trailing arms must be made of solid metal block.

5-All truck trailing arms and brackets must be acceptable to Series Officials. Holes and/or other modifications to the truck trailing arms and mounting brackets, which in the judgment of Series Officials, have been made with the intent of weight reduction will not be permitted.

6-Passenger car type trailing arms must be a maximum of 25 inches in length at the center of the mounting holes. The trailing arms must be fabricated using a minimum 1-1/4 inch by 2 inches steel box tubing with a minimum wall thickness of 1/8 inch meeting the ASTM A-500 specification. Both trailing arms must be the same length and be made in one piece. Both trailing arms must be parallel with each other when attached to the frame and rear axle housing. Mounting points on the axle housing must be evenly spaced and welded to prevent movement and must be equal distance from the center line of the rear frame rails. Standard type rubber or metal bushings must be used. Adjustable rear trailing arms will not be permitted. All trailing arm brackets must be magnetic steel. All trailing arms and brackets must be acceptable to Series Officials. Holes and/or other modifications to the passenger type trailing arms that, in the judgment of Series Officials, have been made with the intent of reduction of weight or weight addition will not be permitted. Any other modifications, that in the judgment of Series Officials, such as, but not limited to weight addition, will not be permitted. The third link (tongue rod) must be a single, one piece, straight, round or tubular bar with heim joints (spherical rod ends) on each end. Rubber bumpers, springs or spring loaded bars will not be permitted.

7-The rear axle housing must be held in center of the car side to side by a single one-piece straight round tubular panhard bar, with adjustable heim joints (spherical rod end) on each end, behind the rear axle connected to the frame on the right side and the rear axle housing on the left side. The panhard bar mounting bolt, at each end of the panhard bar, must be 3/4 inch in diameter and must include a 1/8 inch thick magnetic steel washer with an outside diameter larger than the body of the heim-joint (spherical rod end). Moveable threaded -screw adjusters will be permitted on the panhard bar. If used, the moveable threaded-screw adjuster must be mounted on the frame mount side. The upper adjustment to the threaded-screw bracket (located just under the rear window) must share the same vertical center line with the threaded-screw bracket. The panhard bar, panhard bar brackets and/or components, must not be lower than the edge of the wheel (rim).

**Tread Width\***

Tread width must be 64 -1/2" +/-1/4" front and rear.

**Wheelbase\***

All cars will compete with a wheelbase of 105" +/-1/2" on either side.

**Body Height\***

Must meet specifications of body type and manufacturer.

**Ground Clearance**

Minimum 4" clearance at rocker panels, front valence, and frame.

**Car Height\***

- 1-NO adjustments allowed in driver's compartment.
- 2-NO electrical, pneumatic, hydraulic, remote control, or any other device that changes the handling characteristics or height of car will be permitted.

**Steering Components\***

- 1-Stock OEM appearing steering box, NO rack and pinion steering allowed.

**Brakes\***

Only single piston OEM style brake calipers allowed.

**Fuel Cell and Components (From NASCAR Rule Book\*)**

The use of a commercially manufactured fuel cell acceptable to Series Officials must be used.

1. A minimum of 15 gal and Maximum of 22 gal fuel cell required.
2. Materials other than standard foam, as provided by an approved fuel cell manufacturer, will not be permitted. Filler blocks or other materials, containers, etc... inside the fuel cell or fuel cell container to reduce the capacity, will not be permitted.
3. Fuel cell check valve is required and must be acceptable to Series Officials.

**(Steel Ball Type)**

- A. The fuel cell check valve housing must be manufactured of aluminum or magnetic steel plate not less than 1/4" thick. The bottom surface of the check valve plate must be flat. Spacers will not be permitted between the check valve plate and the fuel cell bladder. Only one gasket with a minimum thickness of 0.065 inch will be permitted between the check valve plate and the fuel cell container.
- B. The solid steel check valve must encase in a four rail carriage. The carriage rails must be constructed of solid aluminum or magnetic steel not less than 1/4" thick by not less than 3/4 inch wide material. The carriage rails must be positioned such that the surface 1/4 inch thick edge rides against the steel check

ball. Outside surfaces of the carriage must not have any sharp edges. The carriage must not be altered in any way and must remain perpendicular to the fuel cell check valve top flange plate.

C. The fuel filler check valve carriage must not exceed a maximum depth of 8-1/2 inches. The maximum inside diameter of the filler neck including the check valve ball seat must not exceed 2-1/8 inches. When seated at least ½ of the check ball must be visible. The diameter of the solid steel check ball must be 2-3/8 inches. The filler neck must not be made of cast aluminum.

D. The fuel vent check valve carriage must not exceed a maximum depth of 8-1/2 inches. The maximum inside diameter of the vent pipe neck including the check ball seat must not exceed 1-1/4 inches. When seated at least half of the check valve must be visible. The diameter of the solid steel check ball must be 1-3/8 inches. The fuel vent check valve must not be made of cast aluminum.

### **(Flap Type)**

A. The fuel cell check valve housing must be from an approved manufacturer and be made of aluminum or magnetic steel plate not less than 3/16 inch thick. A cast aluminum check valve housing assembly will not be permitted. The bottom surface of the check valve plate must be flat. Spacers will not be permitted between the check valve plate and the fuel cell bladder. Only one gasket with a maximum thickness 0.065 inch will be permitted between the check valve plate and the fuel cell bladder.

B. The fuel filler check valve assembly equipped with a fuel resistant flap, must maintain a minimum outside diameter of 3-1/2 inches. The maximum inside diameter of the fuel filler inlet must not exceed 2-1/8 inches. The fuel filler check valve assembly must not be made of cast aluminum.

C. The fuel vent check valve carriage must not exceed a maximum depth of four inches. The maximum inside diameter of the vent pipe neck including the check ball seat must not exceed 1-1/4 inches. The diameter of the solid steel ball/poppet must be 1-3/8 inches. The fuel vent check valve neck must not be made of cast aluminum.

### **Fuel Cell Containers (from NASCAR rulebook\*)**

1-A fuel cell container must be used and must be acceptable to Series Officials and meet the following requirements:

1. The fuel cell must be encased in a container of not less than 22 gauge (0.031 inch thick) magnetic sheet steel. Fuel cells must be fitted within the container so that the maximum capacity, including filler spout, will not exceed 22 gallons.
2. The 22 gal capacity fuel cell container size must be 33 inches by 17 inches by 9-1/4 inches (outside dimensions).
3. Handles should be attached to the top of each end in the center of the fuel cell container for removal from the recessed well.
4. The exterior of the fuel cell should be coated in red.

### **Fuel Cell/Container Installation\***

Fuel cell and container must be installed per manufacturer's instructions and must be acceptable Series Officials and must meet ALL safety requirements. Must have a minimum 10 inches ground clearance.

A rear firewall of magnetic sheet steel of not less than 24 gauge (0.025) inches must be located and welded in place between the driver's compartment and the trunk compartment.

### **Fuel Filler / Vent Requirements\***

#### **Fuel Filler**

Must be acceptable to Series Officials.

1-A minimum of 12 inches of clear flex hose must be used between the end of the fuel filler spout and the fuel cell plate.

#### **Fuel Vent**

Must be acceptable to Series Officials.

1-A single one inch maximum inside diameter vent to outside of body must be installed to the left rear corner in the taillight area only. A fuel vent flap valve is recommended on all tracks.

#### **Full Lines**

Must be acceptable to Series Officials.

#### **Fuel Cans**

Must be acceptable to Series Officials.

#### **Roll Bars / Roll Cage**

Roll bars and roll cage must meet specific car manufacturer's specifications and must meet standard NASCAR specifications and safety requirements and must be acceptable to Series Officials.

\*\*\*\* If you are unsure of any rule, whether contained within these rules or not, it is the responsibility of the driver to question this prior to any competition. You may contact the Series Head Tech Official or Director to clear up any questions. It is the responsibility of the Driver, NOT the Series Technical Director or Series Promoter or Series Representatives or any Track Representative, to ensure that his / her race car meets the specifications noted prior to entering any Event. \*\*\*\*