

2017 DARE Stock Rulebook

ALL RULE REVISIONS FOR 2017

CHECK YOUR CORRESPONDING RULE BOOK FOR COMPLETE EXPLANATION.

DARE STOCK RULE CHANGES

REV. 9/14/16 20H-11.1 OEM FRAMES

REV. 9/14/16 20H-12.4 A-FRAMES

REV. 9/14/16 20H-12.5 SPINDLES & HUBS

REV. 9/14/16 20H-12.6 TRACK WIDTH

REV. 6/27/17 20F-2.2 OVERALL CAR WEIGHT

PREFACE

The rules herein shall refer to Stafford Motor Speedway as “SMS”. These rules are intended to create affordable and fair competition. While they offer a good outline, every item cannot be covered by a written rule. If you have questions regarding something not detailed in these rules, please consult an SMS Official for clarification before proceeding. These rules are for SMS only with no expressed or implied agreement with any other speedway or series as to their interpretation, implementation and method of inspection by their technical inspectors and officials. No car, component, or equipment will be considered as having been approved by reason of having previously passed through inspection unobserved. No car, component, or equipment will be considered as having passed inspection for the event until the finish is made official. All engine models, equipment changes, or modifications not specifically addressed in the rule book by SMS must be submitted in writing for consideration of approval on or prior to September 2, 2016 unless otherwise authorized by SMS to be considered for competition for the 2017 season. All equipment is subject to the approval of SMS Officials. You may be assessed penalties including but not limited to: added weight, fines, loss of points, loss of handicapping, and suspension, car parts, components, and/or equipment deemed as not in compliance with these rules. Any car part, component, and/or equipment which does not conform to specifications or tolerances contained in the 2017 rule book or is not otherwise approved by SMS may not be used in competition in 2017.

By engaging in competition at SMS, you hereby agree to have read the SMS 2017 General Rulebook and the 2017 DARE Stock Rulebook.

DARE STOCK MISSION STATEMENT

The DARE Stock division was designed and created to be an inexpensive way to help competitors develop basic mechanical and driving skills. This division provides a platform to identify and learn the basic skills prior to moving on to more complex competition.

The 2017 NASCAR Whelen All American Series (NWAAS) rules for the Late Model Stock Car division are enforced for the SMS DARE Stock division with the following changes and/or additions (EIRI).

DRIVER ELIGIBILITY- All drivers must have a NASCAR CHD (Charger Division Driver) or higher license. Drivers competing in the DARE Stock division at SMS are not permitted in the SK Modified®, SK Light Modified, Late Model or Limited Late Model division on the same event date. Drivers must be a minimum of 14 years of age.

DEFINITION OF STOCK- In the following rules you will see the term OEM Stock used. This means Original Equipment Manufacturer. The parts must come on a standard production car. Special "Off-Road" or racing parts are not permitted unless pre-approved. No carbon fiber or titanium engine, chassis or body parts are permitted.

20F- 1 COMPETING MODELS- 1969 and newer American made full frame cars with a minimum of 108" wheelbase as factory listed for that year and model. No Firebirds, Camaros, Mustangs or two passenger sports cars. No convertibles, station wagons, or using of their frames for other models. Body and frame parts must be from same year, make and model. If you are in doubt about the eligibility of a make or model, check before you build it.

20F- 2.2 OVERALL CAR WEIGHT- All specified weight requirements are with the driver and race gear, seated in the car. The maximum left side weight percentage allowed is 53%.

The minimum weight at all times is 3100 lbs. for manual transmission cars and 3050 lbs. for automatic transmission cars.

1st win = 100 lbs. of weight added (3200 lbs. total for manual transmission cars and 3150 lbs. for automatic transmission cars).

No other weight penalties will be added for more wins. Stafford Motor Speedway Officials reserve the right to modify these rules in the interest of safety and equality of competition.

All win penalty weight must be removable (bolt-in) for inspection purposes. The win penalty weight may be inspected, removed and weighed at any time. All win penalty weight must be bolted on right side of car within 24" of the right front frame kick out. Any car found to be under the minimum overall car weight allowance will be penalized one position for every pound under the minimum weight. This does not apply to left side weight requirements. After winning two (2) feature events, your engine may be subject to major teardown. If any internal part of the engine is found illegal, the track reserves the right to confiscate the part or the entire engine. If the driver refuses to surrender the part or engine or refuses the tear down, the driver may be subject to a suspension and fine.

20F- 2.3 ADDED CAR WEIGHT- Added weight must be in block form, be magnetic steel or lead, and be of no less than five (5) pound blocks (no pellets). All weight must be bolted to the inside of the frame rail and above the lowest edge of the frame rail where it is mounted. Added weight must be painted white with the car number painted in black. No added weight is permitted inside the driver's compartment. Weight must be welded in a box or attached with two or more 7/16" diam. (minimum) grade 8 bolts, washers and locking nuts.

20F- 2.4 CAR WEIGHTS AFTER RACE- Cars will be weighed as they come off the race track, with the driver and helmet positioned in the seat. Nothing may be added, removed or changed on the car prior to being scaled. An amount equal to one half of one percent (.5%) of the total weight will be added to scale reading for loss in weight due to race wear.

Minimum post-race weight will be 3085 lbs.-no win, 3185 lbs. one or more wins.

20F- 3 DETAILED BODY REQUIREMENTS- The body must be stock appearing and be mounted in the stock location on the frame. Steel aftermarket replacement bodies may be used in place of stock. All body panels must be steel. Hood may be steel or fiberglass. No other fiberglass panels are permitted. Lowering, chopping, channeling or streamlining of any body part (including roof) is not permitted. Stock window openings must be maintained. No aluminum replacement parts unless noted elsewhere in the rules. All exterior chrome trim, ornaments, outside mirrors and door handles must be removed. Replacement body parts must meet SMS templates. Riveted or welded Rocker panels must be rolled under to match OEM contour. Spoilers of any type are not permitted. Rear of car must maintain a stock appearance. Stock will be determined by SMS Officials.

20F- 3.2 GLASS- All glass except windshield must be removed. Side, quarter panel, or rear windows are not permitted. A full windshield made from 1/8" (minimum) polycarbonate must be used. Windshield must maintain stock angle and fit template. Windshield must have two safety straps on the inside and out. Cracked windshields are not permitted. All lights and lenses must be removed from the car. Headlight and taillight openings must be covered. Headlamp and tail lamp decals are recommended for aesthetic reasons.

20F- 3.2.3 WINDOW NET- All door window glass must be removed. A commercially manufactured SFI rated nylon window net must be installed in the drivers side door window opening. It must be positioned to cover the entire window opening. Window nets may not be used beyond three (3) years from the date of manufacture. The window net must be rib type, made from minimum 3/4 inch, maximum one (1) inch wide nylon material with a minimum one (1) inch and a maximum 2-1/4 inches square opening between the ribs. The minimum window net size must be 22 inches wide by 16 inches high. All window net mounts must be a minimum 1/2 inch diameter solid steel rod on the bottom and a minimum one (1) inch wide by 3/16 inch thick flat steel or a minimum 1/2 inch diameter solid steel rod on the top, with mounts welded to the roll cage. The window net must fit tight and be secured with a lever-type quick release latch. The lever must be secured by a detent ball in the lever and may be supplemented by Velcro® fastener only – pins or clips are not permitted. The latch must mount at the top in the front to roof bar (#3) and release from the inside.

20F- 3.2.5 REAR VIEW MIRROR- One (1) rear view mirror permitted. It must mount at the top of the windshield and be no larger than 8"X 2". No multi-image or side mirrors permitted. Drivers wearing approved head and neck restraint devices may use one (1) spot mirror that must be mounted to the #10 A bar. The spot mirror must be a maximum diameter of three (3) inches.

20F- 3.3 DASHBOARD- Stock dashboard may be removed but must be replaced with magnetic sheet steel, a minimum of 24-gage (0.025 inch thick), of similar design and be the full width of the body.

20F- 3.4 FIREWALLS

A. Front firewall must be in stock location and be made of minimum .031" magnetic sheet steel with all holes covered using magnetic sheet steel a minimum of .031" thickness. The front firewall must extend down to the top of the frame.

B. Rear firewall must be made of minimum .031" magnetic sheet steel securely installed over the rear seat back brace and top shelf or "hat rack", completely closing off the trunk compartment.

C. The top shelf or "hat rack" must be positioned horizontal and approximately level, and be no longer front to rear than stock.

D. The stock floor pan may be replaced with minimum .031" magnetic sheet steel bent similar to the original configuration. No part of the passenger side floor pan may be higher than the top of the frame rail. The passenger side floor pan may come straight across from a maximum height of the top of the frame rail to the transmission tunnel. The floor must be sealed to the bottom of the door on both sides of the car. The rear seat area must seal to the rear firewall.

E. The transmission tunnel shape may be altered, however it must remain in original center position (equal distance from frame rails to either side of the tunnel) and within 1-inch of original height. Additionally the transmission tunnel must remain within 2-inches of stock width.

F. Door bars may not be covered on the interior of the car and must be visible for inspection from the inside of the car.

G. Closing in of passenger compartment next to or behind driver is not permitted.

20F- 3.5 DOORS- All doors must be welded or bolted shut. External nerf bars may be used. Nerf bars may be made of a maximum of 1" round tubing. Nerf bars must be in contact with the

body (fender, door, quarter) and painted the same color as the body panel. Nerf bars must be at centerline (in height) of the front and rear tire, and may be placed in between the front and rear wheels only. Ends must be turned into and go through the body or bolted at the end of the bar with a flush bolt that goes through the body to an interior bar of the same length as the outside bar. The nerf bars must have the ends detailed to prevent hooking. Spreading or narrowing of the body is not permitted. Replacement doors must have stock contour.

20F- 3.6 FENDERS- Full front fenders and rear quarter panels are required. Inner fender wells may be removed from front fenders. Fender and quarter panel location, dimensions and angles must remain stock. Wheel openings may be trimmed a maximum of 5" from the outside edge of the tire for clearance.

20F- 3.7 GRILLES- Grill openings must remain stock for body make/model used. Stock unit may be replaced with screen between headlight doors and stock grill frame. No car will be permitted to run with an open front grill area.

20F- 3.8 HOODS / ROOF

A. Full stock steel or fiberglass hood must be in place at all times. Stock hood reinforcing inner panels may be removed. Hoods must lay flat and fit the same as a stock hood without bows or bubbles in the center. Hood must be sealed at firewall and windshield.

B. Hood must be held closed with a minimum of three (3) quick release pins across the front. Hinges are permitted on the back corners of hood.

C. The hood must be solid, and can have no holes or functioning air scoops.

D. A non-functioning 2" tall hood scoop is permitted as long as it is part of the stock hood i.e. (Buick Grand National).

E. A triple reinforced fiberglass roof is permitted. Roof panels must be mounted in stock position the same as the stock production roof. Roof must be bolted to cage at all four corners with at least 5/16" diameter grade 8 bolts. All roofs must be acceptable to SMS Officials.

20F- 3.9 TRUNKS- The rear deck lid must maintain the same dimensions, angles and bodylines as the stock production car. Trunk lid may be held closed with quick release pins. Reinforcing inner panels may be removed. All openings in rear panel must be covered. Floor of the trunk area must be removed. Complete taillight panel and bumper covers must be run. Flat back cars are not permitted. Taillight decals are recommended.

20F- 3.10 BUMPER / BUMPER COVERS- The bumpers/bumper covers must be acceptable to SMS Officials and meet the following requirements:

A. The front and rear bumpers and/or bumper covers must be installed in the same location as far as height, width and depth as a stock factory production bumper.

B. Magnetic steel tubing must be used to reinforce the front and rear bumper covers. The tubing must not be exposed and must remain behind the bumper covers.

C. The front and rear bumpers/bumper covers must be solid. Holes are not permitted.

D. All front and rear bumper covers must be painted the same color as the car including bolts and rivets.

20F- 3.11 IDENTIFICATION- Roof numbers must readable from passenger side of car. SMS reserves the right to assign number colors. See NASCAR Weekly Series rule book.

20F- 3.12 BODY TEMPLATES- Templates may be used to check body dimensions and/or configuration.

20F- 4 GENERAL ENGINE REQUIREMENTS- Engine must be Stock OEM cast iron production block, heads, intake and exhaust manifolds. Approved Engines: GM 305 and FORD 302. Stock stroke must be maintained. Maximum overbore .030" from stock. No deflashing, abrasive cleaning, grinding, welding, Teflon coating or deburring of engine parts. Engine must be in stock location in the chassis. No block may have more than two (2) cylinder sleeves installed and the sleeves must be made of cast iron material. Stock type dowel pins must be used in all engines. The dowel pins must be the same diameter and length as stock OEM pins, with no offset allowed. Dowel pin holes may not exceed .315" dia. and must remain unaltered. Head bolts and holes must remain unaltered.

OP -20F- 4- OPTIONAL SMS 602 CRATE ENGINE As an option for the DARE Stock division, the 602 GM Performance Factory Sealed Circle Track Crate Engine is permitted. The engine is the GM Part Number 88958602 GMR 350/350 Circle Track Engine with no performance modifications. The engine will be inspected, tested and resealed with blue seals by an SMS Official. All engine seals must remain intact and unaltered. Any service work requiring the removal of any seals/ bolts must also be scheduled with and approved by SMS Officials before the seals/ bolts are removed. Tampering with seals/bolts may result in penalties and loss of eligibility of the engine to compete in the DARE Stock division. The engine will only be available through R.A.D. Auto Machine, the SMS approved service center.. The price for this brand new 88958602 engine is \$4,100, which includes dealer delivery to our Authorized Service Center, inspection, break-in, dyno service, documentation and sealing. The DARE Stock engine will be sealed with Blue SMS seals. SK Light or LLM engines are not permitted in DARE Stock competition. Please call R.A.D. Auto Machine (413-583-4414) or email the SMS technical staff at j3ams@comcast.net with any questions.

20F- 5 DETAILED ENGINE REQUIREMENTS- Block, crankshaft, connecting rods, pistons, heads, valves, valve springs, retainers, rocker arms, camshaft, timing chain, water pump and pulleys must be Stock OEM for year/make/model. A Stock OEM replacement harmonic balancer may be used. Solid one-piece type harmonic balancers are not permitted. The maximum compression ratio allowed is 11 to 1, as checked by the SMS "Whistler" tool.

20F- 5.1 ENGINE LOCATION

A. Engine must be in the Stock OEM location for a V8 in the chassis being run. Stock engine location is: The distance between centerlines of the forward most fuel pump mounting bolt and the upper idler-arm mounting bolt measures 8.75" inches +/- .25" inch. The bolts/holes may not be altered in any way.

B. The crankshaft centerline to ground measurement may be no less than 12 ¾ inches (measured from the harmonic balancer area to ground) with the cars frame set on five inch (5") high blocks under all four outer corners of the frame.

20F- 5.5 PISTONS/RODS

A. Only Stock OEM or Stock OEM Type, flat top, three (3) ring aluminum pistons with (3) working stock thickness rings in place are permitted. Minimum ring thickness permitted is as follows, Compression ring 1/16", Oil ring assy. 3/16". All three rings must be stock type, of magnetic steel. Valve reliefs for valve clearance only may be cut into the pistons. All three rings must be of magnetic steel. No portion of piston may protrude above the top of the block.

B. Only Stock OEM magnetic steel piston pins maintaining Stock OEM diameter are permitted.

C. Piston pin holes must be in Stock OEM location in the piston and connecting rods.

D. Only two-piece insert style connecting rod bearings are permitted.

E. Only Stock OEM, or OEM replacements from Scat, or Eagle, solid magnetic steel connecting rods are permitted. Only normal engine balancing and the use of after-market bolts and nuts are permitted. No deburring, deflashing, polishing, grinding or lightening. Billet connecting rods are

not permitted. All rods must be Stock OEM length.

F. Minimum weight for piston, pin, rings, bearing, and rod assembly is 1185 grams.

20F- 5.5.4 OIL PAN- Stock for year, make, and model. Baffles may be installed. A one (1) inch inspection plug may be installed in the front of the pan, Moroso P/N MOR23970. This is to allow SMS Officials access to inspect connecting rods and crank shaft. This is optional but highly recommended.

20F- 5.5.5 OIL PUMP- Stock type oil pumps only. NO dry sumps, external oil pumps or tanks or accu-sump systems allowed. Only OEM type in the pan oil pumps. No pumps of any type may be used in the evacuation system.

20F- 5.6 CYLINDER HEADS- Chevrolet may use aftermarket "World Products S/R" (stock replacement) series heads, bare casting part# 042650 and part# 042650-1 or 042750-1, or a Stock OEM Cast iron cylinder head. Vortec heads are not permitted. Ford Cleveland must use Stock OEM cast iron 2 BBL heads only. Ford Windsor may use the cast iron "World Products Windsor Jr." cylinder head, bare casting part# 053030 and casting part#053030-1 with 1.94" intake valve and 1.60" exhaust valve. Head studs are not allowed. All Chevrolet heads must be factory listed for 58CC's or greater. Heads may not be angled milled. The only modifications allowed will be the installation of valve guide sleeves and milling of the gasket surfaces. Angle milling or changing the angle of the head gasket surface in relationship to the rest of the head is not permitted. Altering the position or angle of the valve guide is not permitted. The addition of screw-in studs, guide plates, valve spring seats optional valve seals, Poly-Locks or jam-nut devices are permitted. Machining of valve guide bosses for seals is permitted. Any cylinder head measuring less than the 56CC Stock OEM spec. may be deemed legal if a full thickness head gasket measuring a minimum of .025" at the time of inspection is present between the head and block. Head gasket surface milling tolerance for DARE Stock is 0.00" to 0.015" from true 23.00 degree of stock valve position. Any cylinder head measuring less than 54CCs is illegal. When heads are checked at the track you will be responsible for cleaning and carbon removal to make the minimum CCs. Coolant lines are not permitted on the any part of the head. All other head modifications are not permitted, including but not limited to: Porting, polishing, any grinding in ports or combustion chambers, chemical milling, welding, sectioning, glass beading or removal of any flashing or casting marks. No internal modifications of any kind including painting or Teflon coating is permitted. No more than two intake-mounting holes may have HeliCoils. Intake or exhaust manifold mounting holes may not be added or relocated. Holes must take Stock OEM diameter intake manifold bolts.

Gasket Compressed Gasket CCs Manufacturer Thickness Bore Added

CARQUEST 5745 .027" 3.839 5.12CCs Felpro 8510PT .041" 3.900" 8.0CCs Corteco 55061HG .028" 3.870" 5.1CCs Victor 5745 .027" 3.839" 5.12CCs Minimum Head Gasket Thickness Spec .025" If CCs Are 55.9 to 54.0 Min.

VALVES- The Manley OEM stock replacement valve or the Liberty TX-194, TX-160, or TX-150 valve must be used. The valves must be stainless steel, 11/32" stem, identical in appearance, size and construction as an the OEM GM 305 valve. No air directional devices are permitted on any of the valve surfaces. Max valve sizes allowed Intake/ Exhaust: G/M 1.940" 1.600" Ford Windsor 1.940" 1.600" Ford Cleveland 2.090" 1.710"

VALVE SPRINGS & RETAINERS- Stock OEM type single steel valve spring with damper and steel retainers only. Valve springs must retain all Stock OEM replacement passenger car dimensions. Barrel wound or conical wound springs are not permitted. All windings must be

parallel. Stock diameter spring must be used. Valve spring retainers must be Stock OEM steel or stock replacement steel only, with a minimum outside diameter of 1.55”.

VALVE JOB- Three (3) angle valve jobs are permitted. 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. Upon completion of the valve job, the bowl area under the valve seat down to the bottom of the valve guide 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. No hand grinding or polishing is permitted on any part of the head. Un-shrouding of valves is not permitted.

20F- 5.7 CRANKSHAFT

A. Only stock production OEM, or Scat OEM replacement crankshafts are permitted. The main and rod journal size must be stock for the block being used. Original bore and stroke combination must be maintained. The maximum allowable stroke tolerance for Chevrolet and Ford is +/- .015”. Minimum main journal size .020 under stock. Minimum rod journal size .030 under stock.

B. After-market crankshafts, knife-edge crankshafts, small journal crankshafts are not permitted.

C. Machining or polishing of the crankshaft counterweights is not permitted. Normal engine balancing is the only acceptable modification that can be performed on this component. Coating, finishings or paint is not permitted. Journals may not be drilled. **D.** Minimum crankshaft weights: Chevrolet engines 50 lbs., Ford 54 lbs.

E. OEM style magnetic steel elastomer type harmonic balancers must be used.

20F- 5.8.1 CAMSHAFT

A. Any type chain is permitted. Belt-drive and gear-drive systems are not permitted.

B. Hydraulic cam and hydraulic lifters must be used.

C. Camshaft lift may be measured at the valve rocker arm, or directly on the camshaft. Cam lift cannot exceed gross valve lift divided by listed rocker arm ratio. The maximum valve lift allowed is .500”. Tolerance for the valve lift is + .005”

20F – 5.8.2 VALVE LIFTERS

A. Stock OEM size and style magnetic steel hydraulic valve lifters must be used. Roller tappets, ceramic valve 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.

E. Lifter must be operative and pass a leak-down test as well as removal and inspection.

20F- 5.8.3 ROCKER ARMS- Stock OEM type magnetic steel rocker arms must be used. Comp Cam Roller Tip Rocker P/N 1412-16 or exact equivalent is permitted. Any steel OEM pushrod is permitted. Chevrolet and Mopar must run 1.5 ratio rocker arms. Ford must run 1.7 ratio rocker arms. Aftermarket shaft rocker systems are not permitted.

20F- 5.9 INTAKE MANIFOLD- A Stock OEM passenger car steel 2 barrel intake manifold must be used. Throttle body/injection manifolds are not permitted. Modifications of any type are not permitted to the intake manifold. You are required to have an unaltered stock OEM manifold. Porting, polishing, acid dipping, deburring, de-flashing, abrasive cleaning, internal painting, milling, cutting, drilling holes, enlarging bolt holes, matching of ports or welding, etc... is not permitted. An SMS supplied stock OEM intake manifold must fit your engine complete with stock gaskets. All bolt holes must be in alignment and same size as stock. Coolant lines / fittings

are not permitted in the intake manifold or cylinder heads. The maximum throttle bore diameter permitted is 1.730”.

20F- 5.10 CARBURETOR- Holley two-barrel model #4412 carburetor must be used. 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. Screw ends may be cut even with shaft but screw heads must remain standard. (9) Throttle Shaft: Shaft must remain standard and must not be thinned or cut in any manner.

20F- 5.10.2 CARBURETOR SPACER- Only one solid spacer made of aluminum or phenolic plastic with a maximum height of 1” is permitted. Only one .075” max. thickness gasket per side may be used. The top and bottom surfaces must be parallel. Spacer can be no larger than base of carburetor. Portholes or hole must be vertical to the surface with no beveling, tapering, or flaring. No additional openings for the induction of air allowed. All spacers must be approved by SMS Officials.

OP-20F- 5.10.2 CARBURETOR ADAPTER, SMS 602 Crate Engine – The Big Haus U.S.A. #001 aluminum adapter plate must be used. Alterations of any kind to the adapter plate are not permitted.

AVM PLATE- A track provided Air Volume Modification (AVM) plate must be installed between the intake manifold and the carburetor spacer. Alterations to the AVM plate are not permitted. The AVM plate is the property of SMS and must be returned to the SMS Officials at the end of the racing season or upon request. Any alteration of any kind to the AVM Plate will automatically result in a three-week suspension and a fine of \$150.00.

OP-AVM PLATE, SMS 602 Crate Engine A track provided Air Volume Modification (AVM) plate must be installed between the intake manifold and the carburetor spacer on the SMS 602 Crate Engine. Alterations to the AVM plate are not permitted. The AVM plate is the property of SMS and must be returned to the SMS Officials at the end of the racing season or upon request. Any competitor that competes without the AVM plate, or competes with an altered or modified AVM plate may face a suspension and a fine.

20F- 5.12.1 CARBURETOR AIR FILTER / AIR FILTER HOUSING

A. Only a round dry type paper air filter elements maintaining a minimum 12 inches and

maximum 14 inches diameter is permitted. The air filter element must maintain a minimum of 1 ½” inches, maximum three and a half (3.5”) inches in height. All air must be filtered through the element.

B. Only a round, metal filter housing (top and bottom) is permitted. The top and bottom of the air filter housing must be solid with no holes. A maximum of one (1) inch lip is 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 and sit level on the carburetor. Air induction, ducts, baffles, tubes, funnels or anything that may control the air entering inside of, or between the air filter and carburetor is not permitted.

C. The bottom of the air filter element must measure within one (1) inch of the carburetor’s top flange. A spacer may be used between the carburetor and the air cleaner so long as the one (1) inch specification is not exceeded.

D. No part of the air filter or air filter housing may protrude through the hood.

20F- 6.1 IGNITION SYSTEM- Must be Stock OEM of the make/model/year.

L. The firing order must be: Ford 1-3-7-2-6-5-4-8 GM 1-8-4-3-6-5-7-2

M. The manufactures cylinder identification sequence is as follows

Ford/GM Front

5-1

6-2

7-3

8-4

OP-20F- 6.1 IGNITION SYSTEM, SMS 602 Crate Engine

H. An MSD # 8728 External RPM limiter with a 6,000-RPM chip is mandatory. The violet wire of the MSD # 8728 must be cut back flush to the unit’s housing. The green and the white wires of the MSD # 8728 must run directly to the coil negative. The MSD # 8728 must be mounted on the engine side of the firewall in plain view. SMS Officials may require the replacement of the RPM chip with a track issued chip at any time during an event. RPM limiters must be fully functional and operational at all times.

20F- 6.4 STARTER- Only OEM type mini starters are permitted. Must be in Stock OEM position and be operative at all times.

20F- 6.5 BATTERIES- The battery must be located in an enclosed battery box. It may be installed anywhere in between the front spindle and the front firewall, but no further back than to have the front surface of the battery flush with the firewall, or in front of the rear axle housing behind the rear firewall. The battery must be completely closed / sealed off from the drivers compartment. The battery box must be mounted inside the outer edge of the frame rails and must not extend below the bottom of the frame rail. Any battery that maybe changed/installed during the race must be installed securely in the battery box. *Only one* 12-volt Gel or Glass Mat type battery with a minimum weight of 17 lbs must be used.

20F- 6.7 ACCESSORIES- Onboard computers, automated electronics, recording devices, or digital readout gauges of any kind are not permitted.

20F- 6.7.1 RADIOS- Monitoring of SMS Race Control on Frequency 461.1375 is mandatory via a RELIANT R416 Receiver, Raceceiver Microscanner, or Victory GT-18 Receiver. Any other

one-way or two-way device is not permitted. The approved Receiver must be mounted in plain view for inspection on the back of the drivers seat.

Track Frequency Channel DARE Stock – 461.13750

Waddell Communications www.waddellcommunications.com 860-573-8821

20F- 7 ENGINE COOLING SYSTEM- Only Water or SMS approved coolants or additives may be used in the cooling systems. Coolant lines to the engine block, intake or cylinder heads are not permitted.

20F- 7.1 WATER PUMP

A. A Stock OEM steel type pump must be used. Electric pumps or the combination water pump/alternator units are not permitted.

B. Any V-Belt or serpentine belt/pulley system is permitted. Cog belts or pulleys are not permitted. Pulleys must be steel or aluminum.

20F- 7.2 FAN-Stock OEM type mechanical or electric fans are permitted.

20F- 7.4 RADIATOR

A. Any brass or aluminum passenger car style radiator is permitted. Radiator must be in stock location.

D. All cars must be equipped with an approved overflow catch can under the hood by the right front fender. The over flow hose coming out of the catch can must run and up through a fitting in the cowl, at the base of the windshield on the right side.

20F- 9 ENGINE EXHAUST SYSTEM

A. Stock OEM exhaust manifolds or headers may be used. Headers for GM engines must be the Schoenfeld #185. Headers for Ford engines must get approval by SMS Officials.

B. Stainless steel, stepped and 180-degree headers are not permitted.

C. The exhaust header flange must mount directly to the cylinder head with no spacers between the flange and the cylinder head. A maximum header flange thickness of ½ inch is permitted.

D. Inserts are not permitted in any part of the header or collector. Merge, crossover and pyramid collectors are not permitted. Exterior and interior coatings are permitted.

E. Exhaust pipe must be reduced from 3” to 2 ½” before entering muffler. The pipes after the muffler may have a maximum diameter of 2 ½ inches must run to within twelve (12) inches of the rear axle housing, then turn down a minimum of 45 degrees. Pipes may not exit out the side(s) of the car. Both exhaust pipes must be independent with no connection between them.

F. LOBAK # RCM 25-12-25 mufflers are required at all times. Modifications or repairs of any type are not permitted on the muffler. Both muffler flanges must be intact. Stainless steel mufflers are not permitted. Mufflers must be removable for inspection. NOTE: The life expectancy for all mufflers is two years. Teams are responsible to make sure their mufflers are in legal condition. If a muffler is missing one or more of the internal baffles it is illegal.

G. Thermal wrap is not permitted anywhere on exhaust system.

H. Only one muffler and exhaust pipe per side of car is permitted.

I. The entire exhaust system is subject to approval by SMS Officials.

20F- 10 ENGINE DRIVE TRAIN – FLYWHEEL AND CLUTCH –

Flywheel- OEM Stock dimension steel, or aftermarket replacement billet steel flywheel for engine type, weighing a minimum of 16 lbs must be used. Flat surface machining allowed only

on the face of the flywheel, any cutting or machining on the back side of the flywheel is not permitted. Pressure Plate- OEM stock type 10" steel pressure plate must be used. See weight requirement below. Clutch Disc- OEM stock type 10" steel full 360 degree disc or Magnus part # 384152F and 384152C must be used.

Pressure plate & clutch disc combined minimum weight – 16 lbs. (fasteners not included).

Clutch disc minimum weight 2.5 lbs and a maximum weight of 3.8 lbs. (fasteners not included).

Drilling or lightening of any part is not permitted. Solid magnetic steel fasteners must be used.

An OEM stock or aftermarket clutch pedal may be used. The pedal and components may be steel or aluminum. A hydraulic clutch bearing, hydraulic slave cylinder, or mechanical linkage may be used. All components are subject to SMS Officials approval.

20F- 10.3 BELL HOUSING- Only a commercially manufactured magnetic steel bell housing may be used. The bell housing must enclose the flywheel 360 degrees with minimum 3/16" inch magnetic steel. Any modifications you make to the bell housing must be done with 3/16" steel and welded in place (no bolt on pieces). A commercially manufactured bell housing (like the Quarter Master # 008110440) with a bolt on bottom cover may be used. An opening no larger than 3 1/2 x 4 inches may be used for throw out bearing access. This hole may be covered with sheet metal.

20F- 10.4 A – AUTOMATIC TRANSMISSION- A completely Stock OEM TH350 automatic transmission must be used. Powerglide or two speed transmissions are not permitted.

TORQUE CONVERTER

A. Full size stock torque converter for your year/make/model must be used.

B. Torque converter must be operational. Any alteration that may serve to "lock" the torque converter at any time or in any way is not permitted.

C. Torque converters of less than 11 inches in diameter are not permitted. Torque converters must have a retail price of less than \$325.00.

20F- 10.4 B- MANUAL TRANSMISSION-

A. Only OEM production stock 3 & 4 speed transmissions may be used. Top loader transmissions are not permitted. Gear ratio must be of stock OEM production, with 2nd gear being a 1.50 to 1 ratio.

B. Only cast iron housings are permitted. Aluminum or magnesium transmission housings are not permitted.

C. Only OEM type, steel, angle cut forward gears are permitted. Square cut forward gears are not permitted.

D. All forward and reverse gears must be in working order, and they must be operational from inside the driver's compartment. All transmissions must have a constant engagement of the input shaft with gear and countershaft with cluster gears.

E. Five-speed transmission, with gears removed are not permitted.

F. Quick change transmissions are not permitted.

H. Machining or lightening of any internal rotating or non-rotating parts including gears, shafts and case is not permitted. Gun drilled transmission shafts are not permitted. Welding on any internal part is not permitted.

I. Additional or different from OEM bearings other than the tail-shaft, which may have roller bearings, are not permitted.

J. Auxiliary, over or under drive transmissions are not permitted. High gear must have a ratio of 1 to 1, 2nd gear must have a ratio of 1.50 to 1, and no other forward gear may have a ratio higher than 1.20 to 1. The shifter and all of its components must be made of steel or aluminum.

20F- 10.5 DRIVESHAFT

- A.** A Stock OEM type, one piece magnetic steel drive shaft, universal joints, and yoke must be used. The driveshaft must be 2-3/4 inches or 3 inches in diameter.
- B.** Two (2) 360 degree solid magnetic steel brackets with no holes or slots, not less than two (2) inches wide and ¼ inch thick, must be placed around the drive shaft. The front bracket must be welded to the rear suspension cross member and the rear bracket must be welded or bolted, with a minimum of two 3/8" diameter bolts on each side (4 total), to the horizontal tunnel bar (#6).
- C.** All drive shafts must be painted white.

20F- 10.6 REAR AXLE- The rear axle assembly must be an unaltered Stock OEM unit for your year/make/model. Buick Grand National rear ends or parts are not permitted.

- A.** The center of the rear end housing must be within 1" of the centerline of the track width, front and rear.
- B.** An unaltered Stock OEM "open" or "single leg" carrier must be used. Any modification that serves to lock or increase the differential resistance of the carrier assembly is illegal. One of the SMS Officials inspection method is to check the resistance of one wheel while holding the other stationary. The maximum resistance permitted is 25lbs/ft at the lug nut of the free wheel with the other wheel held stationary and the drive shaft disconnected.
- C.** Rear axle housing must be a Stock OEM unit from a passenger car and must be a continuous housing between the backing plates.
- D.** Racing axles are mandatory on both sides for all General Motors rears. Axles must retain all stock dimensions. C-clip eliminators are allowed.
- E.** Only magnetic steel axels, bearings, and axle housings are permitted. The carrier must remain stock weight and configuration.
- F.** Stock OEM, identical/exact replacement, or DCA P/N 17811 or J.C.I. P/N 09-03 series upper trailing arms for your chassis year/make/model must be used. They must attach to the frame in the unaltered Stock OEM location. Upper trailing arms may be shortened 1 inch in bolt-in length from Stock OEM dimension.
- G.** Stock OEM, identical/exact replacement, or DCA P/N 17812, J.C.I. P/N JCI-03-01B or Hamm's Welding GHC-1925-RB series lower trailing arms for your chassis year/make/model must be used. The lower trailing arms must maintain the Stock OEM bolt-in length. They must attach to the frame in the unaltered Stock OEM location. Lower trailing arm mounting brackets on the axle tubes may be moved but rear must be centered in chassis. Left and right backing plates must be an equal distance from the frame rails.
- H.** Springs must be mounted on axle housing in stock location for frame being used.
- I.** All parts in or on the rear axle assembly must be steel.

GEAR RULE – The 305 engine with the TH350 automatic transmission may use a maximum numerical gear ratio of 3.73 in the rear end housing.

The 305 engine with the manual transmission may use a maximum numerical gear ratio of 3.42 in the rear end housing.

OP-20F- 10.6 REAR AXLE, SMS 602 Crate Engine GEAR RULE – Maximum numerical gear ratio of 3:42 in the rear end housing is permitted.

20F- 10.7 WHEELS- Magnetic steel racing or wagon wheels are mandatory. Maximum width is 7" wide. Wheels must measure 3 ½ inches (+ or -1/2 ") from the mounting flange surface to the outer contact surface of the tire bead. All four wheels must measure exactly the same (+ or - 1/8".) The minimum wheel (rim) weight is 20 LBS (bare rim). Wheel studs must be magnetic steel with magnetic steel racing type lug nuts and the stud threads must extend a minimum of ½ inch beyond the outside surface of the lug nut. The frame area at the rear of the axle that may

come in contact with the right rear tire may be relieved, if necessary, by denting, bending or notching the frame at this point.

20F- 10.8 TIRES – Hoosier Tire East of Manchester, CT. is the sole tire supplier for the DARE Stock division. The approved tire is the Hoosier Compound Rib 700 sizes 27.0/8.0-15 and 27.5/8.0-15 on both the left and right sides. Tire purchases prior to the first scheduled race of the season may be made at Hoosier Tire East. After the first event of the season all tires used at Stafford Motor Speedway must be purchased at the track on race day. Each tire will carry a special bar coded serial number. The legibility of the bar code is the sole responsibility of the team. This number will be scanned and entered into a database designating it as a tire for use at SMS. Each scanned serial number will be placed on a Tire Inventory that will be assigned to the driver that the tires have been purchased for. In the event a driver changes cars for qualifying or feature racing, his tire inventory must accompany him to the new car. Each driver must update and return a Tire Inventory Card to the SMS Tire Delegate. For the first race of the season, DARE Stock drivers will be allowed a maximum of eight (8) tires in their inventory. For each completed event (EIRI) attended a DARE Stock driver will be issued one (1) tire credit for use at any future event as follows: Taking the green flag in the feature will allow a driver to receive one tire credit. These tire credits may be accumulated and used at any future race event. After a designated number of weeks into the season and at the discretion of SMS Officials, any new driver will only be allowed to start their season off with four (4) new tires and two used ones (total of 6 inventoried tires). The maximum number of tires allowed in a driver's race inventory throughout the season will be twelve (12) for the DARE Stock division. Once a driver's inventory has filled up to 12 tires, that driver must begin to manage their inventory by replacing used/junk/scrap tires. Tires that you throw away must have their barcode number designated as such. Please notify the SMS Tire Official of any tires you discard and will not use. SMS Officials may change or amend this rule at any time. If a tire cannot be identified, it will be considered illegal. SMS Officials may confiscate and/or impound tires at any time for inspection. The JTR Eagle PPM Tester will be set at a fixed level and will be strictly enforced throughout the 2017 season.

20F- 10.8.1 PHYSICAL REQUIREMENTS

F. Minimum Tire Pressures for all inspection purposes are ten (10) psi for both left side tires and fifteen (15) psi for both right side tires. Air may be added to the tires to achieve only the minimum tire pressures during inspections, per an SMS provided tire pressure gauge.

NOTICE: Participants specifically agrees that he/she acknowledges that it is illegal to soak or treat racing tires and that said soaking or treatment of racing tires is against EPA regulations and further contains carcinogens and hazardous material which are unfit for his/her health and the health of all competitors and spectators. Any participant found violating the rule will be subject to suspension. JTR Eagle PPM Tester will be set at a fixed level and will be strictly enforced throughout the 2017 season.

20H- 11.1 STOCK OEM FRAMES- The frame must be Stock OEM for year/make/model. Repositioning, elongating, or over-sizing of any mounting holes in the frame is not permitted. Plating or reinforcing of the frame in any way other than specified here is not permitted.

A. *The Hamm's Welding front frame section (# TBD) may be installed from the front edge of the front spring pocket forward that incorporates the correct OEM steering box, idler arm and sway bar mounting locations.*

The front frame horns may be replaced with 2" X 3" .083" square tubing from the forward most ½" measuring hole to the front bumper. No other part of front frame rails can be replaced with tubing. On the stock front sub frame a minimum opening may be cut into the front of the spring pocket to access the adjustable spring spacer.

B. The front cross member must remain unaltered, Stock OEM.

C. Rear frame rails may be replaced with 2" x 3" .083" magnetic steel square tubing from the rear edge of stock upper cross member back, only if following stock configuration height, width, and length. Optionally the replacement rear frame rails may extend parallel rearward maintaining a minimum width of the stock frame rails width at rear most edge of the upper cross member. Both the Stock OEM cross member ahead of the rear axle and Stock OEM upper cross member must be used.

D. No offset or shortening of frame rails.

E. Frames must measure within a 1/4inch of all factory specifications for year/make/model used. All measuring cups or holes must remain unaltered.

F. Tubing of a size and length that will not protrude from the stock frame may be located inside the driver's side frame rail. All roll cage bars normally attaching to the drivers side frame rail must be welded directly to the supplemental tubing.

G. Tubing may be utilized as a replacement for the stock transmission cross member. Any non-stock replacement transmission cross member must be located perpendicular at 90 degrees to the stock frame rails and no further towards the rear of the car than to have the rear edge of the tubing even with the rear edge of the transmission hosing.

H. Additional X-tubing may be added so long as the tubing connects to the cross member and is not one continuous piece running from corner to corner of the stock frame. The X-tubing must attach within the two corners of each frame turnout. The X-tubing may not extend past any of the frame turnouts and may not be attached to the perimeter frame rails short of the frame turnouts.

FORD FRAMES- Ford full-size frames, (LTD, Crown Victoria) 1979 and newer may be shortened to 108" wheelbase. Frame must be shortened in center section only using the same area on both sides. Any Fords that are shortened to 108" wheelbase are allowed to use the Ford Thunderbird body from the same era.

20H-11.2 Optional tubular X-Y-G FRAMES- Frame uprights for the front & rear sub-frames must be "mandrel" bent type only. All vertical (height) dimensions listed are measured with the frame at 5" ride height at all 4 corners.

A. Main Frame

(1) A tubular magnetic steel "perimeter" frame must be used. Offset frames are not permitted. The main frame side rails must be parallel and be an equal distance from the centerline of the frame. The main frame side rails must be the same size (left and right, height and width), constructed using a single tube, and must be magnetic steel box tubing three (3) inches in width by four (4) inches in height with a minimum wall thickness of not less than 1/8 inch meeting ASTM A-500 specification. The main frame side rails start at a distance of 20 inches forward of the rear axle centerline and extend forward a length of 66 inches. When measured from the outside of the left frame rail to the outside of the right frame rail, a width of 54 inches, plus or minus (+/-) 1/2 inch, must be maintained. The distance from the outside edge of the main frame side rails, left and right, must be the same, measured from the centerline of the tread width, front and rear.

(2) Sub-frame kick outs must be constructed using a single tube and must be magnetic steel box tubing three (3) inches in width by four (4) inches in height with a minimum wall thickness of 1/8 inch meeting the ASTM A-500 specification. The sub-frame kick-outs must turn in 90 degrees to the main frame side rails and be welded to the inside ends of the main frame rails. The open ends of the sub-frame kick-outs must be closed by welding caps on the ends or bolting weight containment caps. The distance from the front of the front kick-out to the rear of the rear kick-out must be 66 inches. The front kick-out must measure 86 inches from the rear axle centerline.

(3) A cross member constructed of magnetic steel box tubing, two (2) inches by two (2) inches with a minimum wall thickness of 0.083 inch meeting the ASTM A-500 specification, must be welded between the main frame side rails at a distance of 48 inches from the rear axle centerline.

- (4) All frames must have diagonal cross bracing constructed of a minimum one (1) inch by one (1) inch by 0.065 wall thickness steel tubing.
- (5) All cross members and diagonal bracing must be installed flush to the top of the main frame side rails. The centerline of cross members may be notched a maximum width of 12 inches for driveline clearance. No part of the cross members or diagonal bracing may extend lower than the main frame side rails.
- (6) If the optional tubular metric frame is used, the center to center dimension of the main roll bar #1 and the rear axle must be a minimum of 23-1/2 inches.

B. Rear Sub-Frame

- (1) The rear sub-frame rails must be configured and attached in the same location on the left side and right side to the sub-frame kick-outs four (4) inches in from the outside edge of the main frame rails. The rear sub-frame when measured from the outside edge of the left sub-frame rail to the outside edge of the right sub-frame rail must measure 46 inches, and this width must be maintained for the entire length of the sub-frame. The rear sub-frame must angle rearward and upward at an angle between 45 degrees and 50 degrees to a maximum height of 22 inches from the ground (on five (5) inch blocks), then angle rearward parallel to the main frame rails a maximum distance of 16 inches, then angle down to a minimum height of 11 inches and a maximum height of 14 inches from the ground. The rear sub-frame must be constructed using magnetic steel box tubing, two (2) inches in width by three (3) inches in height, with a minimum wall thickness of 1/8 inch and must be similar in design and configuration to Stock OEM rear kick-ups.
- (2) The rear sub-frame tail section must extend rearward at a minimum height of 11 inches and a maximum height of 14 inches, to a maximum length of 38 inches from the centerline of the rear axle. The rear sub-frame tail section side rails must be parallel to the main frame side rails and have a minimum length of 24 inches. The rear sub-frame tail section must be constructed using magnetic steel box tubing two (2) inches in width by three (3) inches in height with a minimum wall thickness of 0.083 inches.
- (3) The rear sub-frame must incorporate the mounting locations for the rear springs, shock absorbers, panhard bar, and fuel cell, ending with a cross member constructed of magnetic steel box tubing two (2) inches in width by three (3) inches in height with a minimum wall thickness of 0.083 inches a maximum length of 38 inches from the centerline of the rear axle.
- (4) A reinforcement bar, made from round magnetic steel tubing, minimum 1-1/2 inches in diameter with a minimum wall thickness of 0.083 inches, must extend below the rear sub-frame section behind the fuel cell. This reinforcement bar must be as wide as the rear sub-frame rails and extend as low as the bottom of the fuel cell with two (2) vertical uprights evenly spaced between the sub-frame rails and attached to the rear cross member. Two (2) support bars, one (1) located on each corner, must angle upward and be welded to the rear sub-frame side rails. (See the Construction Guidelines in the rear pages of the Rule Book)
- (5) Weight containers, if used, must only be attached to the inside of the frame rails and must not be lower than the bottom of the frame rails.
- (6) The back of the rear sub frame from the center line of the rear end may be mitered to conform to the rules stated above. This is the only mitered section allowed, excluding the front radiator support.

C. FRONT SUB-FRAME- All vertical (height) dimensions listed are measured with the frame at 5" ride height at all 4 corners. The front sub-frame must be constructed by the following guidelines.

- (1) A GM-METRIC type front steer tubular front sub-frame must be constructed using two (2) inch wide by four (4) inch high magnetic steel tubing with a wall thickness of meeting ASTM A-500 specifications. The front sub-frame rails must be parallel to each other both vertically and horizontally. The front sub-frame rails must be parallel both vertically and horizontally to the

mainframe rails from the Stock OEM shock hole location forward. All front steer assemblies must maintain a dimension of 31 inches from the center of the left side frame rail to the center of the right side frame rail at a point from the Stock OEM shock hole location extending forward in front of the steering assemblies. Spring bucket may be cut into left side and right side frame rails. Top of spring buckets will maintain a vertical height of $15 \frac{1}{4}$ (+/-) $\frac{1}{2}$ inch. Stock OEM shock hole location will maintain a centerline distance of $33 \frac{1}{2}$ (+/-) $\frac{1}{2}$ inch measured at top of spring bucket from left side to right side and be located equal distance from centerline left and right. Note: a measurement and angle for the upper A-frame mounts will soon be inserted. A distance of 21 inches (+/-) $\frac{1}{4}$ inch must be maintained from the front frame kick-outs forward to the Stock OEM shock hole location centerline. The front sub frame rails may angle outwards and downwards from the Stock OEM shock hole location to the front frame kick-out to a maximum distance of 41 inches. If frame rails are angled outward, a wishbone made from round magnetic steel seamless tubing $1 \frac{1}{2}$ inch by .083 minimum wall thickness meeting ASTM A-519 specification must extend from dash bar #8 to an area at the rear lower a-frame mount and continue to connect at an intersection of roof support bar #12 and diagonal bar #7A extend rearward a distance of 34 inches then angle down 30 degrees to the front frame kick-out. The front frame extensions using two (2) inch wide by three (3) inch high minimum wall thickness of 0.083 inch magnetic steel tubing meeting ASTM A-500 specifications must angle out and forward and extend a distance of twelve (12) inches forward of the forward most top steering box bolt to a minimum distance of 33 inches from the center of the left side frame rail extension to the center of the right side frame extension. This forward top steering box bolt will be a horizontal distance of 39 inches from the front frame kick-out and a vertical height of 15 inches (+/-) $\frac{1}{2}$ inch. (Steering box bolt location will be inspected with a fixture that will read zero (0) degrees with the frame on six (6) inch ride height blocks). At a point four (4) inches in front of the top steering box bolt a two (2) inch wide by four (4) inch high magnetic steel tubing with a minimum wall thickness of 0.125 inch meeting ASTM A-500 specification must be a distance of $24 \frac{1}{2}$ (+/-) $\frac{1}{8}$ inch must be maintained to the center of an O.E.M. three quarter ($\frac{3}{4}$) inch pin boss located on the mainframe centerline at the front of the front sub-frame cross member. The O.E.M. pin boss will be used for locating inspection fixtures. The front sub-frame cross member must be mounted at the centerline of the front sub-frame at a 90 degree angle against the back of the $\frac{3}{4}$ inch pin boss and be constructed using two (2) inch high by four (4) inch wide magnetic steel tubing with a minimum wall thickness of 0.125 inches meeting the ASTM A-500 specifications. A minimum thickness of one hundred thousandths (0.100) 12ga. magnetic steel must be used to construct the remainder of the front sub-frame cross member. The front mounting points for the front lower a-frames must be constructed using a minimum $\frac{3}{16}$ inch thickness magnetic steel. The front mounting points for the front lower A-frames must be $9 \frac{3}{8}$ inches, measured from the centerline of the front sub-frame to the centerline of the mounting bolt at the front side of the mount and a vertical height of seven (7) inches (+/-) $\frac{1}{4}$ inch. The rear mounting points for the lower A-frames must be constructed using a minimum $\frac{3}{16}$ inch thickness magnetic steel. The rear mounting points for the lower A-frame must be 13 inches (+/-) $\frac{1}{4}$ inch measured from the centerline of the front sub-frame to the centerline of the mounting bolt at the rear side of the mount and the vertical height will be $6 \frac{7}{8}$ inches (+/-) $\frac{1}{4}$ inch. Adjustable insert slugs may be used on the rear mounting bolt to maintain a distance of 22 inches (+/-) $\frac{1}{2}$ inch from the center of the lower ball joint to the leading edge of the mainframe side rail and kick-out. A $\frac{1}{2}$ inch round by 15 inch long solid steel pin must pass freely through these points during inspection. When measuring either the right side or left side the distance from the centerline of the bottom ball joint to the centerline of the sub-frame must be equal. The mounting plates for the upper A-frames must be welded to the top of the sub-frame rails and be parallel with the centerline of the sub frame rails. A distance of 37 inches will be maintained from the top idler arm bolt centerline to the front frame kick-out with a vertical height of 14 inches (+/-) $\frac{1}{4}$ inches. The GM-METRIC tubular front sub-frame must weigh a minimum of 95 lbs. A bare

front sub-frame must be submitted to track officials for weigh in and approval. Front sub-frame must be acceptable to SMS Officials before it can be used in competition

NOTE: The tubular front sub-frame may not have jacking bolts, and the shock hole location and the upper a-frame mounting points will remain in the Stock OEM location. Approved Front Sub-Frames are: Johnson Chassis Part # JCI 09-01-011SS and Hamm's Welding Part # GHC-54108-D. The X-Y-G Stock OEM type front sub-frame and the rear clip are the only parts permitted. The center section frame rails must be Stock OEM rails.

20F – 12.1 COIL SPRINGS / SPRING MOUNTS / JACKING BOLTS- One (1) spring rubber insert, not to exceed one (1) full coil, acceptable to SMS Officials will be permitted on each spring. Only one (1) spring per wheel will be permitted. Progressive or digressive rate springs are not permitted. Any wrapping or binding of the coils will not be permitted. All upward and downward chassis movement must be limited by the spring's rate or the bottoming of the chassis against the race track. Any compression or rebound limiting device or procedure is not permitted. One of the ways SMS Officials will check for chassis travel limiting devices is as follows: With your car's front wheels rolled up onto 2×6 wood planks, the car's valence (air dam) must travel downward beyond the top of the wood plank (over-travel the ground) when three (3) crewmembers push down on it.

Front Coil Spring– Must meet the following:
Manufactured from round magnetic steel wire.
Consistent wire diameter from top to bottom.
May not exceed \$95 in retail advertised price.
All the coils must be active.
Maintain consistent spacing between coils.
8-1/4" to 11" in free height.
5-1/4" to 5-3/4" OD.

Rear Coil Spring- Must meet the following:
Each rear coil spring may not exceed 400 lbs in rate.
The spring will be checked for rate through several inches of travel, and must remain at the 400 lb rate (+/-) throughout the travel range.
Manufactured from round magnetic steel wire.
Consistent wire diameter from top to bottom.
May not exceed \$95 in retail advertised price.
All the coils must be active.
Maintain consistent spacing between coils.
Both coil ends closed and ground.
The closed ends of the coil spring must not have a gap larger than 1/8".
10" to 15" in free height.
4-3/4" to 5-1/4" OD.

20F- 12. 2 SWAY BARS

- A.** One Stock OEM swaybar may be used in the front and/or rear. The swaybar must be magnetic steel, one-piece, and can be no larger than 33 millimeters (1.299") in diameter. The swaybar must be used as it is manufactured. Modifications to the swaybar are not permitted. Front swaybar must mount under the frame, in the stock location, and attach to the lower a frames in their stock location.
- B.** Bump pad configurations are not permitted. Splined sway bars and arms are not permitted.
- C.** Rubber bushings may be replaced with metal bushings or eye/lollypop type mounts.
- D.** Heim joints (spherical rod ends) are not permitted.

20F- 12. 3 SHOCK ABSORBERS – One shock per wheel. Front and rear shocks must be a matched pair, matched left to right. Shocks must remain in Stock OEM location. Rear shocks may be placed on top of frame in original position (must use original mounting holes) with a 1.5” maximum length spacer. Listed below are the only approved shocks for GM cars.

Brand	Front	Rear
CARQUEST	64600	64604
KYB	KG-4513	KG-5548
Monroe SSF Series	N/A	12475-6-7-8
Monroe SensaTrac	5840	5802
Doetsch	0101	0102
AFCO	1020	1030
Bilstein	AK1043	AK1044
Pro Shock	SS-100	SS-201

For non-GM cars, you must use the same series shocks from the above list and obtain prior written approval.

20F- 12. 4 A-FRAMES

A. Upper & lower A-frames must remain stock OEM & unaltered for year/make/model. A-frames may not be changed from side to side.

The following upper a-frames are permitted:

*Stock OEM upper A-frames for the chassis year/make/model.

***Speedway Motors P/N 91031134L and 91031134R with steel cross shaft.**

***ALLSTAR P/N ALL57831 and ALL57830 with steel cross shaft.**

*UB Machine P/N 14-0809-5R and 14-0829-6L with steel cross shaft.

No modifications may be made to the upper A-frames.

The following lower a-frames are permitted:

*Stock OEM lower A-frames for the chassis year/make/model.

*X-Y-G aftermarket stock geometry replacement for chassis year/make/model.

*Hamm’s Welding P/N GHC-1425727 (L-R) & GHC-1425727-10deg.-R

*Johnson Chassis P/N JCI-9-02-001 (L-R) & the

The only modification permitted to the lower A-frame is the following: the flat surface of the right front ball joint helix may be cut and moved 10 degrees for ball joint bind clearance purposes only if a Chrysler screw-in type ball joint is used.

B. Lower ball joints may be replaced with “pressed-in” stock type extended lower ball joints in Stock OEM position or with standard factory Stock OEM production Chrysler screw-in type or standard factory Stock OEM production Chrysler screw-in type direct replacement ball joints in the stock location on the A-frames.

C. Rebuildable or serviceable ball joints are permitted. Adjustable and “mono” ball joints are not permitted. Ball joints must be stock appearing, heavy-duty magnetic steel construction and must be acceptable to SMS Officials. The ball joints must not have any adjustment with the exception of a free play adjustment in the housing for the ball and socket. The total length of the ball joint pin from the top of the ball joint housing to the top of the pin must not exceed 3.375 inches for both upper and lower ball joints.

D. Upper ball joints must be stock OEM. Shimming of the upper ball joint is permitted.

E. Only Stock OEM type steel , zero offset upper control arm cross shafts are permitted. Upper A-frame bolts may be replaced for added camber.

F. Upper & lower A-frames must use the Stock OEM rubber bushing or an aftermarket polyurethane bushing. Bushings must have zero offset (be concentric). Bushing hole location

may not be altered.

G. All A-Frame mounts must remain in Stock OEM location.

20F- 12.5 SPINDLES AND HUBS – *GM Metric or Camaro Stock OEM steel spindles must be used. The Coleman two piece steel stock Metric replacement safety hub # 16798 and rotor # 140-753, or the Camaro hub # 20651 and rotor # 130-750-2 are permitted (and recommended).*

No modifications are permitted to the spindle or hub assemblies. Low Drag components are not permitted. Two standard steel wheel bearings, a wheel bearing seal, a torque nut and a standard nut locking mechanism are the only components permitted on each spindle/hub assembly.

20F- 12. 6 TRACK WIDTH – Maximum track width measured outside the tire bulge at wheel center height is 72¼ inches. Metal wheel spacers are permitted to utilize the maximum allowable track width. The wheel spacers must be the same thickness left and right, however, the front and rear do not have to match.

20F- 12.8 WHEELBASE – GM Metric chassis or XYG must measure 108” +/- ¼”. All other chassis year/make/model must be +/- ¼” from factory listed wheelbase.

20F- 12.8.2 GROUND CLEARANCE – A minimum of six (6) inches of ground clearance must be maintained at all times measured at the lowest point of the frame rail. No part of frame, body, sheet metal or bumper may be lower than 6” from ground. All ground clearance requirements are with the driver in the car.

20F – 12.9 BODY HEIGHT – Minimum height for the roof is 51” at the roof centerline measured 8” back from the windshield/roof seam.

20F- 12.11 WEIGHT TRANSFER DEVICES – The only weight transferring device permitted is a mechanical jacking bolt. The jacking bolts are permitted on the rear springs only. Upper rear spring perch may be trimmed only enough to accommodate new pocket. Ratchets and extensions must be removed from jacking bolts before the car is moved.

20F- 13 STEERING COMPONENTS

A. Stock steering shaft length must be maintained. Tilt steering wheel assemblies are not permitted. A collapsible steering shaft is highly recommended.

B. Stock steering pumps and boxes may be interchanged from different years/makes/models.

C. Aftermarket steering pumps are permitted.

D. Remote reservoirs are permitted.

20F- 13.1 STEERING WHEEL – A NASCAR approved quick release steel coupling on steering wheel is mandatory. Center-top of steering wheel must be padded with at least 2” resilient material.

20F- 14 BRAKES – Stock OEM type brakes must be used (disc front, drum rear). Front calipers must be Stock OEM with correct bore size. Other brake components may be utilized from different year/make/models. The Stock OEM “proportioning” valve may be replaced with one aftermarket hydraulic adjustable unit. The aftermarket unit must proportion the front/rear bias only, and it cannot be accessible by the driver in the cockpit. Racing type brake pedals and master cylinders may be used. Master cylinder(s) must be single stage design. No bias adjusting units allowed.

20F- 14.2 – BRAKE COOLING – Brake “coolers” or “blowers” are not permitted. Additionally, “coolers” or “blowers” of any type are not permitted anywhere on the car.

20F- 15 FUEL SPECIFICATIONS

A. SMS has instituted an approval process for all racing fuel. The intent of this rule is to help control costs, to eliminate very expensive fuel blends and fuel additives, to prevent engine damage from untried concoctions, and to insure that the fuels used are available to all. Sunoco Race Fuel 260GTX is the only fuel permitted. The fuel may not be blended with any other fuel or additive. This fuel is available for purchase in the SMS paddock area. Several testing procedures will be utilized to insure the fuel is pure Sunoco Race Fuel 260GTX, with no additives. All fuel samples taken must exactly match all of the manufacturer's printed specifications or penalties may result.

B. Icing or cooling of the fuel system is not permitted anywhere on SMS property.

C. Fuel may be tested and certified at any event through the application of various chemical analyses as considered appropriate by SMS Officials. Fuel may be checked before, during and after racing events.

D. Nothing may be placed in the fuel line except a standard fuel filter. The use of any type of fuel catalyst or other fuel-altering device is prohibited.

20F- 16 FUEL SYSTEM – See SMS Late Model rule book

20F- 16.1 FUEL CELL – Must meet NASCAR specifications with a fuel cell bladder made of a material that returns to its original size and shape after deformation. Rotational molded bladders are not permitted. It is highly recommended that the fuel cell bladder be no more than six (6) years old. Competitor must provide bladder model, serial number and date(s) to SMS Officials before competing. If a gas cap is used it must be painted white with the car number on it for identification. For additional specifications see the NASCAR rule book. The minimum requirement for approved fuel cells at SMS are as follows: ATL Super Cell "100" FB1 – Series Bladders. (Note: the complete cell will be the SU1- Series), and the Fuel Safe Sportsman Cell (SM Series). Any cell that is rated above these cells (ATL 200 & 500 series), and the Fuel Safe Pro Cell (PC Series), will also be approved for competition at SMS.

20F- 16.2 FUEL CELL CONTAINER – See SMS Late Model rule book

20F- 16.3 FUEL CELL / CONTAINER INSTALLATION – Trunk floor may be removed and fuel cell container installed in the opening centered between the frame rails with a minimum 10-inch ground clearance with the car's frame set on five inch (5") high blocks under all four outer corners of the frame. If a reinforcement bar is installed per NASCAR rule book 20F-16.3 section H, the maximum distance permitted from the center of the rear axle to the center of the reinforcement bar is 37 ½ inches. For additional specifications see SMS Late Model rule book

20F- 16.4 FUEL FILLER / VENT REQUIREMENTS – See SMS Late Model rule book

20F- 16.4.1 FUEL FILLER – A twist in fuel filler cap assembly bolted from the inside of the left rear quarter panel and located in the side as high and as far back as possible or on top as far to the left as possible (but not in the deck lid) is permitted. See SMS Late Model rule book

20F- 16.5.3 FUEL SHUT-OFF – A ¼-turn fuel shut-off valve of minimum 3/8-inch NPT with minimum 4-inch handle is required in the fuel line. The fuel shut-off valve must be located 8-inches inboard of the passenger side frame rail's outside edge and 24-inches forward of the main roll bar (#1 bar). The fuel shut-off valve must be mounted securely to the underside of the driver's compartment sheet metal. The fuel shut-off valve shank must protrude through a maximum 1-inch diameter hole in the sheet metal to the interior of the driver's compartment. The fuel shut-off valve handle must be parallel with the sheet metal that the valve is mounted to. The fuel shut-off valve handle must be a minimum of 4-inches in length, red in color with a

minimum of 1-inch clearance from the sheet metal throughout its full travel. A minimum 6-inch by 6-inch square area must be painted white with the fuel shut-off valves ON and OFF positions clearly labeled with ½-inch tall, black in color lettering. The shut-off valve must rotate clockwise from the ON position with the handle parallel with the frame rail, pointing towards the rear of the car, to the OFF position with the handle perpendicular to the frame rail pointing toward the driver.

20F- 17. 4.1 OEM FRAME ROLL BARS – See NASCAR rule book. The following are additional requirements and clarifications for the installation of roll bars. All NASCAR rule book specifications must be followed. No plating of the frame. A maximum of 38.875 inches from the center line of the front lower ball joints to the centerline of the roll cage front legs (referred to as bar #2a & #2b) will be permitted. A maximum of 82.625 inches from the centerline of the front lower ball joints to the centerline of the main roll bar (referred to as bar #1) is permitted. The centerline to centerline of these two bars starting at the front roll cage leg must maintain a minimum measurement of 43 inches and a maximum of 45 3/8 inches. The main roll bar must be mounted vertical (90 degrees) on the center section of the frame with no offset or setback. The #1 bar must be centered to the chassis. The roof bar (referred to as #3) must be within 4” of the side window and/or door openings on both sides, as well as the front windshield. All roll bars must follow the contour of the body. The #2A & #2B bars must be no more than two (2) inches behind the length of the A-pillar in the stock location. Offset or set-back cages are not permitted.

20M -18 ROLL BARS X-Y-G Frame – Roll cage #1 bar must be located a minimum distance of 22-1/2 inches and a maximum 24-1/2 inches forward of the rear axle centerline. Roll bar #1 must be in the same location on the left side and Right side. SMS Officials may request an access hole be added or any obstructions be removed to acquire a straight line measurement from the back of roll bar # 1 to the centerline of the rear axle. The main roll bar must be mounted vertical (90 degrees) on the center section of the frame with no offset or setback. The #1 bar must be centered to the chassis. The roof bar (referred to as #3) must be within 4” of the side window and/or door openings on both sides, as well as the front windshield. All roll bars must follow the contour of the body. The #2A & #2B bars must be no more than two (2) inches behind the length of the A-pillar in the stock location. A diagram will be available for builders. Offset and/or set-back cages are not permitted.

NOTICE – Competitors are solely and directly responsible for the safety of their race cars and racing equipment and are obligated to perform their duties (whether as a car owner driver or crew members) in a manner designed to minimize to the degree possible the risk of injury to themselves and others.

NOTE: All vertical (height) body measurements are at ride height with driver in the car, and all vertical (height) frame dimensions are at ride height.

SPECIAL DARE STOCK RULES

HANDICAPPING – *Current season DARE Stock feature winners will not be posted to start higher than 5th position in any feature events (EIRI).* When there are “ties” in the Handicapped order, drivers will be placed according to their “wins”, the driver with more wins starting behind the driver with fewer.

YELLOW FLAG – CAUTION – Slow down as soon as possible. The pace car will pick up the leader. All cars go into double file behind the pace car immediately. You may not pit or go to the paddock during an event. Any cars pulling onto pit road during an event are considered out of the event and will no longer be scored unless otherwise advised by SMS Officials.

RACE DISTANCE – Regular feature races may be considered complete at 15 laps or the first yellow flag 20 minutes after the race start.

CONTINGENCIES– Contingency sponsors are a valuable part of the SMS program. Contingency stickers must be displayed for either product or monetary considerations. Each division will be notified as to what stickers are required to be eligible for contingency rewards. The sticker must be displayed on both sides of the car in such a manner as to be clearly visible in a photograph.