

# **Lancaster Motorplex** **2025 Sportsman Division Rulebook**

## **TO ALL** **COMPETITORS/PARTICIPANTS**

**IMPORTANT, PLEASE READ:** All rules within are at the discretion of the Race Director and Technical Officials. Any stock part or aftermarket part must remain stock and unaltered for that part unless stated within the rule. Removal of ID or Part numbers makes the part illegal. If something is not covered or not clear within the rules "DO NOT ASSUME IT IS LEGAL" you must call the Tech Official and an amendment may be made, if necessary. This is in an attempt to keep the competition even and the cost to race low.

### **Radios**

Two-way radios are allowed, but a dedicated spotter MUST monitor the track one-way radio system. Failure to monitor and/or follow instructions promptly will result in the loss of the two-way communication. Lancaster Motorplex reserves the right at any time to eliminate the two-way radio system and return to only the one-way system.

### **Engine**

#### **A) LOCATION**

The engine must be mounted between the frame rails in front of the driver. The centerline of the crankshaft when measured to the center of the lower ball joint, left and right must be within two (2) inches in distance. The engine minimum crankshaft center to ground clearance is 9 1/2 inches. The engine may NOT be tilted.

#### **B) ENGINE GROUND CLEARANCE**

Engine ground clearance will be measured (with driver in car) at the oil pan. A minimum height of two (2) inches from the bottom of the oil pan to ground MUST be maintained at all times.

#### **C) ENGINE MOUNTS**

All engine mounts shall conform to the following requirements: Engine mounts must be reinforced and must be acceptable to Lancaster Motorplex. All engine mounts MUST be securely bolted.

#### **D) ENGINE DISPLACEMENT/COMPRESSION LIMIT**

Only "small block" V-8 engines with a minimum of 350 cubic inch displacement will be allowed. To clarify the identification of a "small block" engine, listed below are the basic engines designated and approved as "small block" engines. Any engine NOT listed will be designated as a large block engine and will NOT be permitted, regardless of the engine size.

#### **E) MAXIMUM ENGINE DISPLACEMENT AS FOLLOWS:**

- a) GENERAL MOTORS 350 CU. INCHES
- b) FORD 351 CU. INCHES
- c) MOPAR, AMERICAN MOTORS 360 CU. INCHES

**F) ENGINE DISPLACEMENT** May be increased by boring. Formula for determining cubic inch displacement: 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.

## **G) COMPRESSION LIMIT**

a) The maximum compression limit allowed shall be 11.0 to 1 on any cylinder. When calculating the compression ratio, an allowance of one (1) cubic centimeter will be added to the volume for the area around the top of the piston down to the top of the piston ring that will be sealed with grease.

b) The procedure for checking compression is as follows: Bore x Bore X .7854 x Stroke equals the Cylinder Volume of each cylinder at Bottom Dead Center (bdc) in cubic centimeters. The cylinder head pour volume minus (-) the known volume of the cylinder head plate plus (+) head gasket volume plus (+) 1.00 cc for sealing piston ring plus (+) the cylinder block volume minus (-) the known volume of the block plate equals (=) chamber volume. (Compression ratio = Cylinder Volume plus (+) Chamber Volume)

## **H) ENGINES**

Maximum compression ratio of 11.0 to 1, Compression will be checked with a whistler. V8 engines only. NO aluminum engine blocks or heads. This is subject to change at any time per Lancaster Motorplex Officials.

## **I) BLOCK**

GM Chevy 350 cu. In standard production block with stock external and internal measurements. Bore size of 4.00 to 4.060 Only (+.005 tolerance) Bowtie Block # 124800474 allowed. Dart block part # 3116111 will be allowed. Block must be centered between frame rails and not tilted. Must be securely mounted to frame. The center of crankshaft must be within 2-inch center of thread width.

## **J) CRANKSHAFT**

Only stock production type crankshaft can be used. Standard steel or cast iron. Aftermarket crankshafts must be identical to stock OEM in appearance, construction, weight, and journal size. Counterweights must be the same shape and size as stock OEM crankshaft. Minimum crankshaft weight 48 lbs. Chevrolet must use LARGE journal size crankshaft. Stroke 3.480 only (+ or - .005). Counterweights must remain stock. No undercutting. No knife edging, tapering, or altering in any way. Except for normal balancing, by drilling, turning, or adding #. Rod journals stock diameter with tolerance of .020 light deburring permitted, however forging or casting flashing must remain.

## **K) CONNECTING RODS**

OEM stock rods or aftermarket rods. Machining for bushing or full floating is allowed. 5.700 Or 6.000 forged or billet connecting rod permitted, for Chevrolet. Aftermarket 5.700 forged or billet minimum weight 575 total grams. Aftermarket 6.000 forged or billet minimum weight 600 total grams. Maximum Ford rod length 6.000 Mopar rod length 6.125. NO de-burring, de-flashing, polishing abrasive cleaning or lightening. NO titanium, aluminum, max-light aerospace alloy rods allowed.

## **L) PISTONS**

Flat top or dished aluminum three ring pistons only. All three rings in place. Valve reliefs may be machined in pistons. Any steel pin may be used. No Domed Pistons allowed.

## **M) CYLINDER HEADS**

**These are your OPTIONS for heads.**

Heads must be any 23-degree, un-ported cast iron, from listed manufacture.

**Chevrolet** – 185 CC

**World Product casting** - #011150 – Angle plug, #011250 – Straight plug,

**RHS** - #12319 Straight plug, 200 CC, #12320 Angle plug \*Because of later heads.

**Iron Eagle** - #10310010 – Angle plug, #10320010 – Straight plug 200 CC **Proaction** - #2234-00000A –

Angle plug, #2234-00000 – Straight Plug 200 CC **Proaction** - #12320 –

Angle plug, #12319 – Straight plug 200 CC

**Ford** - #M-6049-N351, N352

**Mopar** - #W-2

**GM Cast Bowtie Heads** - #'s 10134392, 14011058, 14011034. Maximum intake runner volume of 200 CC. No porting to reach maximum runner volume.

**Dart Iron Eagle Platinum 64CC** - #10310010P – Straight plug bare, #1031112P – Straight plug assembly,

#10320010P – Angle plug bare, #1032112P – Angle plug Assembly. Maximum intake runner of 210 CC

**G.M. VORTEC CYLINDER HEADS OF ANY TYPE WILL NOT BE PERMITTED**

### **O) The Cylinder Heads**

Must retain stock internal, external measurements. No port matching, blending, porting, polishing, removal, or addition of materials to head. No hand grinding or acid dipping permitted on any part of the head. No paint, epoxy fillers, welding, or spray welding on heads. External painting to match engine allowed. Manufacturer's spec and intake runner CC size will apply on all heads listed. NO TOLERANCE.

1. All valves must be identical in appearance in construction as OEM type valve. Minimum valve stem diameter 11/32 inch. Valve stem diameter may be undercut to a minimum diameter of 15/16 inch in the area of the valve stem from the head of the valve to the bottom of the guide.
2. The valve must be solid stainless steel only.
3. Valve springs and push rods must be magnetic steel only. (NO TITANIUM VALVE SPRING RETAINERS ALLOWED)
4. Screw in studs allowed.
5. Roller rockers and girdles are allowed. No shaft rocker arms.
6. Chevrolet intake valve 2.020 exhaust valve 1.600.
7. Ford Windsor intake valve 1.844 exhaust valve 1.546.
8. Ford Cleveland intake valve 2.046 exhaust valve 1.546.
9. Ford #M-6049-N351 intake valve 2.020 exhaust valve 1.600.
10. Mopar Corp intake valve 2.020 exhaust valve 1.625.
11. ½ inch under valve seat to complete valve job allowed. Machine cut only. No polishing or blending.
12. Heat risers can be filled.
13. Multiple angle valve job with valve centerline and guide angle in OEM stock location in relationship to the head.
14. No combustion chamber modifications.
15. No repositioning head on block. Stock location only.
16. No air directional devices.

### **P) CAMSHAFT**

Flat tappet camshaft only. Roller camshaft(s) will not be permitted. Mushroom or roller lifters will not be permitted. Lifters must be stock diameter. No roller camshaft bearings.

### **Q) TIMING CHAIN**

Any timing chain and gears may be used. Degree bushing and offset crank gear keys may be used. Gear drives may be used.

### **R) ROCKER ARMS**

Roller rocker arms permitted. NO shaft mounted roller rocker systems.

### **S) PUSH RODS**

Magnetic steel valve push rods are permitted only.

## **T) ENGINE LUBRICATION NO DRY SUMP MOTORS ALLOWED**

### **a) OILING SYSTEM**

Internal oil pumps driven from the distributor are required.

### **b) OIL PANS**

Steel or aluminum oil pans only

No vacuum pumps allowed.

Open breathers or vacuum pan allowed.

### **c) OIL PAN INSPECTION PLUG**

Is required on the left side of the oil pan. The inspection hole must be a minimum of 1 1/4-inch I.D. It must be 9 1/2 inches from the rear block face to the centerline of the inspection hole or 4 1/2 inches from the front block face to the centerline of the inspection hole and 1 1/4 inches from oil pan rail. There will NOT be any obstruction of view from the inspection hole to view crank and rods.

### **d) VIBRATION DAMPER**

NOT to be machined or altered in any way. Harmonic balancer minimum diameter 6.25 inches. Fluid dampener is legal. Centerline of crankshaft minimum 9 1/2 inches from the ground. Must be SFI Approved. Weight 7.5lbs. No aluminum.

## **U) DISTRIBUTOR**

Battery operated ignitions only. Stock type point distributor or electronic ignition allowed. Stock firing order for engine must be used. NO ignition boxes or multi-spark systems. Aftermarket coils must fit in stock location. May use aftermarket H.E.I. stock replacement type distributor. MSD H.E.I. # 8365 permitted. **Track reserves the right to swap out modules from one car to the next or to use track supplied modules.**

## **V) WATER PUMPS**

Only OEM type steel or aluminum mechanical water pumps in stock location, turning in the same direction of the crankshaft rotation, are permitted. Water pump impellers may be altered but coolant flow must be in the same direction as the production engine.

## **W) CARBURETOR**

a) Unaltered HOLLEY #4412-500CFM, HP Carb Part #0-805-83-1; 4412C, 4412S or 4412CT only. The Holley 4412SA is NOT allowed. HP Carburetor allowed. #4412 Carb can use metering block or HP metering block and is allowed to have stock throttle plate screws flush with the throttle shaft.

b) Lancaster Motorplex officials must approve carburetor. Choke horn may NOT be removed. Boosters may NOT be changed. Booster size or shape may NOT be altered. NO sideways carburetors allowed. Venturi area must NOT be altered. Casting ring must NOT be removed. NO grinding or polishing. NO modifications to the base plate. Throttle shafts must remain standard and must NOT be thinned or cut. Stock butterflies may be drilled for idle holes but must not be thinned or tapered. Removal of the choke plate and choke linkage. Changing of jets, accelerator pump nozzle, pump cam and power valves permitted. Alterations to allow additional air to be picked up below the opening of the venturi such as altered gaskets, base plate or drilling holes into the carburetor will not be permitted. The slightest amount of Epoxy may be used to hold the booster in; officials will closely monitor this.

c) Carb must pass go/no-go gauge while hot or cold immediately after the race in tech.

## **X) CARBURETOR ADAPTOR PLATE / SPACER**

Only one solid spacer made of aluminum or phenolic plastic of a maximum height of one (1) inch permitted. Only one .075 maximum gasket per side. NO wedge-shaped mounting surfaces, both top and bottom surfaces must be parallel. Spacer must have two (2) holes maximum size 1.750 straight bore and match the base of carburetor. No air flow modifications.

## **Y) CARBURETOR THROTTLE**

All linkage must be mechanical type. NO cable types. **Two (2) springs MANDATORY.** Toe strap MANDATORY.

## **Z) AIR CLEANERS AND FILTERS**

MAXIMUM OF FIVE (5) INCHES IN HEIGHT. All air must be filtered through the element. The top of the air cleaner must be solid with NO holes. The top and bottom of the air cleaner must be of the same diameter. NO air induction, ducts, baffles, tubes, funnels, or **hats** which may control the air leading **to or through the or inside air filter to redirect air into carburetor**. The filter base must have a minimum round opening of five (5) inches. It will be permissible to shield the front area of the air cleaner up to a maximum of one-half of the air cleaner circumference and no wider than the height of the element. A one (1) inch maximum height spacer may be used between the carburetor and the air cleaner. K&N Plastic top and Bottom **WILL NOT BE PERMITTED. Only paper air filters will be permitted. May use outer wear screen to protect air filter.**

#### **AA) INTAKE MANIFOLD**

- a) CHEVROLET – EDELBROCK #2101
- b) CHRYSLER – EDELBROCK #2176
- c) FORD #M-9424-C358, EDELBROCK #2181, EDELBROCK #2750
- d) NO alterations or modifications to manifolds allowed. NO coatings allowed on or in manifold with the exception of paint only on exterior surfaces. Identification in the form of cast-in part numbers must remain unaltered on the manifold.

#### **BB) EXHAUST SYSTEM**

Officials reserve the right to reject improper mounted exhaust systems. Exhaust headers must be a commercially manufactured header using a steel primary tube size of 1 5/8 inch minimum and a maximum of 1 3/4 inch outside diameter. 1 5/8" to 1 3/4" step header permitted. Must be a conventional four-into-one collector with a maximum size of 3 1/2-inch OD. Maximum header flange will be 3/8 inch. NO header plates between heads and headers. NO adjustable headers. NO inserts allowed in any part of the header or collectors. NO 180-degree headers. NO stainless headers. NO merge. NO pyramid. No Try-y or similar style collector permitted. NO exhaust pipes allowed in the driver's compartment. NO thermal wrap permitted on headers. NO crossover pipes permitted. All exhaust pipes must be a single round steel 3 1/2-inch pipe, with a muffler.

#### **CC) HEAT SHIELDS**

Heat shields to cover exhaust manifold can be NO more than six (6) inches wide and NO longer than the valve cover.

#### **DD) MUFFLERS**

Any type of muffler allowed. No car will be allowed to race without mufflers. No modifications of any type allowed on muffler. **MUST BE REMOVABLE FOR INSPECTION.** All cars must be a maximum of 95 decibel checked from the center of the track. 95 D.B.A. is MANDATORY. Muffler falling off car may result in immediate disqualification.

#### **EE) ENGINE COOLING SYSTEM**

Engine cooling system must be acceptable to Lancaster Motorplex. Icing, Freon type chemicals or refrigerants may NOT be used in or near the engine compartment. Portable cooling machines or devices will NOT be permitted.

#### **Stafford Spec motor**

**Stafford Spec motor will be allowed to compete. There are no interchanging of parts. If you are claiming spec motor rules, then you must abide by all of the following rules for that motor. Must be on the hood claiming this motor. If this motor is deemed too competitive that rules may be altered IE adding weight.**

GENERAL SPEC ENGINE REQUIREMENTS- The only approved engine for Spec use is the Chevrolet 350. All parts for the Spec Engine must maintain manufacturers overall dimensions and weight. All Spec Engine parts must be installed as supplied, with no machining or modification except where noted. These SMS Spec Engine rules are intended to create a standardized rule package to reduce cost and increase the level of competition. With the exception of engine machined components, all Spec Engine listed parts and components must be used as purchased, with no modifications permitted, unless otherwise noted. We will add a list of Spec Engine component part numbers.

DETAILED SPEC ENGINE REQUIREMENTS All Spec Engines must use the following parts, approved part numbers are as follows: GM BLOCK – 10066034, 3970010, 3970014, 14010207, 14010209, 14011064, 14016379, the DART SHP, or any pre-existing GM Bow-Tie block. PISTONS- Wiseco Pro Tru-PT003H, JE SPR-157076, or Manley 5915 must be used. The ring package used (type and thickness) must be the one designed for the piston used. RODS- Manley-14101-8, 14050R-8, or Crower Sports Rods- SP3205 OIL PAN – Any pre-approved aluminum pan or Canton 11-196. VALVES- Manley Intake 11596 or 11864, Manley Exhaust 11543 or 11863 CRANK- Scat Cast or Steel – 9-350-3480-5700, Callies Comp Star Series #SAF113-CM, or Manley 190190. INTAKE- Edelbrock 7101 Carb Spacer- Big Haus USA part 002 HARMONIC BALANCER- ATI 917260 or 917320 or BHJ CH-IBS-6-C or Power Bond PB1012-SS. The maximum decking of the block is 9.00". Angle milling of block deck is not permitted. Offset dowel pins are not permitted. De-flashing, grinding, welding, or painting of any internal area is not permitted. Maximum overbore is .060". A maximum static compression ratio of 11.0 to 1 is permitted. PISTONS/RODS Wiseco Pro Tru-PT003H, JE SPR- 157076, or Manley-5915 piston must be used. Manley-14104-8 or 14050R-8, or the Crower Sport Rod- SP3205 must be used. A. The approved piston must retain all its manufactured dimensions and weight. The JE and Manley pistons must maintain a 2.50" pin length. Wiseco pistons must maintain a 3.00" pin length. Additional gas porting of any type is not permitted. All rings must be installed, working and of magnetic steel. Stainless, z-gap, gapless, or Dykes type rings are not permitted. No portion of piston may protrude above the top of the block. The minimum ring thickness permitted is as follows: Compression rings .043" Oil ring assembly 3mm. B. Only magnetic steel non-coated piston pins maintaining a minimum diameter of .927" inch is permitted. They must be contained by bushings only (no bearings of any type). Full floating pins are permitted. Wrist pins may not be coated. 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 are permitted. E. The approved rod must retain all of its manufactured dimensions and weight. Only normal engine balancing and the use of after-market bolts and nuts are permitted. No de-burring, de-flashing, polishing, grinding, or lightening is permitted. Rod length must be 5.700". G. Minimum weight for piston, pin, ring, bearing, and rod assembly is 1168 grams.

**OIL PAN** – Dry sumps, external oil pumps or tanks or accu-sump systems are not permitted. The Canton 11-196 steel pan or any pre-approved existing aluminum oil pan may be used. Oil coolers are permitted. Only OEM in the pan magnetic steel type oil pumps are permitted. No pumps of any type may be used in the evacuation systems.

**HEADS** – The Dart 10024266 cylinder head casting must be used. The casting part number must be purchased as completely produced by Dart; custom ordering of partial production/finishing is not permitted. The Dart casting is produced with, and must maintain a 60cc combustion chamber, a 2.02" intake valve and a 1.60" exhaust valve. Machining the valve guide bosses for seals and machining the gasket surfaces is permitted. The addition of screw-in studs, guide plates, valve spring seats, valve seals, poly-locks or jam-nuts is permitted. Coolant lines are permitted on the front/rear ends of the heads. Coolant lines are not permitted on the side of the head. Max Intake port volume is 177cc. Max Exhaust port volume is 71cc. Head gasket surface milling tolerance for SK Modified® is 0.00" to 0.050" from true 23.00 degrees of stock valve position. The Intake to pin measurement must be no less than 6.050". No other machining or modifications of any kind are permitted. The ports/runners, combustion chamber, the valve angle and location must remain as produced by Dart. The EGR port may be blocked off at the intake gasket area only, by use of a metal shim on one surface of the gasket. The exterior of the casting may be painted. A maximum of 2 intake mounting holes may have Heli Coils. Intake and exhaust mounting holes may not be added or relocated. Holes must take standard dimension bolts.

**VALVES**- The Manley intake valve 11596 (111 grams), Manley intake valve 11864 (114 grams), Manley exhaust valve 11543 (95 grams) or Manley exhaust valve 11863 (102 grams) must be used. Valve stems must have a minimum diameter of 11/32 inch. Valve lifter weight is 85 grams minimum. All parts must maintain production dimension and weight.

**VALVE JOB**- When cutting the valve seat angles, no stone or grinding marks are permitted above the bottom of the valve guide. All cutting in reference to the valve job must be centered off the centerline of the valve guide. Competition style multi-angle valve job is permitted. The bowl area must pass the 360 degree "ball" check (the appropriately sized ball must not fall into the guide area when rolling around on the valve stem). Intake is a .787" ball. Exhaust is a .531" ball. Surfaces and/or edges where the cutter or stone has touched must not be polished. No hand grinding or polishing is permitted on any part of the head.

**VALVE SPRINGS & RETAINERS**- OEM Stock type magnetic steel retainers that weigh a minimum of 30 grams (retainer only) must be used. Valve springs may be single or double springs but must be parallel wound. Barrel wound, conical wound springs, or beehive type springs are not permitted. Double springs must have a diameter between 1.450" and 1.437". Valve springs must have a height of 1.700" to 1.800". Retainer locks must be magnetic steel, and must be Machine 7 degree, Super 7 degree, or 10-degree types only.

**CRANKSHAFT A.** The Scat Cast or Steel Crank 9-350-3480-5700, Callies Comp Star series crankshaft #SAF113-CM, or the Manley 190190 may be used. The main and rod journal sizes are .020" under for the main and .030" under for the rod journals. Stroke must be 3.480". If you are currently converting an existing Engine over to the Spec Engine, you may use your existing GM cast or forged steel crankshaft, and it must weigh a minimum of 50 pounds and must be 3.480" to 3.495" in stroke. You must contact the LMS Tech Staff to notify them of your intent to run this pre-existing crankshaft. **B.** Small journal or Honda pin crankshafts are not permitted. **C.** Machining or polishing of the crankshaft counterweights is not permitted. Normal standard engine balancing is the only acceptable modification that can be performed on this component. No painting or Teflon coating. No capping of the counterweight holes. Crankshafts must maintain the manufacturer's dimensions. **D.** Minimum crankshaft weight is 45 lbs. for the SCAT, Callies, or Manley crankshaft, and 50 lbs. for the old-style SK pre-existing crankshaft. **E.** The Power Bond PB1012-ss, ATI 917260 , 917320, or the BHJ CH-IBS-6-C harmonic balancer must be used.

**CAMSHAFT**- K15 or P55 cast core camshafts must be used (Billet steel cores are not permitted). The maximum camshaft bearing journal size is 1.875" (47.5mm). Camshaft may not exceed .550" +/- .005" lift at the valve with zero lash.

**VALVE LIFTERS A.** An 842" diameter magnetic solid steel valve lifter must be used. Roller tappets, ceramic valve lifters, tool steel solid lifters, mushroom valve lifters, and any type of mechanical assistance exerting a force to assist in closing the valve and/or push rod commonly known as rev-kits are not permitted. **B.** Valve lifters can weigh no less than 85 grams.

**ROCKER ARMS**- Aluminum or stainless stud mounted roller rocker arms are permitted. 7/16" studs may be used. Steel 5/16" x .080" minimum wall push rods must be used. Chevrolet must run 1.5 ratio rockers. Stud-girdles are permitted, aftermarket shaft rocker systems are not permitted. Competition Cams rocker part number 1604 will be permitted.

**INTAKE MANIFOLD**– A second generation Edelbrock 7101 intake manifold must be used. There are no modifications or alterations permitted to the intake manifold. No porting, polishing, acid dipping, deburring, de-flashing, abrasive cleaning, internal painting, milling, cutting, drilling holes, enlarging bolt holes, matching of ports, or welding. An LMS supplied intake manifold must fit your engine complete with stock gaskets. All bolt holes must be in alignment and same size as stock. Coolant lines are only approved from the water neck to the back side of heads. The maximum thickness allowed for the Intake gasket is .064". Note: LMS Officials reserve the right to swap competitors intake manifolds as part of their routine post-race tech process.

**CARBURETOR SPACER** – The Big Haus USA 002 spacer must be used. One gasket per side, maximum gasket thickness of .075" permitted. The spacer may not be modified in any way. Additional openings for the induction of air is not permitted. Carb and spacer mounting hardware must be solid and must not permit air to pass through or by.

ENGINE EXHAUST SYSTEM Same rules as Lancaster Motorplex apply. No Stainless-Steel headers.

ENGINE DRIVE TRAIN – FLYWHEEL AND CLUTCH – SPEC ENGINE The Quarter Master 298108 or 298158, 7-1/4" two-disc V-Drive, with an SFI rated 153 tooth steel OEM type ring gear/flex plate that weighs a minimum of 4.1 pounds may be used with the Spec Engine. Optional stock type clutch rule: A Stock OEM dimension 153 tooth steel flywheel and 10" steel clutch and pressure plate may be used. OEM type steel pressure plate and steel disc only. Solid type disc only, no paddle or button type discs. Minimum diameter 10" clutch and pressure plate. Drilling or lighting of any part is not permitted. Steel bolts only. Flat surface machine is allowed only on the face of the flywheel, any cutting on the back side of the flywheel will deem the part illegal. Spec Engine flywheels must weigh a minimum of 9 lbs. (without bolts) and be one of the following part numbers: 10,000 RPM 1019-9.5 Magnus MRPF-95 Ram 851

CARBURETOR – A Holley two-barrel model 4412 carburetor must be used. Only Holley replacement or service parts can be used in any carburetor rework. Carburetors and/or carburetor components machined from billet materials are not permitted. All parts must be a Holley manufactured part for the 4412 model. Polishing, grinding, resizing, or reshaping of any part or orifice is not permitted. The body, base plate, metering block, and bowl must be a standard Holley 4412 part, HP parts are not permitted. OEM type gaskets, jets and power valve must be used. The diameter of every hole in carburetor must pass the standard NASCAR /SMS pin and tooling gauges as part of our routine tech process. (1) Body of carburetor and metering block: No polishing, grinding, or reshaping of any part. Drilling of additional holes or plugging holes is not permitted. (2) The choke may be removed, but all screw holes must be permanently sealed. (3) Choke Horn: Choke horn may not be removed. (4) Boosters: Boosters may not be changed. Size or shape must not be altered. Height must remain standard. (5) Venturi: Venturi area must not be altered in any manner. Casting ring must not be removed. (6) Alterations to allow additional air to be picked up below the opening of the venturi such as altered gaskets, base plates and drilling holes into the carburetor will not be permitted. (7) Base Plate: Base plate must not be altered in shape or size. (8) Butterflies: The stock Holley 4412 or Stainless-Steel Holly part #346 butterflies must be used. They may not be thinned or tapered. The Butterflies must remain as manufactured and must maintain the Holley production tolerance thickness of .0438" to .0398". Idle holes may be drilled in butterflies. (8) Throttle Shaft: Shaft must remain standard and must not be thinned or cut in any manner.

CARBURETOR AIR FILTER / AIR FILTER HOUSING A. Only a round dry type paper air filter element maintaining a minimum 12 inches and maximum 14 inches diameter will be permitted. The air filter element must maintain a minimum of 1½" inches, maximum five (5) inches in height. All air must be filtered through the element. A nylon pre-filter may be used. B. Only a round metal filter housing will be permitted. The top and bottom of the air filter housing must be solid with no holes. A maximum of one (1) inch lip will be permitted from the air filter element to the outer edge of the air filter housing top and bottom. The air filter housing carburetor mounting ring must have only one (1) round hole a minimum of five (5) inches in diameter. It is permissible to attach a shield to the front area of the air filter housing up to a maximum of one half of the air filter circumference. The shield must not be higher than the height of the air filter element. The air filter housing metal top and bottom must be of the same diameter. The air filter housing must be centered side to side and set level on the carburetor. No air induction, ducts, baffles, tubes, funnels, or anything else which may control the air entering inside of, or between the air filter and carburetor. No plastic air filter housings or parts. C. The bottom of the air filter element must measure within 2-1/2 inches of the carburetor's top flange. A spacer may be used between the carburetor and the air cleaner so long as this specification is not exceeded. D. No portion of the hood may be higher than the bottom of the air cleaner. You may not compete without the air filter, air filter housing or hood in place.

IGNITION SYSTEM – NASCAR approved ignition system must be used. Electronic distributors are permitted. All electronic distributors must be in stock type housings, have stock type controls and modules, be equipped with a magnetic pickup, be gear driven, and be mounted in the stock location. Billet distributor housings are permitted. B. Single or dual point camshaft driven distributors are permitted. C. Only one (1) ignition coil is permitted and must be mounted on engine side of the firewall. D. Electronic firing module amplifier box is not permitted. E. Computerized, multi-coil, dual electronic firing module box or crank trigger systems are not permitted. Magnetos are not permitted. All ignition systems are subject to approval by LMS Officials. F. Adjustable timing controls are not permitted. G. Retard or ignition delay devices will not be permitted. H. Only MSD 8727CT or 8728 External RPM limiters may be used. The violet wire must be cut back flush to the unit's housing, with the green and the white wires running directly to the coil negative, mounted on the engine side of the firewall in plain view. I. Accessories to regulate the power supply are not permitted. J. The tachometer wire must run from the distributor to the tachometer along the #8 dash bar separate from any other wires and in unobstructed view for inspection. The tachometer wire must be isolated from any other wires, connections, or devices. The entire length of the tachometer wire must be visible from distributor to the gauge. K. The Vacuum advance unit may be replaced with a manual non-electronic timing adjuster that does not extend more than two inches beyond the distributor housing.

## **TRANSMISSION**

**The transmission must meet the following requirements:** Only standard production OEM type Muncie or T-10 manual three (3) or four (4) speed transmissions are permitted. If it is a three-speed transmission, the first gear may be removed and replaced with spacer. If it is a four-speed transmission, two gears may be removed and replaced with spacers. Only aluminum or steel transmission housings are permitted. Only OEM type gears are permitted. All transmissions must have a constant engagement of the input shaft with gear and countershaft with cluster and reverse gears. Lancaster Motorplex reserves the right to have all cars use a final drive gear ratio within the limits set by Lancaster Motorplex. Any method or transmission gear no less than 1.18 to 1 will NOT be permitted. The only high gear transmission ratio allowed will be 1-to-1. Two forward gears and reverse gears MUST be in working order. ONLY manual shift linkage is permitted on the transmission. ONLY fire-resistant type shifter boots are permitted. The Jerico Transmission will NOT be permitted. No automatic transmission allowed. May not have any gun drilled input or output shafts.

## **RADIATOR**

**The engine-cooling radiator must meet the following requirements:** Radiator must remain in front of the engine. Radiator dust screens PERMITTED. The radiator MUST be copper, brass or aluminum. Radiator installation must be acceptable to Lancaster Motorplex Officials. Radiator overflow pipe MAY be relocated, and a minimum one (1) gallon overflow can. NO anti-freeze. WATER ONLY.

## **CLUTCH**

- a) The clutch and clutch assembly must meet the following requirements: Must be disc / pressure plate design clutch assembly. NO coupler type / Dog clutch or direct drives. Multiple disc clutches are permitted. Minimum 7 ¼-inch diameter disc and using one (1), two (2) or three (3) disc design. Limited to magnetic steel discs, Steel or Aluminum pressure plates.
- b) The disc clutch housing assembly or cover shall be made from aluminum or steel ONLY. Any single disc OEM production type clutch assembly, with a minimum 10 ½-inch diameter steel hub disc.
- c) Clutch MUST be mounted inside approved bell housing.

## **DRIVE SHAFT**

**The drive shaft must meet the following requirements:** Drive shaft, universal joints and yokes must be magnetic steel drive shaft and be similar in design to standard production type. Only a one (1) piece magnetic steel drive shaft will be permitted. It is MANDATORY that two (2) 360-degree solid magnetic steel brackets, NO less than two (2) inches wide and 1/4 inch thick, be placed around the drive shaft and torque arm and be fastened to the cross member of the car. All drive shafts MUST be painted white or orange. Driveshaft diameter must be 2 ½" minimum.

## **WEIGHT**

- A) All cars minimum POST RACE weight 2,565 With driver after feature.
- B) Cars with non-quick-change rear ends. 2590 after feature.
- C) GM 602 motors can weigh 2500 pounds after feature.

**All motors are 56% left side weight. No allowances for gas, water etc. after the races.**

- D) Stafford type Spec motors will be 2565 after feature. If deemed overly competitive weight will be added. Must be claimed on the hood of the car.
- E) TRACK SCALE: Unless otherwise authorized by Lancaster Motorplex, at all times during an event, all weights will be calculated on official track scales. It is the responsibility of each race team to see that their car meets the specified minimum weight requirements for this division on these scales. Lancaster Motorplex scales are final.
- F) BALLAST WEIGHT: Added weight must be in block form of no less than five (5) pound blocks. If ballast weight is needed to make total weight, it must be securely fastened to the frame rails, be painted white and car number painted on weight in a dark color. Material and mounting must be acceptable to Lancaster Motorplex. NO steel or lead pellets. NO weight is to be mounted in driver's compartment. **Lead weight must be mounted with at least (2) two ½" bolts.**

## **WEIGHT SHIFTING DEVICES**

Mechanical devices for shifting weight which can be activated by the driver will NOT be permitted inside of driver's compartment. Electrical, pneumatic, hydraulic, or remote-control devices which change the handling characteristics or height of the car are NOT permitted.



## **BODY**

All bodies must be reasonably neat, and stock appearing, must be painted, and neatly lettered. Numbers from 00 to 99 two digits only, no letters. Number must be registered with Lancaster Motorplex the rear of the roof, at the highest point, shall be no more than three (3) inches higher than the actual front measurement. A maximum height of 35 inches is allowed on the taillight panel measured from the ground to the spoiler mounting point. The minimum body height is 40 inches. Body height shall be determined by measuring. NO decals allowed on spoiler.

## **FRAME / SUSPENSION**

All construction must be safe, professional, and acceptable to Lancaster Motorplex officials.

## **ROLL CAGE**

Must be constructed of seamless round steel tubing with a minimum of 1 1/2 inch outside diameter .095" wall thickness. There are several allowable variations to the basic roll cage design that are subject to the discretion of Lancaster Motorplex. Lancaster Motorplex decision on roll cage design and safety is final. The mandatory six-point cage must surround the driver.

## **CHASSIS RULES**

Open to steel bodied automobiles provided they comply with, and adhere to, specifications as outlined for this division.

## **COMPETING MODELS**

Lancaster Motorplex Sportsman Series races are open to eligible 1980 through current year models of American-made steel bodied passenger car production sedans. Unless otherwise authorized by Lancaster National Speedway, all combination Events shall be governed by the 2023 Lancaster Motorplex specifications.

## **APPROVED COMPETITION MODELS**

BUICK Skyhawk  
CHEVROLET Cavalier, Monte Carlo, Beretta, Corvette  
CHRYSLER Eagle, Talon  
DODGE Avenger, Stealth, Daytona  
FORD Escort, Mustang, Probe  
OLDSMOBILE Firenza  
PLYMOUTH Laser, Sundance  
Pontiac Sunbird, J-2000, Grand Prix

**OTHER APPROVED MODELS** - Other models may be selected when available providing they are the same in body configuration and meet the spirit and intent of competitive racing as currently evidenced in Lancaster Motorplex Sportsman Weekly racing.

## **GENERAL CAR BODY REQUIREMENTS (CAR BODIES)**

**THE CAR BODY MUST MEET THE FOLLOWING REQUIREMENTS:** Cars must be neat appearing. Aluminum may be used on the body. Steel must be used for the firewall. All bodies must be installed on frame in a manner acceptable to Lancaster Motorplex. Window openings must remain stock appearing and must maintain the original manufacturer's window-opening configuration. Cars will not be allowed to compete with altered window openings. Bodies must be no wider than the standard width from the front of the door panel to the rear of the quarter Panels when measured beneath the car at the rocker panels. A minimum distance of 43 inches and a maximum distance of 45 inches are permitted across the body at the bottom of the front windshield opening. Bodies must not extend below the frame at the side rails. Skirts or additional metal may NOT extend below the body. The floor area directly beneath the seat forward to the front engine firewall must be made using a minimum of 1/8-inch steel. The remainder of the floor area to the right and rear of the seat must be made from minimum 22-gauge steel. All floor area panels must be welded together. Streaming at the top of the windshield will NOT be permitted. Bodies must have standard appearing windshield opening and the windshield post must follow standard configuration. Cars will NOT be permitted to compete with excessive body damage. Excessive body damage to be determined by Lancaster Motorplex. Belly pans will NOT be permitted. A belly pan will be defined as any object or material that alters the flow of air under the car. Determination of whether any material or object is or is not a belly pan shall be in the discretion of Lancaster Motorplex. The bottom panel of the front nose panel may NOT extend rearward past the edge of the harmonic balancer. The driver's compartment may be enclosed with additional sheet metal. All interior sheet metal must be minimum 22-gauge steel. Interior sheet metal CANNOT be higher than or enclose a standard window opening. Sheet metal in driver's compartment must be horizontal from the top of the drive shaft tunnel to the right-side door bars or angle from top of drive shaft tunnel upwards to top of right-side door bars. Angled or horizontal metal must extend from the rear firewall or back of seat a minimum of 26-inches forward. The interior sheet metal behind the rear hoop may be roll formed upward to the top of the rear hoop cross bar. The sheet metal must extend rearward and at the center of the rear axle housing, the sheet metal may angle upward and seal to the bottom of the rear window opening. Interior spoilers, wings, or wind deflectors

will NOT be permitted. Double panels will NOT be permitted. Lancaster Motorplex Officials may not approve of interior sheet metal.

#### **DETAILED CAR BODY REQUIREMENTS**

##### **A) FRONT AIR DAM**

An approved air dam may be mounted to the front underside of cars. The optional metal or vinyl front air dam must be mounted perpendicular to the ground and no more than three (3) inches behind the front edge of the nose panel. Front nose panel and air dam must not extend past the rear edge of the front bumper **and must maintain two (2) inches ground clearance**. The nose panel and air dam must not extend past outside edge of front frame rails. Air dams must have a minimum ground clearance of two (2) inches. All support brackets must be mounted to the rear of air dam. Horizontal or flat air deflectors must not extend past the outer edges of the front nose panel side walls.

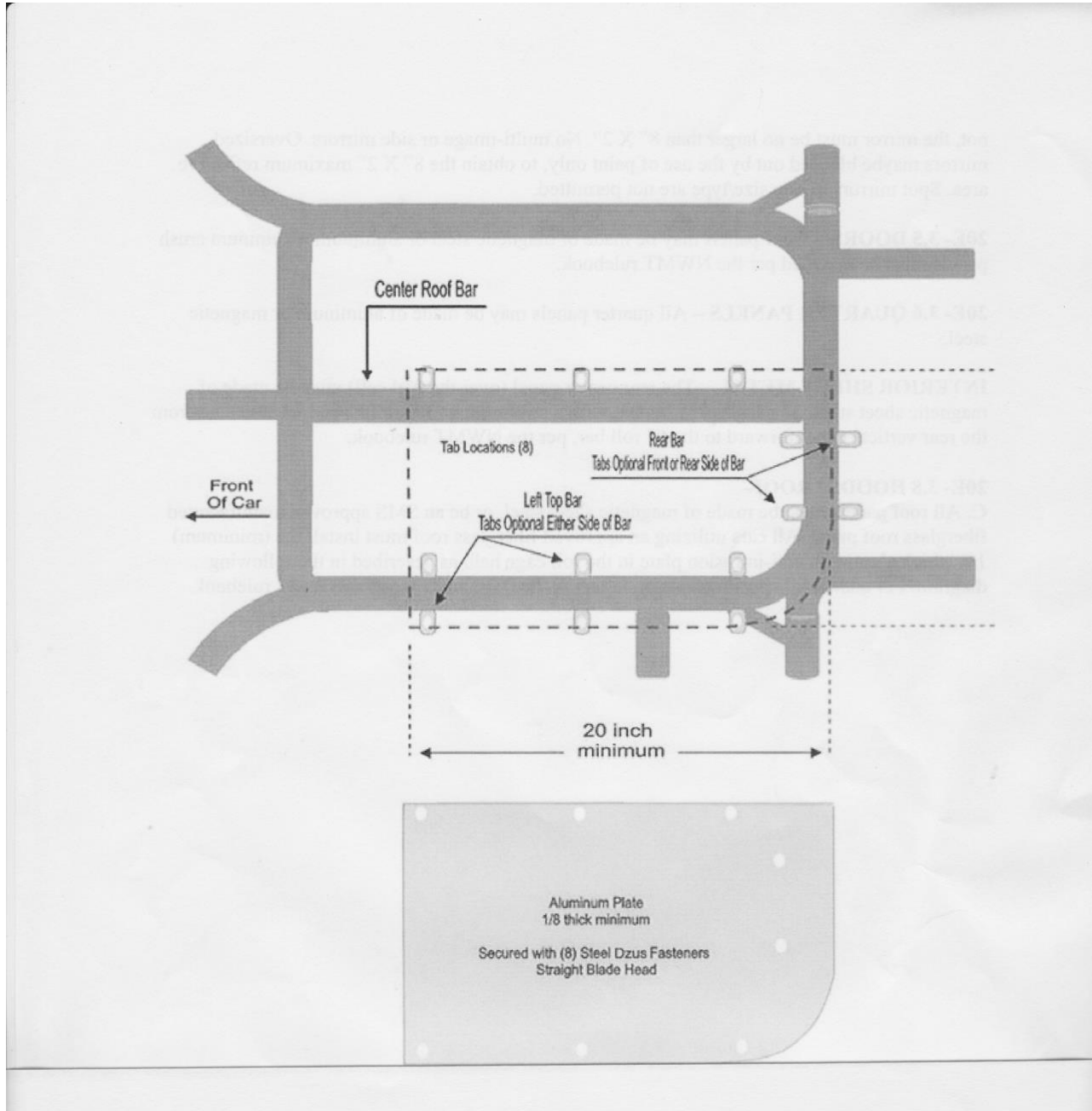
##### **B) REAR SPOILER**

All rear spoilers and spoiler mounting points must be approved by Lancaster Motorplex. A solid rear spoiler of a minimum ¼-inch thickness clear polycarbonate only may be installed at the rear deck lid and meet the requirements that follow. An approved spoiler which controls the flow of air over one surface only. The maximum spoiler size permitted shall be eight (8) inches high by 48 inches wide. The rear spoiler must not be wider than the standard width of the rear quarter panels, measured across the top. The rear spoiler must be installed to the rear of the quarter panels where the rear panel meets the interior sheet metal. During race events the rear spoiler must not extend past the rear edge of rear bumper. The centerline of the rear spoiler must meet the centerline of the rear tail section.

##### **C) HOODS/ROOF**

All cars must be equipped with a hood manufactured from metal or fiberglass. The hood must be manufactured so that it will completely cover the engine compartment, from the left side to the right side; turn down a minimum of four (4) inches on each side, and cover (if used) the engine side panels. NO part of the hood at the side panels except for the "A" post, shock and master cylinder covers may be higher than the lowest part of the hood. Only openings for the air cleaner and the distributor will be permitted. NO portion of the hood may be higher than the bottom of the air cleaner. Hoods must be fastened with positive pin fasteners evenly spaced across the front. All hoods must be approved by Lancaster Motorplex officials. Roof must be stock for make and model of body used. The roof must be steel or fiberglass. No Aluminum or Carbon Fiber. Roof support posts must maintain the same angles as a stock production car. The front post ("A" post) must be mounted to the top front of the door panel. The rear post must be anchored to the rear quarter panels. All roof panels must be installed in a manner that is acceptable to Lancaster Motorplex. The front of the roof must be secured in three (3) places: one (1) in the center and one (1) on each side. The rear roof quarter window panel including the door "B" post must be Lancaster Motorplex approved. The front edge of the "B" post must be located a maximum of 24 inches from the center of the rear axle housing forward. Rear deck lid and interior panels shall be made of magnetic steel.

Fiberglass roofs will be allowed with the following rules. Must have a minimum of 1/8" aluminum or steel intrusion plate installed in the roll cage halo. The following picture is a suggested example of how one should be installed.



## **D) BUMPERS/SIDE RAILS**

- 1) The bumpers and side rails must be rear of the car will be 57 inches and the maximum width permitted will be 66 inches. Each end of the rear bumper (from the mounting side) must be cut on an angle and capped with a minimum of 0.125-inch aluminum. Lancaster Motorplex officials must approve alterations to this design. All Bumper caps must be welded, and sharp edges must be filed. The minimum size permitted will be 2 3/4 inches by four (4) inches by 3/16 inch thick. Bumper must be mounted at axle height. A maximum distance of 46 inches measured at the center of the rear edge of the bumper is permitted. Weight reducing holes will NOT be permitted in the bumper. Any inappropriate bumper will be disallowed. Front and rear bumper must be securely attached in order to COMPETE.
- 2) All cars must be equipped with rear corner rails and side rails. All rails must be constructed using a minimum of 0.083-inch-thick magnetic steel seamless tubing with an outside diameter of a minimum 1-1/4 inches and a maximum of 1 3/4 inches. Side rail bars should be constructed using the following guidelines:
  - a) Right side bars shall be constructed by using two (2) pieces of magnetic steel seamless tubing. The bottom bar shall attach to the rear of the frame rail and extend upward and outward even with the outside of the tires, or up to a maximum of 1/2 inch outside of the tires. The bottom side bar shall extend forward parallel with the frame rail and angle into the front sub-frame rail with minimal tire clearance. The bottom bar shall be mounted centerline with the rear axle and front spindle. The top side bar shall be attached centerline with the rear hoop cross bar extending outward and forward to the forward most point of the bottom bar. The top bar shall turn down, be centered on, and attach to the bottom bar. The top bar shall have an additional support bar attached to the front roll cage leg bar centered on the dash cross bar. An additional support bar must be added in the center.
  - b) The bar must be attached to the frame rail and side bar. Two (2) additional vertical support bars should be added, one (1) at the rear and one (1) in the center of the side rail bar. The distance measured at the front, center to center, of the top and bottom bars at the turn down area shall be a minimum of six (6) inches. The distance measured at the rear center to center shall be a maximum of nine (9) inches and minimum six (6) inches. Cars will not be permitted in competition without side rails.
  - c) Left side rail bars shall be constructed using the same guidelines described above EXCEPT that the rear support bar may be a radiused bar that attaches to the rear hoop bar centered on the cross bar and extending down and attached to the frame rail. Left side rail bars must be mounted by centering the two parallel side rail bars with the center of the rear axle and the front spindle or left side bars may be raised a maximum of two (2) inches from center. Cars will NOT be permitted in competition without side rails.
  - d) Rear corner rails must be constructed using two (2) pieces of magnetic steel seamless tubing a minimum of 1 1/4 inches and a maximum of 1 3/4 inches in diameter. Both pieces of tubing shall be identically formed and welded to a steel bumper bracket at the rear. The tubing shall angle out and upward even with the outside of the tires, or up to a maximum of 1/2 inch outside of the tires and maintain a six (6) inch dimension measured center to center. The corner bumpers shall then turn in with a minimal tire clearance to the rear quarter panels. Additional support bars must be installed behind the body panels to the rear frame rails and/or roll cage. Cars will not be permitted in competition without rear corner rails.

## **FRAMES**

All frames must meet the requirements described in the following paragraphs. Aluminum or light alloy frames will NOT be permitted.

## **FRAME REQUIREMENTS**

- A)** All frames are subject to Lancaster Motorplex approval. **A minimum ground clearance of two (2) inches must be maintained on any part of the frame or sheet metal.** All frame components must be made of steel and welded. Holes drilled in frames, frame supports, and cross members with the intent of making the metal lighter are not permitted.
- B)** Side frame rails and rear kick up must be constructed with .090" minimum thickness meeting the STMA-500 specifications and be a minimum of two (2) inches wide and three (3) inches high magnetic steel box tubing.
- C)** The distance from the centerline of the driveline to the left side frame rail, measured anywhere along the frame, must be within six (6) inches (eight (8) inches on 1989 and newer models with the frame rail and roll cage extension) of the distance from the centerline of the centerline of the drive train to the right frame rail. A minimum width of 34 inches and a maximum 46 inches, measured from center of left frame rail to center of right frame rail, must be maintained in the driver's compartment. A minimum width of 31 inches and a maximum of 46 inches, measured from center of left frame rail to center of right frame rail, must be maintained on the rear kick up, with exception for suspension and tire clearance. All rear kick ups must maintain a minimum of 18 degrees from side frame rails to top of kick up.
- D)** The fuel cell reinforcement bar, using a minimum 1-1/2 inches seamless (3) vertical supports of 1 3/4 inches by 0.083-inch minimum seamless round magnetic steel tubing connecting it to the rear frame cross member. The main roll cage bar and the front roll bar legs must be connected with four (4) horizontal door bars on both left and right sides. The top door bar on each side must have a vertical vent window bar welded upward and connecting to the Front roll bar legs. An optional vertical bar may extend from the roof hoop bar radiuses outward and turn down to the top horizontal door bar on driver's side. The minimum 1-1/2-inch steel seamless tubing should be located in line with the driver. The door bars must be convex in shape and spaced from top to bottom as equal as space permits. The door bars must be the

same length and have an equal amount of convex in both the right and left sides. The door must have six (6) vertical studs per side of 1 3/4 inches by 0.083 minimum seamless round magnetic steel tubing equally spaced. Two (2) angular studs must be attached from next to the bottom door bar to the frame rail. Right side door bars must cover a minimum of 25 inches of door length and may be either four (4) horizontal bars with six (6) vertical studs or two (2) horizontal bars and two (2) bars configured in an X design. If the X design is used, a vertical bar must connect through the center of the X from the top horizontal bar to the frame. A roof support bar must also extend from the right front corner of the roof bar down to the transmission cross member. All joints where bars meet the main frame and meet the door bars, the roof bar, and the rear support bars, MUST have gusset plates for reinforcement. Magnetic steel tubing must be installed behind the fuel cell. This reinforcement bar must be as wide as the fuel cell and as low to the ground as the fuel cell with a minimum of two (2) uprights from the reinforcement bar to the rear frame cross member, evenly spaced behind the fuel cell. An X cross member made of one (1) inch magnetic steel tubing must be installed beneath the fuel cell from corner to corner. The X cross member must be welded or bolted to the rear frame rails in a secure manner. Two (2) additional support bars, one (1) at each corner of the protective bar, must extend forward and be welded to the rear frame assembly.

**E)** The front sub-frame assembly must be constructed using a minimum 0.083-inch thickness meeting the ASTM-A-500 specifications, two (2) inches wide and three (3) inches in height steel tubing. A minimum of 27 inches, and a maximum of 32 inches, measured from center of left frame rail to center of right frame rail, must be maintained from the mounting point of upper control arms forward. All front sub-frame assemblies must maintain a minimum of 30 degrees angle from side frame rails up to the top of the sub-frame. All sub-frame assembly support bracing shall be a minimum 0.090-inch by 1 3/4 inches round magnetic steel seamless tubing. Frame support bars, left and right, must extend from the roll cage to the sub-frame and must have a downward radius bent into the bars before they are welded to the sub-frame. The left and right support bars must not have any additional braces added between the front leg bars and where they attach to the front sub-frame assembly. A flex support tube may be added to the front support bar at the radius and extend forward and be attached to a cross member. Any frame rejected by Lancaster Motorplex for showing poor workmanship will not be approved until necessary corrections have been made.

**F)** The minimum wheelbase permitted in the Lancaster Motorplex Sportsman class is 106 inches, Maximum wheelbase is 108". When measuring the wheelbase, the minimum allowable tolerance CANNOT exceed one (1) inch plus or minus on the other side.

### **ROLL BARS**

Round magnetic steel tubing 1 3/4 inches by 0.090-inch seamless rollover bars are compulsory for the basic roll cage and must be Lancaster Motorplex approved. Aluminum and/or other soft metals are NOT permitted. Roll bar connections MUST be welded. MUST be four post minimum fastened to top of frame. MUST have X or diagonal brace in case behind driver. Seat to be fastened to top of cage and frame. Nerf bars must conform to the same as asphalt modified. Bumpers and nerf bars must be built on 14-inch centerlines. The center of front and rear bumper must be at the center of tire height - 14 inches.

Bumper must be smooth and capped. MUST have driver's side window net. Fire resistant padding MANDATORY on all bars located near driver. May use one-piece pad on driver's door bars. MUST have vertical bar in middle of front opening of windshield (minimum 1-inch O.D.) **Must have anti intrusion plate welded to outside of driver's door.**

### **FAN SHROUD AND DUCTS**

When ducting air from the nose housing to the radiator, air directional shields are permitted within the duct.

### **STARTER**

The car must have self-working starter and must work at the beginning of the race.

### **SAFETY**

#### **A) IGNITION SHUT OFF SWITCH**

All open wheel cars shall have an Ignition shutoff switch.

#### **B) SEAT AND SHOULDER HARNESS**

All cars shall have a full containment seat meeting current SFI 39.1 and/or 39.2 standards. **It is the responsibility of the driver, that his/her seat, headrest/head surround assembly, and all seat components are correctly installed, per the manufacturer's instructions, maintained, and properly used.** The seat must be attached to roll cage and frame. The back of seat must be mounted to the roll cage. NO fiberglass or plastic seats. The driver must use a minimum three-inch quick release, five-point restraint systems. A two-inch wide crotch strap is mandatory. All safety belts must be no more than three (3) years old and have a readable identification tag. Any belts older than three years will not be allowed. NO original equipment belts permitted. The shoulder harness must be connected to the roll cage. All lap belts must be mounted behind the seat and attached to the roll cage according to manufacturer specifications. All roll bars and driver side bars or other protrusions that driver may come in contact with must be properly padded with approved race car roll bar padding. All cars must have a working fire extinguisher in easy reach of the driver. On board central fire extinguishing

systems are highly recommended. Driver side net with quick release mechanism is MANDATORY. No plastic parts permitted. Boldly labeled fuel and electrical safety switches are to be in reach of Driver and safety crews.

### **C) FIRE SUIT/HELMET**

All drivers must wear a clean one- or two-piece driver's suit with a minimum SFI 3.2A/5 quilted and/or with Nomex. Underwear, head socks, gloves, foot socks and shoes must meet SFI specifications. Driver will wear a full-face helmet, with at least a valid SA2020 or SA 2015 Standard Snell and/or a valid SFI 31.1, SFI 31.2 or SFI 31.1 2000 label. The driver will wear the helmet in accordance with the directions provided by the helmet manufacturer and/or supplier. If a head and neck restraint system is connected it should conform to the manufacturers mounting instructions. Head and Neck restraints with a SFI 38.1 specification are MANDATORY.

### **D) WINDSHIELD**

A single one (1) piece flat or radius type polycarbonate/ Lexan windshield may be used on the driver's side. The windshield must be mounted flush with the cowl or dash panel and extend up to the top of the windshield opening in front of the driver. Regardless of the type of windshield being used, it cannot be wider than the center of the windshield opening. A complete steel windshield screen (with maximum openings of one (1) inch by two (2) inches must be installed in the right side of the windshield opening. The windshield screen must cover the right-side windshield opening from the center windshield bar to the right-side roll bar and from the front hoop bar, at the top, down to the cowl or dash panel. Decals will NOT be permitted on the windshield. All windshields, windshield screens and their installation must be acceptable to Lancaster Motorplex. Driver window must have window net.

### **FIREWALL**

A front and rear firewall of a not less than 22-gauge magnetic steel must separate driver from the engine compartment and fuel cell. The front firewall must be positioned below the leading edge of the windshield. The fire walls must be sealed and welded in place.

### **SUSPENSION**

All suspensions and related parts must be reinforced and meet the following requirements:

#### **A) COIL SPRINGS**

- a) Coil over front springs. One spring per wheel. STEEL ONLY.
- b) Coil -over must mount to lower control arm.
- c) Strut bars will NOT be permitted for mounting of coil -over.
- d) The coil over springs must be steel and will be constructed with both coil ends closed and ground.
- e) No coil binding, bump stops or travel limiting devices allowed.

#### **B) COIL OVER REAR SPRINGS**

Coil over springs must be steel and will be constructed with both coil ends closed and ground.

### **SWAY BARS**

Only magnetic steel front sway bars are permitted. Rear sway bars (anti-roll bars) will NOT be permitted.

### **SHOCK ABSORBERS**

- A) The use of shock absorbers must meet the following requirements: Coil over shock absorbers may be used. Shock absorbers and coil over shock and spring, by visual reference, must remain within the outline of the body and NO holes can be cut in the outer body for the mounting of shocks.
- B) SHOCKS - Only one (1) shock per wheel. All shocks are subject to Lancaster Motorplex approval. NO shock with a published racers net price greater than \$350 U.S. currency will be permitted. Any shock to be approved must be available to all competitors.
- C) The only shock absorbers and internal components permitted will be those shock absorbers submitted by the manufacturers and approved by Lancaster Motorplex officials. A maximum of one (1) shock absorber per wheel is permitted. External shock absorber reservoirs will NOT be permitted.

### **A-FRAMES**

The upper A-frames and lower control arms must meet the following requirements: Upper A-frames and lower control arms must be acceptable to Lancaster Motorplex. When attaching upper control arms to the mounting plate, only standard type castor/camber shims or washers will be permitted.

### **SPINDLES/WHEEL BEARINGS/HUBS**

The spindles, wheel bearings and hubs must be acceptable to Lancaster Motorplex and meet the following requirements: Heavy-duty magnetic steel spindles and wheel bearings are compulsory. Aluminum or magnetic steel hubs are permitted. The front spindles must be attached to the frame using steel or approved cables and be secured in a manner acceptable to Lancaster Motorplex officials. Lancaster Motorplex officials must approve spindles and hubs.

### **BODY HEIGHT REQUIREMENTS**

Body height shall be determined by measuring (with driver) the overall height of the car from a distance of six (6) inches behind the top of the windshield on the roof centerline. The minimum height will be 40 inches. The rear of the roof at the highest point shall be NO more than three (3) inches higher than the actual front measurement.

### **STEERING COMPONENTS**

The car steering components must meet the following requirements: Rack and pinion steering ALLOWED. All cars will be equipped with a magnetic steel steering shaft. Tie rods, drag links and component parts must be heavy duty. Interchangeable pitman arms may be used. Pitman arms may NOT be drilled for weight reduction. The center-top of steering post must be padded with at least two (2) inches of resilient material. A quick release magnetic steel or aluminum coupling on steering wheel is MANDATORY. The coupler CANNOT be covered with plastic. The use of universal joints in steering shaft must be approved by Lancaster Motorplex. Only metal or aluminum steering wheels are permitted. NO Plastic power steering pump must be mounted and driven off the front of the engine.

### **BRAKES AND BRAKE COMPONENTS**

The car brake components must meet the following requirements: Four (4) wheel disc brakes MANDATORY. Only magnetic cast iron or cast steel rotors will be permitted. Brakes must be operational on all four (4) wheels at all times. Master cylinders and reservoirs should be mounted on the engine side of the front firewall. Inboard brakes are NOT allowed. Electric wheel speed sensors or brake actuators will NOT be permitted. Power assisted braking systems will NOT be permitted. Only one (1) brake caliper per wheel using only two (2) brake pads per caliper will be permitted. Only a single brake bias system which connects to the balance bar of the brake pedal assembly will be permitted. No Titanium allowed anywhere in the braking system.

### **BRAKE COOLING**

The brake cooling system must be acceptable to Lancaster Motorplex and meet the following requirements: One (1) air duct per wheel may be used for brake cooling. All scoops must be acceptable to Tech Officials. The maximum dimension of front brake air scoops is three (3) inches by eight (8) inches when mounted to the front sub-frame or front bumper. If the brake scoops are not operational, they must be blocked off. Screens and air ducts, from the opening to the brakes, must be acceptable to Lancaster Motorplex officials. Brake fluid recirculating devices will NOT be permitted.

### **BATTERY**

Only one (1) - 12-volt battery. Battery must be located between the frame rails. Battery must be securely anchored and mounted inside a spill proof container located under hood or floor of the car. If located under the floor, the battery must be completely encased. If located under the hood, the battery must have a suitable cover. NO battery may be forward of the radiator or rear of the rear end housing of the car. Battery location must be acceptable to Lancaster Motorplex officials.

### **ELECTRICAL SWITCH LOCATION**

All electrical switches must be located on the dash panel or within easy reach of the driver. A labeled on/off master switch to the battery cable MUST be installed on the cowl behind the windshield opening on the right side of the driver. The switch must be easily accessible and in plain view.

### **REAR AXLE**

The rear axle must meet the following requirements: Aftermarket racing steel aluminum spool, steel aluminum mini spool allowed. Axle shafts and gears must be magnetic steel. Clip in axles MUST be welded in place. Aluminum or magnesium quick change and non-quick change center sections equipped with aluminum or magnesium side bells are permitted. If quick- change rear ends are used, only those with magnetic steel spur gears on the back side, jackshafts and axle tubes will be permitted. Quick changes rear ends must have the gears in the rear of the quick-change Front loaders are not permitted. **Ring and pinions in Quick changes must not be smaller than 10 inches.** No mini quick changes. ONLY locked rear drive axle assemblies are permitted at all times during an Event. Limited slip differentials are NOT permitted. For purposes of checking a pre-determined final drive gear ratio, when jacked up both rear wheels must rotate in the same direction with each traveling the same rotational distance. The distance, measured from the center of the rear end housing to the rear hubs, left and right, at the point the wheels bolt on, must be within three (3) inches in length. Only magnetic steel axle housings permitted. The rear end must be mounted so that the inside edge of the left rear tire is even with or outside the outermost edge of the left side frame rail. Lancaster Motorplex reserves the right to have all cars use a final drive gear ratio within the limits set by Lancaster Motorplex. Cambered rear tubes with bolt on snouts, will not be permitted.

**Non-quick-change rears will be allowed to run with a 25lbs penalty. Max gear 4.86**  
**Will be reviewed during the season and changes made if necessary.**

## **GEARS**

**Max 4:87 gear ratio will be permitted in competition. The gear ratio will be checked mechanically or by taking gears out.**

## **FUEL SYSTEM**

**VP (purple) 110 Race Fuel is the Official Fuel for Lancaster Motorplex. Fuel may be tested weekly. Any fuel not meeting track specs will be deemed illegal and driver will be disqualified. Fuel will be checked with Specific gravity if needed.**

Lancaster Motorplex will reject any fuel cells, containers or check valves which appear to be damaged, defective or do not function properly. Fuel cell vent pipe check valves are compulsory. Pressure systems will NOT be permitted. Any concealed pressure type containers, feed lines or actuating mechanism will NOT be permitted, even if inoperable.

**Fuel cell flapper valves will be mandatory beginning in 2024 season. IE. Speedway motor's part # 458315**

## **FUEL CELL**

The use of a commercially manufactured fuel cell is MANDATORY. The maximum fuel cell capacity, including the filler spout and overflow, shall not exceed 24 gallons. The nominal fuel cell dimensions are 24-1/4 inches by 16-3/8 inches by 13-1/4 inches. Materials other than standard foam, as provided by an approved fuel cell manufacturer, are NOT permitted. Fuel cells must be encased in a container of not less than 22-gauge magnetic steel. Fuel cells must be fitted within the container so that the maximum capacity, including filler spout will not exceed 24 gallons. Fuel cell container size shall be 25 inches by 16-3/4 inches by 13-5/8 inches (inside dimensions) Interior magnetic steel sheet metal must allow access to top of fuel cell for inspection. Fuel cells and fuel cell container must be installed as far forward as possible in trunk compartment behind the rear axle and maintain a minimum ground clearance of six (6) inches. Fuel cell containers must be secured by one (1) inch by one (1) inch by 0.065-inch minimum thick square steel tubing meeting the ASTM-A-500 specifications or one (1) inch by 1/8-inch-thick magnetic steel straps two (2) lengthwise and two (2) crosswise. The straps must be located as close to the fuel filler check valve housing as possible.

## **FUEL FILLER VENT REQUIREMENTS**

The maximum filler spout size is four (4) inches by eight (8) inches by 18 inches.

## **FUEL CELL VENT** (vented as follows)

Single, one (1) inch maximum vent to outside of body at left rear corner. A fuel vent flap valve must be used. The fuel cell check valve vent pipe neck inside diameter shall not exceed one (1) inch maximum. The fuel cell vent flexible hose shall have a maximum inside diameter of 1 1/4 inches and a maximum length of 60 inches when measured from the outside end of the fuel cell check valve vent pipe to the top of the fuel cell fill plate. A screen cap with a maximum diameter of 1 1/4 inches may be placed over the vent.

## **FUEL LINES**

Either (or both) right or left side pickup in fuel cell may be used as approved by Lancaster Motorplex. ONLY one (1) fuel line permitted from fuel cell to fuel pump. All fuel lines are subject to Lancaster Motorplex. Park approval. The fuel lines from the fuel cell to the carburetor may be relocated to prevent vapor lock, but Must remain under floor of car unless otherwise approved. When the fuel line runs through the right side of the driver's compartment, it must be enclosed in a one (1) inch outside diameter magnetic steel tube. Lancaster Motorplex approved check valve mounted at the line outlet on the fuel cell is recommended. Additional lines or extra length may not be used on the fuel system, Extra fuel lines or fuel cells, concealed or otherwise prohibited. It is recommended that an on-off switch be mounted within easy reach of the driver.

## **FUEL PUMP**

Electric fuel pumps are not permitted. Cooling of the fuel pump is not permitted. Only mechanical fuel pumps in stock location permitted. No Piston Pumps.

## **WHEELS**

**A) The wheels must meet the following requirements:** Only 15-inch diameter five (5) lug reinforced magnetic steel racing wheels with a maximum width of 13 inches are permitted. Any offset is permitted. Wide five bolt pattern OPTIONAL. Bead locks are NOT permitted. Maximum tread width is 83 3/4" measured at the tire bead surface @ spindle height.

### **B) LUG BOLTS AND NUTS**

Solid heavy-duty 1/2" to 5/8" magnetic steel lug bolts and standard one (1) inch hex by 1/2" to 5/8" thick magnetic steel lug nuts. Lug stud threads must go through the full thickness of the wheel nut on all four (4) wheels.



### C) TIRES

Only tires approved by Lancaster Motorplex will be permitted. Tire durometer 55 will be checked. Durometer readings may be taken after racing competition or in the lineup staging areas, or anytime at Official's discretion. Any car not meeting the specification will not be permitted onto the racing surface. NO use of bleed-off OR pop off type valves. Hand grooving, buffing, grinding and/or cutting on any area of the racing tire will NOT be permitted. Tires that have been altered by unauthorized treatment will NOT be permitted. NO TIRE SOFTNER ALLOWED. If tire softener is found, you will not be allowed to race for the remainder of the season and face fine and suspension of all points and point fund.

***The top 5 cars must stop in turn 3 after the completion of the race to have the tires durometered. If you do not stop, you will be disqualified.***

Tire rules are as follows.

**Tire Rules are subject to change according to availability.**

You are allowed 4 tires for the first race of the season, the 50 LAP event and the US Open. ALL OTHER EVENTS YOU ARE ALLOWED A MAXIMUM OF 2 NEW TIRES (1 LEFT SIDE and 1 RIGHT SIDE). **ALL TIRES MUST BE PURCHASED AT THE TRACK WITH THE SERIAL NUMBERS RECORDED BY OFFICIALS. You must get a card from the front gate to buy tires and that card must be given to the tire guy to buy tires. Tires bought the day of the race must be run that night.**

**No saving or pooling of tires.**

**NO CELL PHONES, SMART TYPE WATCHES AND OR ANY ELECTRONIC TYPES**

**OF EQUIPMENT ARE ALLOWED IN THE CAR, IF FOUND, IT RESULTS IN IMMEDIATE DISQUALIFICATION**

5/3/2022 All cars must run a Mylaps transponder mounted 150" from the front edge of the front bumper rearward mounted on the RR frame rail, mounted vertically and with the bottom of the bracket even with the bottom of the frame rail.

7/19/22 Fixed language of roof being made of instead of hood.

1/31/23 added language track reserves right to change distributor modules from one car to another.

1/31/2023 Added outer wear screen is allowed on air filter.

11/6/23 Added Stafford Spec motor rules.

1/12/24 added no titanium valve spring retainers

8/13/2024 added Carbs must pass go/nogo guage after race.

2/18/25 non-quick-change rear ends allowed with 25lb weight penalty. **Subject to change**