



## 2023 LATE MODEL SPORTSMAN RULES | KINGSPORT SPEEDWAY

Rule Deletions are ~~struck through~~, Rule additions are **highlighted**

~~The Sportsman (formerly Modified Street) division utilizes Late Model Stock Car chassis and stock front clip tube chassis.~~

(Late Model Sportsman rules are in accordance with the 2023 NASCAR Late Model rulebook and NASCAR Technical Bulletin MWAAS 19-2-12/11/19 with the following exceptions:)

### 13-1 Competing Models

- A. Late Model Stock Car (LMSC) chassis will be permitted or 1964 and later stock front clip tube chassis cars.

### 13-2 Body Specification

- A. Steel, aluminum, fiberglass, or plastic body panels allowed. All bodies can only be altered for tire clearance only.
- B. Aftermarket nose and tail is allowed.
- C. Car must have a 1/8-inch Lexan windshield.
- D. Car must have quarter windows and rear window.
- E. New body style aftermarket muscle car bodies will be permitted. New style aftermarket bodies permitted are Chevrolet Camaro, Ford Mustang and Dodge Challenger.
- F. Five Star North American Sportsman Bodies are permitted.
- G. LMSC bodies are permitted.
  - i. Buick Regal: 1995-1997
  - ii. Chevrolet Monte Carlo SS: 2007
  - iii. Chevrolet Impala SS: 2008-2021
  - iv. Dodge Charger: 2007-2021
  - v. Chevrolet Monte Carlo: 1995-2007
  - vi. Ford Thunderbird: 1995-1997
  - vii. Ford Taurus: 2000-2005
  - viii. Ford Fusion: 2006-2021
  - ix. Mercury Cougar: 1995-1997
  - x. Dodge Intrepid: 2001-2008
  - xi. Pontiac Grand Prix: 1995-2003
  - xii. Toyota Camry: 2009-2021
- H. 2<sup>nd</sup> generation, and 3<sup>rd</sup> generation Camaro, or Firebird Bodies permitted.
- I. The new Five Star Race Car Bodies defined in NASCAR Technical Bulletin MWAAS 19-3-12/11/19 will be allowed for Sportsman, as well as AR Bodies Gen 6 bodies.
- J. Spoilers for all bodies may be same height and width of Five Star Race Car Bodies defined in NASCAR Technical Bulletin MWAAS 19-3-12/11/19
- K. Other car bodies not listed are at tracks discretion.
- L. The roll cage may not be offset. Must use NASCAR LMSC roll cage specifications.
- M. Metric cars cannot have the roll cage set back more than 25 inches from the rear of the cage to the center of the rear end housing.

### 13-3 Engines

- A. The GM "602" will be permitted and must be as supplied by the manufacturer and/or per the specifications manual provided by the engine supplier with the following exceptions.
  - i. Valve Covers may be changed
  - ii. Oil Pan may be changed
  - iii. Timing Cover may be changed
  - iv. Valve Springs PAC 1210X are allowed
- B. The GM "603" will be permitted and must be as supplied by the manufacturer and/or per the specifications manual provided by the engine supplier with the following exceptions.
  - i. Valve Covers may be changed
  - ii. Oil Pan may be changed
  - iii. Timing cover may be changed
  - iv. Valve Springs Part#19300952 Beehive valve spring conversion kit may be used. Maximum amount of shims per spring will be .030.
- C. The GM "604" will be permitted and must be as supplied by the manufacturer and/or per the specifications manual provided by the engine supplier with the following exceptions.
  - i. Valve Covers may be changed
  - ii. Oil Pan may be changed
  - iii. Timing Cover may be changed
- D. The "Paul Shull engine" will be permitted in accordance with the specifications defined in Section 13-11 herein
- E. The "Built Steel Head (Old LMSC)" engine will be allowed in accordance with the specifications defined Section 13-10 herein.
- F. The "Harrington Enforcer" will be permitted and must be used as supplied by the manufacturer and/or per the specifications manual provided by the engine supplier.
- G. The "Ford D347" will be permitted and must be used as supplied by the manufacturer and/or per the specifications manual provided by the engine supplier.
- H. The "Ford S347" will be permitted and must be used as supplied by the manufacturer and/or per the specifications manual provided by the engine supplier.
- I. The "Chevrolet Upgrade" engine kit will be permitted and must use engine components as per the specifications manual provided. The Edelbrock part #2701 Performer and part #2975 Victor Jr. intake manifolds will be the only intake manifolds permitted and must remain as supplied without any modifications. The maximum rocker arm ratio permitted will be 1.6. All other engine components and specifications must meet the requirements as described in The NASCAR Weekly Series Rule Book Section 20F-5 (Detailed Engine Requirements).
- J. No Porting/Polishing/Gasket Matching on any engine or engine components.

### 13-4 Car Weight

- A. 602 – 3050 Total, 1375 Right Side
- B. 603 – 3100 Total, 1400 Right Side
- C. 604 – 3100 Total, 1400 Right Side
- D. Paul Shull – 3100 Total, 1400 Right Side
- E. Built Steel Head (Old LMSC) – 3100 Total, 1400 Right Side
- F. Harrington Enforcer – 3100 Total, 1400 Right Side
- G. Ford D347 – 3100 Total, 1400 Right Side
- H. Ford S347 – 3100 Total, 1400 Right Side
- I. Chevrolet Upgrade – 3100 Total, 1400 Right Side
- J. All Engine packages must be at minimum weight following qualifying.

- K. All Engine packages will be allowed 1lb per lap allowance to determine weight at the conclusion of competition.
- L. Hood openings – All cars with hoods that have openings allowing fresh air enter the engine bay, or hot air escape the engine bay when closed must either:
  - a. Fix body/hood mounting to remove openings or
  - b. Tape perimeter of the hood to close openings
  - c. If neither of the above can be done must at 25lbs to total weight.
- M. All engines may be adjusted via weight, for competition purposes

### 13-5 Carburetors

- N. 602 – Holley 650 CFM Carburetor with Aluminum Spacer Max thickness 1 inch
- O. 603 – Holley 4412 500CFM Carburetor (Box Stock) with Aluminum Spacer Max thickness 1 inch
- P. 604 – Holley 450 CFM Carburetor (500 Body/350 Base)
- Q. Paul Shull – Holley 450 CFM Carburetor (500 Body/350 Base)
- R. Built Steel Head Chevrolet (Old LMSC) – Holley 450 CFM (500 Body/350 Base)
- S. Built Steel Head Ford/Dodge (Old LMSC) – Holley 350 CFM Carburetor (NASCAR LMSC Rework Guidelines)
- T. Harrington Enforcer – Holley 350 CFM Carburetor (NASCAR LMSC Rework Guidelines)
- U. Ford D347 – Holley 350 CFM Carburetor (NASCAR LMSC Rework Guidelines)
- V. Ford S347 – Holley 350 CFM Carburetor (NASCAR LMSC Rework Guidelines)
- W. Chevrolet Upgrade – Holley 350 CFM Carburetor (NASCAR LMSC Rework Guidelines)
- X. All engines may be adjusted via Carburetor and/or Restrictor Plate, for competition purposes

### 13-6 Tires (Tire rules subject to change based on tire manufacturer)

- A. Cobra Tires Required.
- B. Maximum of 5 tires can be purchased Race 1.
- C. 1 tire may be purchased each race week. Tire does not have to be ran the week it is purchased and may be placed in any position on the car.
- D. Can have a Maximum of 6 tires in impound., 4 race tires and 2 spare tires.
- E. Must qualify/race on tires from impound. Once a tire leaves the track it is considered practice only.

### 13-7 Coil Springs – Spring Mounts – Jacking Bolts – Sway Bar

- A. Coil binding will not be permitted on any spring. All coils of the spring must be active. All downward chassis movement while the race car is in competition must be limited only by the normal increasing stiffness of the springs or the bottoming of the chassis against the race track, whichever occurs first. Any travel limiting device or procedure that in the judgement of Track Officials attempts to detract from or compromise the above will not be permitted. Any device(s) such as chains, cables, etc. that limit the travel of the suspension either up or down will not be permitted. When jacking the car, a minimum of two (2) inches of chassis movement is required before movement of the axle/tire assembly.
- B. Only coil spring suspension will be permitted. All coil springs must be constructed using round magnetic steel wire, wound in a clockwise direction. Ovate and flat wire will not be permitted. The coil spring wire diameter must be the same size from the top to the bottom of the springs. All of the coils in a spring must be active. The coil springs in all four (4) wheels must be active in any and all suspension movement.
- C. Sway bar – any size allowed

### 13-8 Shock Absorbers

- A. Any Steel Body, non-adjustable, non-rebuildable shock allowed. Subject to tech approval and shock claim rule.
- B. They must remain as manufactured with part number visible and unaltered, with factory paint and will be subject to exchange. If an exchange of shocks is required by track officials, the shocks ran by the competitor must be in proper working order. If the shock is damaged or not working properly, the competitor must replace it with either a properly working used one or new one of the same number.

- C. Claim Rule - \$130 per shock and claim must be presented in writing to Track Officials no more than 20 minutes after the checkered flag is displayed. Top 5 only can claim shocks. Track may claim shock/shocks for tech purposes. (If shock is deemed legal racer receives shock claim, if shock is deemed illegal track keeps shock claim)
- D. Steel bodied shocks only permitted.
- E. The use of rebuildable shocks will not be permitted. Bump stops, coil bind or any other device to accomplish similar results will not be permitted.

**13-9 Ground Clearance**

- A. The frame rail and sheet metal clearance must be a min. of four (4) inches. Ground clearance is subject to measurement at any time.
- B. The front air dam clearance must be a min. of four (4) inches.

**13-10 DETAILED BUILT ENGINE REQUIREMENTS**

Built engines must conform the following detailed engine requirements. Changes from the approved standard production automobiles or components parts will not be permitted except as specified in the following rules for engine preparation.

**13-10-1 Engine Location**

- i. General Motors open/built 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 with or a maximum of 1 inch forward of the right front upper ball joint.
- ii. Ford and Dodge engines must be located so that the front of the cylinder head on the right side is in line or a maximum of one (1) inch forward of the center of the right front upper ball joint.
- iii. The center of the crankshaft must be on the centerline of the frame, front sub-frame, and tread width, front and rear.

**13-10-2. Engine Ground Clearance**

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

**13-10-3 Engine Mounts**

All engine mounts must be acceptable to Track Officials and meet the following minimum requirements:

- i. All engine mounts must be reinforced steel or aluminum.
- ii. All engine mounts must be securely bolted.
- iii. Adjustable engine mounts will not be permitted.

**13-10-4 Engine Displacement**

The formula for determining cubic inch displacement is as follows; Bore x Bore x Stroke x 0.7854 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.

- i. The cubic inch displacement will be as follows:

CUBIC INCH MAXIMUM

MANUFACTURER DISPLACEMENT OVERBORE

General Motors 350 CID 0.060 inch overbore

Dodge: 360 CID 0.035 inch overbore

Dodge: 355 is not allowed

Ford: 351 CID 0.045 inch overbore

- ii. The manufacturer's stock bore and stroke nominal dimensions for the approved engines are listed as follows:

MANUFACTURER BORE STROKE

General Motors: 4 inches, 3.480 inches

Dodge: 4 inches, 3.580 inches

Ford: 4 inches, 3.500 inches

- iii. Unless otherwise permitted by Track Officials, a maximum cooling down time of two (2) hours from the official completion of the Race will be permitted prior to measuring the total cubic inch displacement.

### 13-10-5 Engine Blocks

All engine blocks must be acceptable to Track Officials and meet the following minimum requirements. Track Officials may use an engine block provided by the respective manufacturer as a guide in determining whether a Competitor's engine block conforms to the specifications of the Rule Book.

#### 13-10-5-1 Eligibility

- i. Engine block must be a product of the manufacturer of the make of the approved engine being used for competition.
- ii. Aftermarket engine blocks will not be permitted.
- iii. The engine block must retain the 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.
- iv. Only cast iron engine blocks will be permitted. Aluminum or compacted graphite engine blocks will not be permitted.
- v. The engine block deck height, measured from the center of the crankshaft main bearing journal to the top of the engine block where the cylinder heads bolt on, must be as follows:  
MANUFACTURER BLOCK DECK HEIGHT General Motors 9.000 inches (minimum 8.980 inches)
- vi. Any engine block deck height below the minimum tolerance may be assessed a weight penalty of five (5) pounds for every 0.010 inch up to 0.050 inch below the minimum tolerance. Any engine block deck height more than below 0.050 inch minimum tolerance may be assessed a weight penalty of 50 pounds.

#### 13-10-5-2 Internal Changes

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

#### 13-10-5-3. Piston/Rods

- i. All pistons must be configured with two (2) separate compression piston ring grooves located near the top of the piston and one (1) oil ring groove located below the compression ring grooves. A piston compression ring must be used in each compression ring groove and one (1) oil ring groove assembly must be used in the oil ring groove.
- ii. Any flat top three (3) ring round aluminum piston with three (3) rings will be permitted. Minimum compression ring nominal width is 0.043 inch and the minimum oil ring nominal width is 3mm (0.118inch). 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 the piston will not be permitted.
- iii. Only magnetic steel piston pins maintaining a minimum diameter of 0.927 inch will be permitted.

- iv. Piston pin holes must be in a fixed location in the piston and connecting rods.
- v. Only two-piece insert style rod bearings will be permitted. Roller bearings will not be permitted.
- vi. 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:  
 MANUFACTURER: MINIMUM, MAXIMUM  
 General Motors: 5.700 inches, 6.250 inches  
 Dodge: 6.0 inches, 6.250 inches  
 Ford: 5.778, 6.250
- vii. Titanium and stainless steel connecting rods will not be permitted.
- viii. Connecting rods must be machined to normal machining schedule utilized for standard production parts. Piston guided rods will not be permitted. Spacers or shims will not be permitted between the piston boss and the connecting rod. The maximum side clearance between the connecting rods will be 0.035 inch.

**13-10-5-4. Oil Pans/ Oil Coolers**

The oil pan and oil coolers must be acceptable to Track Officials and meet the following requirements:

- i. Oil pans must be made of magnetic steel.
- ii. The oil pan 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 holes and bolt 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.
- iii. 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 to extend rearward of the center of the spindle. All oil coolers and the installation must be acceptable to Track Officials.

**13-10-6 Cylinder Heads**

- A. All cylinder heads must be approved and all modifications must be presented to Track Officials before any proposed modification will be eligible for approval. Approved manufacturers' identification and part numbers must remain unaltered on the cylinder head being used in competition. The following heads are approved for competition:

MANUFACTURER PART NUMBER CASTING NUMBER

General Motors 10134392 14011034

(Current design) 12480034 12480034

World Products Sportsman II SBC 011150 1-037

(Current design with mfg. date stamped on head)

Dodge-Mopar W2 (Current Design) Part # P5249769, Casting #4532693

Ford M-6049-N351

- B. The approved cylinder heads above must conform to all of the requirements of Section 13-10-6 through Section 13-10-6-3 herein.
- C. Track 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

D. Heating pads, blankets or any other heating devices will not be permitted for warming the heads.

**13-10-6-1 Eligibility**

- i. To be eligible, the cylinder heads must be acceptable to Track Officials and meet the following requirements:
- ii. Cylinder heads must be stock cast iron production only and approved by NASCAR, and are limited to two (2) valves per cylinder. iii. The valve angle must remain as approved by NASCAR and be acceptable to Track Officials.

The following are the acceptable valve angles permitted:

MANUFACTURER VALVE ANGLE

General Motors 23 Degree

World Products Sportsman II SBC 23 Degree

**Dodge-Mopar 18 Degree**

**Ford 10 Degree**

- iv. All valves must be identical in appearance and construction as an OEM valve. Titanium or exotic material 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 permitted. The maximum valve sizes as measured across the face of the valve are as follows:

General Motors Intake – 2.020 inch, Exhaust – 1.625 inch

**Dodge Motors, Intake – 2.020 inch, Exhaust – 1.625 inch**

**Ford Motors, Intake – 2.020 inch, Exhaust – 1.600 inch**

- v. A maximum of three (3) valve 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 in reference to the valve job and bowl area must be centered off the centerline of the valve guide. Radius cuts will not be permitted. Upon completion of the valve job, the bowl area above the valve seat must 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.
- vi. Titanium valve springs will not be permitted. Only magnetic steel valve springs will be permitted.
- vii. Port matching or flow work will not be permitted.
- viii. Angle cutting of the cylinder head to the engine block mating surface will not be permitted. ix. 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.
- x. "O" rings will not be permitted for sealing the cylinder head to the engine block.

**13-10-6-2. External Changes**

- i. External modifications will not be permitted.
- ii. All cylinder heads are limited to a minimum of 62 cc combustion chamber for each cylinder. The combustion chamber may be machined cut, on the walls beside the valve only, to equalize 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.

### 13-10-6-3. Internal Changes

- i. Internal polishing, porting and/or any other internal modifications will not be permitted. 13-

### 10-7. Crankshaft/Harmonic Balancer

#### 13-10-7-1 Crankshaft

- i. 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 OEM crankshaft for the approved standard production engine. Stroke must **not** be increased or decreased. Balancing will be permitted. A solid material must be used to balance the crankshaft.
- ii. Only two-piece insert style crankshaft bearings will be permitted. Roller bearings will not be permitted.
- iii. 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 weights listed below shall include the timing chain sprocket. The following dimensions are the minimum specification for all crankshafts:

MANUFACTURER Main Journal Rod Journal Weight

General Motors: 2.450 minus 0.030, 2.100 minus 0.030, 50 Pounds

Dodge: 2.500 minus 0.030, 2.100 minus 0.030, 50 Pounds

Ford: 2.750 minus 0.030, 2.100 minus 0.030, 50 Pounds

#### 13-10-7-2 Harmonic Balancer

- i. Harmonic balancers must be used and must be used as manufactured and be acceptable to Track Officials. Only standard OEM magnetic steel elastomer type harmonic balancers will be permitted. The use of :O" rings or other devised that deviate from the standard OEM elastomer rubber insert will not be permitted. Outer covers, lops, etc. to prevent the separation of the outer ring will be permitted provided they do not deviate from the standard OEM elastomer rubber insert.
- ii. Electronic switching devices or sensors will **not** be permitted on the harmonic balancer, crankshaft or flywheel.

### 13-10-8. Camshaft/Valve Lifters/Rocker Arms

#### 13-10-8-1. Camshaft

- i. Only magnetic steel camshafts will be permitted. **The camshaft bearing journal size Maximum 2.362 inches (60mm)**
- ii. Only standard production timing chains will be permitted. Belt drive and gear drive systems will not be permitted. Camshaft timing must be fixed, Variable timing devices will not be permitted.
- iii. Only standard production sleeve type cam bearings will be permitted and must be the standard inside diameter for the NASCAR approved 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.
- iv. Camshafts must be driven in the same direction of rotation as the NASCAR approved production engine being used. The camshaft must maintain the same firing order as the NASAR approved production engine.

The approved firing orders using approved cylinder identification are as follows:

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

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



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

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

General Motors/Dodge

(Front)

1 2

3 4

5 6

7 8

Ford

(Front)

5 1

6 2

7 3

8 4

- vi. The front engine cover material must be acceptable to Track Officials.

**13-10-8-2. Valve Lifters**

- i. Only solid magnetic steel or magnetic steel hydraulic valve lifters will be permitted. Roller tappet, ceramic valve lifters, mushroom valve lifters and any type of mechanical assistance exerting a force to assist in closing the valve and/or rush roc, commonly referred to as rev-kits will not be permitted.
- ii. 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.
- iii. Only magnetic steel one-piece, pressed together valve push rods, without any moving parts, will be permitted.
- iv. the standard production push rod guide plates will be the only guide plates permitted.

**13-10-8-3. Rocker Arms/Valve Covers**

- i. Only steel or aluminum rockers arms, one (1) per valve, that are acceptable to Track Officials.
- ii. Roller rocker arms will be permitted. Rocker arms for all cars must be an independent single stud type. Dual shaft rocker arms will not be permitted. Offset rocker arms will not be permitted. Stud girdles will be permitted. All aftermarket rocker arms assemblies must be acceptable to Track Officials.
- iii. Valve covers must be made of steel or aluminum. Magnesium and other exotic material will not be permitted.

**13-10-9. Intake Manifolds**

- A. The intake manifold must be approved by NASCAR. The approved manufacturer's identification in the form of cast-in part numbers must remain unaltered on the intake manifold.
- B. Track 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. The eligible manifolds must remain as manufactured. Listed below are the only eligible intake manifolds for the Sportsman division competition:

MANUFACTURER PART NUMBER  
General Motors Edelbrock – 2101

Edelbrock part numbers are current design Edelbrock Performer Series Intake Manifolds. Older design intake manifolds with the same part number will not be permitted.

- D. 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 ½ 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.
- E. The intake manifold material must be aluminum. Magnesium or other exotic materials will not be permitted.
- F. Port matching or flow work will not be permitted.
- G. Only one (1) standard flat gasket, a maximum compressed thickness of 0.075 inch, may be used between the cylinder head and the intake manifold.
- H. Intake manifolds must not be painted or coated.

### 13-10 Detailed Built Engine Requirements

- A. General Motors open/built 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 with or a maximum of one (1) forward of the right front upper ball joint.
- B. The engine ground clearance will be measured (with the driver) from center of the crankshaft accessory drive bolt. A minimum of 12 inches and maximum of 13 inches from center of crankshaft accessory drive bolt to ground must be maintained at all times.
- C. All engine mounts must be acceptable to Track Officials and meet the following minimum requirements:
- i. All engine mounts must be reinforced steel or aluminum.
  - ii. All engine mounts must be securely bolted.
  - iii. Adjustable engine mounts will not be permitted.
- D. Max overbore 0.060 inch
- E. The manufacturer's stock bore and stroke nominal dimensions for the approved engines are listed as follows:  
General Motors 4 inches 3.480 inches
- F. The formula for determining cubic inch displacement is as follows; Bore x Bore x Stroke x 0.7854 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.
- G. Unless otherwise permitted by Track Officials, a maximum cooling down time of two (2) hours from the official completion of the Race will be permitted prior to measuring the total cubic inch displacement.
- H. All engine blocks must be acceptable to Track Officials and meet the following minimum requirements. Track Officials may use an engine block provided by the respective manufacturer as a guide in determining whether a Competitor's engine block conforms to the specifications of the Rule Book
- I. Engine block must be a product of the manufacturer of the make of the approved engine being used for competition.
- J. Aftermarket engine blocks will not be permitted.
- K. The engine block must retain the 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.

- L. Only cast iron engine blocks will be permitted. Aluminum or compacted graphite engine blocks will not be permitted.
- M. The engine block deck height, measured from the center of the crankshaft main bearing journal to the top of the engine block where the cylinder heads bolt on, must be as follows: General Motors 9.000 inches (minimum 8.980 inches)
- N. Any engine block deck height below the minimum tolerance may be assessed a weight penalty of five (5) pounds for every 0.010 inch up to 0.050 inch below the minimum tolerance. Any engine block deck height more than below 0.050 inch minimum tolerance may be assessed a weight penalty of 50 pounds.
- O. Internal polishing of the engine block will not be permitted. Deburring of casting flash from the engine block will be permitted.

### 13-11 "Paul Shull" Engine

"Paul Shull" Built engines must conform the following detailed engine requirements. Changes from the approved standard production automobiles or components parts will not be permitted except as specified in the following rules for engine preparation.

#### 13-11-1 Detailed Engine Details

- i. Any 5.7 steel rod is permitted
- ii. Stock type piston 2 (two) or 4 (four) eyebrow
- iii. 50lb. crank minimum. Lightening, cuttings, polishing and/or edging is not permitted
- iv. Stock stroke only
- v. Roller rocker arms are allowed, all must be 1.5 ratio
- vi. Steel straight plug head only. Aftermarket, Dart, World Product, etc. will not be permitted
- vii. Double hump vortec heads allowed, EQ-CH350 heads Allowed
- viii. 62 c.c. combustion chamber
- ix. 1.94 intake, 1.500 exhaust valves, Aftermarket allowed must be same shape as factory and single cut only.
- x. Modifying and angle cutting of the head will not be permitted
- xi. Guide plates and screw in studs are permitted
- xii. Single valve spring, with flat damper inside permitted. Must be stock diameter. If using Bee Hive/Ford Crate Valve springs, must add 35 lbs to total weight.
- xiii. Zero (0) deck height, piston must not protrude from cylinder bore
- xiv. Max overboard allowed .060
- xv. OEM steel elastomer type harmonic balancer is permitted

#### 13-11-2 Camshaft and Valve Lifter

- iv. Only magnetic steel, stock flat tappet type camshaft is permitted.
- v. The use of roller cams is not permitted
- vi. Lifters must be standard production hydraulic size and steel.
- vii. Hydraulic cam lift is 450/480 max lift at valve
- viii. Polly locks are permitted

#### 13-11-3 Intakes

- i. Edelbrock Performer series intakes only #2101, #2716, or #2116.

### 13-12 Brakes

- A. Four-wheel disc brakes are optional. Single piston caliper only.

### 13-13 Fuel

- A. Track fuel is required. The use of additives will not be permitted.
- B. Fuel options will be
  - a. 110 octane
  - b. 93 octane

- c. 110/93 octane mixture
- C. Must purchase minimum 10 Gallons per Event.

**13-14 Ignition System**

- A. GM HEI, and MSD ignition are allowed
- B. MSD Ignition boxes must be mounted in accordance to the NASCAR Weekly Series Rulebook

**13-15 Wheels**

- A. Must run 10 inch wheels
- B. All 4 wheels must have same offset

**13-16 Treadwidth**

- A. Treadwidth will follow Nascar Weekly Series Rulebook

**13-17 General**

- A. Rules may be adjusted at any time for competition purposes.
- B. Track has option to tech sealed crate engines.
- C. Engine/ Claimed weight must be on either Right Side A Post, or Windshield, 2 inch letters, contrasting color. \$25 fine for not being displayed

**13-18 Procedure**

- A. Qualifying order will be determined by pill draw.
- B. Only 3 people per car at tech area.
- C. Only One of those 3 people may be at scale display with tech official.

