SUNOCO MODIFIED RULES Updated 2021

ANYTHING NOT COVERED BY THE FOLLOWING RULES MUST BE CHECKED WITH CHEMUNG SPEEDROME TECH OFFICIALS BEFORE PROCEEDING.

CHEMUNG SPEEDROME RESERVES THE RIGHT TO ADJUST ANY RULE FOR BETTER COMPETITION.

ALL CHEMUNG SPEEDROME MANAGEMENT DECISIONS ARE FINAL AND BINDING.

EVERY COMPETITOR MUST MAKE THEMSELVES AWARE OF AND FAMILIAR WITH THE TECHNICAL RULES IN THIS CLASS. EVERY INDIVIDUAL AGREES TO BE KNOWLEDGEABLE AND BOUND BY THE CONTENTS OF THE CHEMUNG SPEEDROME SUNOCO FUEL WEEKLY MODIFIED RULE BOOK.

TRACTION CONTROL: No traction control device of any type is allowed. Anyone caught with a traction control device, operative or not, will be suspended indefinitely and lose all points & money for the night & all points for the year.

- **1 - 3" inch spot mirror allowed inside driver's side window***

1. WEIGHT - All LEGANCY ENGINE cars minimum weight 2600 pounds with driver. Maximum 56% left side weight. Car must meet minimum weight after the race with NO ALLOWANCES (NO gas, No Oil, NOTHING). Absolutely NO weight shift devices of any type. Any car found to be under the minimum overall car weight allowance will be penalized one position for every pound under the minimum total weight.

TRACK SCALES: - Unless otherwise authorized by Chemung Speedrome, at all times during an event, all weights will be calculated on official Chemung Speedrome 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.

CHEMUNG SPEEDROME SCALES WILL BE FINAL!

BALLAST WEIGHT: - Added weight must be in block form. ballast weight must be securely fastened to the frame rails, be painted white and car number painted on each weight in a dark color. Material and mounting must be acceptable Chemung Speedrome. NO steel or lead pellets. NO weight is to be mounted in driver's compartment. Any weight that falls off during competition, the car & driver will be disqualified from the day / nights racing event(s).

2. 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 Chemung Speedrome. Number assignment is on a first come first serve basis, if the number is already taken you Will be required to change your number prior to racing, Chemung Speedrome will have final determination of the car number. all cars running the 602-crate engine MUST say "602 CRATE" on drivers side of hood.

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 tail light panel measured from the ground to

the spoiler mounting point. Minimum body height is 40 inches. Body height shall be determined by measuring.

NO MIRRORS or reflecting devices are allowed that would enable the driver to see the car behind/around them. This rule will be voted on at the beginning of each year.

APPROVED COMPETING MODELS**: -** Chemung Speedrome Sunoco Weekly Modified Series races are open to eligible 1980 through current year models of American made steel bodied passenger car production sedans.

BUICK Skyhawk
CHEVROLET Cavalier, Monte Carlo, Beretta, Corvette, Camaro

CHRYSLER Eagle, Talon
DODGE Avenger, Stealth, Daytona, Charger
FORD Escort, Mustang, Probe
OLDSMOBILE Firenza
PLYMOUTH Laser, Sundance
PONTIAC Sunbird, J 2000, Grand Prix
OTHER 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.

BODY'S MUST MEET THE FOLLOWING REQUIREMENTS: - Cars must be neat appearing. Aluminum may be used on the body, Steel must be used for the interior All bodies must be installed on frame in a manner acceptable to Chemung Speedrome. Window openings must remain stock appearing and must maintain the original manufacturers 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 is 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 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. 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. 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. The 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.

MISC. DETAILED CAR BODY REQUIREMENTS:

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. 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 rear of air dam. Horizontal or flat air deflectors must not extend past the outer edges of the front nose panel side walls.

HOOD: **-** 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. Roof must be stock for make and model of body used.

REAR SPOILER: **-** A solid rear spoiler of a minimum 1/4 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. Decals or logos will NOT be allowed on the rear spoiler. Maximum of two (2) one (1) inch wide adjustable supports are permitted on the front of the spoiler. A maximum of three (3) supports may be attached to the rear of the spoiler. The supports, front or rear, may be attached to the spoiler using a piece of one (1) by one (1) inch aluminum angle one (1) inch long. A maximum of 35 inches measured from the ground to the spoiler mounting point is permitted.

ROOF - All cars must be equipped with a steel or approved fiberglass roof. 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. 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 Chemung Speedrome 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.

All cars utilizing an approved fiberglass roof must install the (minimum) 1/8” thick aluminum anti-intrusion plate in the roll cage halo as described in the diagram. (diagram on last page of this document)

BUMPERS: **-** The bumpers and side rails must be rear of the car will be 48 to 50 inch flat and will be capped. Chemung Speedrome officials must approve alterations from 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.

SIDE RAILS: **-** All cars must be equipped with rear comer rails and side rails. All rails must be constructed using a minimum 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:

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.

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.

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 f

from center. Cars will NOT be permitted in competition without side rails.

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 to compete with missing Front, rear bumpers, rear comer rails and side bars.

Cars will NOT be permitted to compete with excessive body damage. (Excessive body damage to be determined by Chemung Speedrome)

3. FRAME / ROLL CAGE: - All construction must be safe, professional and acceptable to Chemung Speedrome.

ROLL CAGE: - 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 Chemung Speedrome approved. All Roll bar connections MUST be welded. There must be six posts 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. Bumpers and nerf bars must be built on 14 inch centerlines. Center of front and rear bumper must be at the center of tire height 14 inches. Bumper must be smooth and capped. Must have vertical bar in middle of front opening of windshield (minimum 1 inch O.D.)

FRAME: - **A minimum ground clearance of two (2) inches must be maintained on any part of the frame.** 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.

Side frame rails and rear kick up must be constructed with .090" minimum thickness meeting the ASTMA 500 specifications, and be a minimum of two (2) inches wide and three (3) inches high magnetic steel tubing. 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 drivers' 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.

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 radiused 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.

The front sub frame assembly must be constructed using a minimum 0.083-inch thickness meeting the ASTMA 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.

WHEELBASE: - The minimum permitted is 107 inches. When measuring the wheelbase, the allowable tolerance cannot exceed one (1) inch plus or minus on the other side. Wheelbase will be measured from the center of the front hubs to the center of the rear hubs.

TRACK WIDTH: - All cars must maintain the following track width requirements. A minimum front and rear track width of 82 inches and a maximum track width of 84 inches will be permitted. The track width will be determined by measuring the left outside wheel (rim) bead surface to the right outside wheel (rim) bead surface at spindle height. Aluminum or steel spacers will be permitted to utilize the maximum allowable track width. Spacers must be acceptable to Chemung Speedrome Officials.

4. SAFETY: -

BATTERY AND FUEL SHUT OFF: - A boldly 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.

A boldly labeled on/off master fuel shut of valve 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.

SEAT AND SHOULDER HARNESS: - All seats must be aluminum and have head rests or high back seat. Seat must be attached to roll cage and frame. Back of seat must be mounted to the roll cage. NO fiberglass or plastic

seats. Driver must use a racing 5-point restraint system with a minimum (3) three-inch quick release, with exception of the special HANS style neck restraint, shoulder belts and crotch strap, they may be (2) two inches wide. All safety belts must be no more than five (5) years old with no obvious damage or excessive wear, any belts deemed not safe by track officials will not be allowed regardless of age and they must have a readable identification tag. 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.

NECK RESTRAINT: - A HANS OR HUTCHINS head and neck restraints are mandatory. Other devices will need approval on a case by case bases.

FIRE EXTINGUSHER / FIRE SYSTEM: - All cars must have a working fire extinguisher in easy reach of the driver. On board, central fire extinguishing systems are highly recommended.

WINDOW SAFTEY NET: - Driver side net with quick release mechanism is MANDATORY. No plastic parts permitted. minimum 16 inches by 20-inch ribbon or mesh style, and must be mounted to roll cage so latch is at top front of window.

FIRE SUIT/ HELMET: - All drivers must wear a clean one piece SFI 3.2 drivers suit quilted and or with Nomex. Underwear, head socks, gloves, foot socks and shoes must meet SFI specifications.

WINDSHIELD - A single one (1) piece flat or radiused type polycarbonate / Lexan windshield must 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.

PADDING: - All roll bars and side bars or other protrusions that driver may come in contact with must be properly padded with approved race car roll bar padding.

TRANSPONDERS: - Transponders are mandatory. Transponder location, 12-18" behind right side rear wheel and no higher than 18". Transponder must have an unobstructed view of the racetrack surface. It is the driver's responsibility to be sure their Transponders is charged working. If your transponder stops transmitting during the race, your car will not be scored.

5. SUSPENSION: - All suspensions and related parts must be acceptable to Chemung Speedrome, any component deemed unsafe or unfair by use or design will not be allowed. Chemung Speedrome Tech Officials shall determine if the car shall be able to compete prior to removing the part / parts.

COIL SPRINGS - One spring per wheel. STEEL ONLY. Front coil over must mount to lower control arm. Strut bars will NOT be permitted for mounting of coil over. Coil over springs 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 - 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.

SHOCKS: - There shall be only one (1) shock per wheel. NO shock with a published racers net price greater than $350.00 U.S. currency will be permitted. Any shock to be approved must be available to all competitors. External shock absorber reservoirs will NOT be permitted.

A FRAMES / CONTROL ARMS: - When attaching upper control arms to the mounting plate, only standard type castor/camber shims or washers will be permitted.

SPINDLES, WHEEL BEARINGS AND HUBS: - the spindles, wheel bearings and hubs must be acceptable to Chemung Speedrome 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 wheel tethers and be secured in a manner acceptable to Chemung Speedrome officials. Oil filling of any spindles, wheel bearings or hubs is not permitted.

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

STEERING COMPONENTS: - Rack and pinion steering is 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. 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 Chemung Speedrome. Only metal or aluminum steering wheels are permitted. The power steering pump must be mounted and driven off the front of the engine.

BRAKES & BRAKE COMPONENTS: - 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. 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. Inline brake proportioning systems will NOT be permitted.

BRAKE COOLING: - One (1) air duct per wheel may be used for brake cooling. All scoops must be acceptable to Chemung Speedrome officials. 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. Screens and air ducts, from the opening to the brakes, must be acceptable to Chemung Speedrome officials. Brake fluid recirculating devices will NOT be permitted.

6. BATTERY: - Only one 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

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 Chemung Speedrome officials.

7. ENGINE COOLING SYSTEM: - 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.

RADIATOR: -The engine cooling radiator must remain in front of the engine. Radiator dust screens permitted. Radiator MUST be copper, brass or aluminum. Radiator installation must be acceptable to Chemung Speedrome. Radiator overflow pipe may be relocated and a minimum one (1) gallon overflow can. **NO Anti-Freeze**. Cooling additives are permitted.

8. DRIVE LINE:

NO MICROPOLISHING OR REM TYPE FINISES ALLOWED ON ANY DRIVE LINE COMPONENTS. Driveline consists of transmission, drive shaft & rear end.

TRANSMISSION: **-** Only standard production OEM type Muncie or T 10 manual three (3) or four (4) speed transmissions are permitted. May remove first gear and replace with spacer. 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. Chemung Speedrome reserves the right to have all cars use a final drive gear ratio within the limits set by Chemung Speedrome. Any method or transmission gear higher than 1.18 to 1 will NOT be permitted. The only high gear transmission ratio allowed will be 1 to 1. A forward gear and reverse gear 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 transmissions allowed. NO straight cut gears allowed.

RACING CLUTCH: - Must be disc / pressure plate design clutch assembly. NO coupler type / Dog clutch or direct drives. Multiple disc clutches are permitted, Minimum 7 1/4-inch diameter disc and using one (1), two (2) or three (3) disc design. magnetic steel discs only, pressure plates maybe Steel or Aluminum.

OEM CLUTCH: - Any single disc OEM production type clutch assembly, with a minimum 10 1/2-inch diameter steel hub disc. The disc clutch housing assembly or cover shall be made from steel or aluminum ONLY.

BELL HOUSING: - Clutch MUST be mounted inside an approved bell housing.

DRIVE SHAFT: - The drive shaft, universal joints and yokes must be magnetic steel. Only a one-piece magnetic steel drive shaft with a minimum outside diameter of two (2) inches and a minimum thickness of 0.090 inch or a minimum outside diameter of 2-1/2 inches and a minimum wall thickness of 0.065 inch 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.

REAR AXLE: - Aluminum or magnesium quick change center sections equipped with aluminum or magnesium side bells are required. Only steel axle tubes will be permitted. Quick change rear ends must have the gears in the rear of the quick change. Front loaders are not permitted. Ring gear must be 10 inches or larger. ONLY locked rear drive axle assemblies are permitted at all times during an Event. Limited slip differentials are NOT 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. If axle housing support bars are used, they must not have any method of adjustment. Chemung Speedrome reserves the right to specify the final drive gear ratio. 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.

DRIVE AXLES / QUICK CHANGE GEARS: - Steel drive axle ONLY, NO Aluminum or Titanium.

Aftermarket racing aluminum or steel spools ONLY, NO Titanium.

Steel Quick changes gears ONLY, No Aluminum or Titanium Gears.

9. FUEL AND FUEL SYSTEM:

Sunoco fuel will the official fuel for Chemung Speedrome. You MUST run this fuel. Sunoco purple 110 fuel will be sold at Chemung Speedrome. There will be no mixing of fuel and no additives added to the fuel. Fuel will be tested on a random basis. Any fuel not meeting track specs will be deemed illegal and you will be disqualified. All car owners in the Sunoco Mod class is required to purchase 5 gallons of the Sunoco 110 fuel each week. You need to make sure a receipt is given to you for your purchase. Your receipt will be numbered and a copy will be kept in your file. If you are found not to have purchased 5 gallons of fuel at the track each night you could lose all money and points for that night, and a fine may incur.

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 cell must be encased in a container of not less than 22 gauge magnetic steel. 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 cell 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 five (5) inches**. Fuel cell container must be secured by one (1) inch by one (1) inch by 0.065-inch minimum thick square steel tubing meeting the ASTMA 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.

Chemung Speedrome 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 VENT: - A 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. ONLY one (1) fuel line permitted from fuel cell to fuel pump. All fuel lines are subject to Chemung Speedrome 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. Chemung Speedrome 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.

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

10. WHEELS / TIRES:

WHEELS: - All 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. 12-inch maximum is recommended by most tire manufacturers. Any offset is permitted. Wide five bolt patterns OPTIONAL. Bead locks are NOT permitted.

LUG BOLTS AND NUTS: - Solid heavy duty 1/2 or 5/8-inch magnetic steel lug studs and standard one (1) inch hex by 1/2 to 5/8-inch-thick magnetic steel lug nuts. Lug stud threads must go through the full thickness of the wheel and nut on all four (4) wheels. NO aluminum or titanium Allowed.

TIRES: - Tires must be purchased only from the Chemung Speedrome. Only Hoosier 1070 tires will be used. Durometer of tires will be checked. The only approved durometer will be the Chemung Speedrome official instrument. A tire minimum softness may be declared at the beginning of a race event. Durometer readings may be taken after racing competition or in the line-up staging areas, **any tire not meeting the specification will be determined illegal. The Car shall be disqualified and lose all points and money for the night, Fines and suspension may be incurred by both the Driver & Car Owner.** Tires found illegal will become the property of Chemung Speedrome. Any competitor purposely avoiding a Chemung Speedrome official by running through the dirt, water, taking extra laps around the track, etc.. will be determined to have illegal tires. 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. All decisions by Chemung Speedrome officials will be final.

SOAKING, SOFTENING OR TREATMENT OF TIRES IS NOT ALLOWED

NOTICE: A participant competing in any race at Chemung Speedrome agrees that he/she acknowledges it is illegal to soak or treat racing tires and that said soaking or treatment of racing tires is subject to disqualification from race, forfeiting of the event points and monies of that race, forfeiting all previous points earned that season and subject to suspension & fines, determined by Chemung Speedrome Officials.

11. ENGINE:

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. Engine minimum crankshaft center to ground clearance is 9 1/2 inches. The engine may NOT be tilted.

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.

ENGINE MOUNTS: - All engine mounts shall conform to the following requirements: Engine mounts must be reinforced and must be acceptable to Chemung Speedrome. All engine mounts MUST be securely bolted.

STARTER: - Car must have a self-working starter and must work at the beginning of the race. If car cannot start, it may be push started, any car push started shall start the race in the rear of the field.

(LEGACY) ENGINES

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.

Maximum engine displacement as follows:
1. GENERAL MOTORS 350 CU. INCHES
2. FORD 351 CU. INCHES – Anyone wishing to run a ford engine please see tech officials.

COMPRESSION LIMIT:

The **maximum compression limit allowed shall be 11.0 to 1 on any cylinder**.

Compression will be checked with a track approved whistler.

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). NO aluminum engine blocks
Bowtie Block # 124800474 allowed. Dart block part # 3116111 will be allowed.

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 of 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 weigh. 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. Centerline of crankshaft minimum 9 ½ inches from the ground.

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. NO de burring, de flashing, polishing abrasive cleaning or lightening. NO titanium, aluminum, max light aerospace alloy rods allowed. No Honda rods.

PISTONS: - Flat top or dished aluminum three ring pistons only. All three rings in place. Valve relief's may be machined in pistons. Any steel pin may be used.

CYLINDER HEADS: - Heads must be only 23 degree, unported cast iron, from listed manufacture.

NO G.M. VORTEC CYLINDER HEADS OR ALUMINIUM CYLINDER HEADS OF ANY TYPE.

Chevrolet – 492, 462, 461and 461x type heads will be allowed

Chevrolet – World casting #011150 –Angle plug, #011250 –Straight plug
Pro-action #2234 00000A – Angle plug, #2234 00000 – Straight plug
Pro-action #12320 – Angle Plug, #12319 Straight Plug
Ford #M 6049 N351, N352
GM Cast bowtie heads #'s, 10134392, 14011058, 14011034
Dart Iron Eagle Platinum Series
#10310010P – Straight plug bare, #10311112P – Straight plug assembly
#10320010P – Angled plug bare, #10321112P – Angled plug assembly

Maximum intake runner volume of 200 cc's. No porting to reach maximum runner volume. Manufacturers spec and intake runner CC size will apply on all heads listed. NO TOLERANCE.

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.

a. All valves must 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.
b. Valve must be solid stainless steel only.
c. Valve springs and push rods must be magnetic steel only.
d. Screw in studs allowed.
e. Roller rockers and girdles are allowed. No shaft rocker arms.

f. Chevrolet intake valve 2.020 exhaust valve 1.600.
g. Ford Windsor intake valve 1.844 exhaust valve 1.546.

h. Ford Cleveland intake valve 2.046 exhaust valve 1.546.
i. Ford #M 6049 N351 intake valve 2.020 exhaust valve 1.600.
j. Machining ½ inch under valve seat to complete valve job max. allowed. Machine cut only. No polishing or blending.
k. Heat risers can be filled.
l. Multiple angle valve job with valve centerline and guide angle in OEM stock location in relationship to the head.
m. No combustion chamber modifications.

n. No repositioning head on block. Stock location only.
o. No air directional devices.

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 appropriate 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, but must be parallel wound.

INTAKE MANIFOLD:

CHEVROLET EDELBROCK # 2101

FORD # M 9424 C358 EDELBROCK # 2181 EDELBROCK # 2750

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.

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".

Chemung Speedrome reserve the right to swap competitors intake manifolds at any time as part of their routine post-race tech process.

CAMSHAFT: - Flat tappet camshaft only. **NO** roller camshaft. **NO** mushroom or roller lifters. Lifters must be stock

diameter for the make of the motor (i.e.. chevy in chevy, ford in ford). No roller camshaft bearings.

TIMING CHAIN: - Any timing chain and/or gears may be used. Degree bushing and offset crank gear keys may be used. Gear drives may be used.

ROCKER ARMS: - Roller rocker arms permitted. **NO** shaft mounted roller rocker systems.

PUSH RODS: - Magnetic steel valve push rods only.

ENGINE LUBRICATION:

OILING SYSTEM: Internal oil pumps driven from the distributor are required. NO Drysump systems.

OIL PAN: Magnetic steel oil pans only.

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.

VIBRATION DAMPER / HARMONIC BALANCER: - Minimum diameter 6.25 inches. Fluid dampener is legal. Stock type steel or cast iron. **NOT** to be machined or altered in any wal

IGNITION SYSTEM / DISTRIBUTOR: -

a. Battery operated ignitions only. Stock type point distributor or electronic ignition allowed. No ignition boxes or multi-spark systems. Aftermarket coils must fit in stock location. May use aftermarket H.E.I. stock replacement type distributors. MSD H.E.I. # 8365 permitted.
b. Adjustable timing controls are not permitted.
c. Retard or ignition delay devices will not be permitted.
d. Accessories to regulate the power supply are not permitted.
e. The tachometer wire must run from the distributor to the tachometer. 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 tachometer.
e. The Vacuum advance unit may be removed or replaced with a manual non-electronic timing adjuster that does not extend more than two inches beyond the distributor housing.

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.

CARBURETOR: - Unaltered Holley #4412 500 CFM only. NO HP carburetors allowed . 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. Alternations 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.

Chemung Speedrome carburetor checking tools shall be final.

CARBURETOR ADAPTOR PLATE / SPACER: - Only one solid spacer made of aluminum or phenolic of a maximum height of one (1) inch permitted. Only one .075 - .100 maximum gasket per side. NO wedge shaped mounting surfaces, both top and bottom surfaces must be parallel. Spacer must have 2 holes maximum size 1.750 straight bore and match the base of carburetor (no tolerance on 1.750 diameter, must be no more than 1.750 diameter HOT or COLD). No air flow modifications.

CARBURETOR THROTTLE LINKAGE: - All linkage must be mechanical type. NO cable type. (2) two return springs are MANDATORY. Toe strap MANDATORY.

AIR CLEANERS AND AIR FILTERS: - **MAXIMUM OF 5 INCHES IN HEIGHT.** All air must be filtered through the element. Top of the air cleaner must be solid with NO holes. 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 air filter, or inside air filter to redirect air into carburetor. The filter base must have a minimum round opening of 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 ARE NOT Allowed. Only paper air filters will be allowed.

12. EXHAUST SYSTEM - THIS SECTION ALPPLIES TO BOTH LEGACY MOTORS AND 602 CRATE MOTORS

HEADERS: - 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 merge. NO pyramid. No Try y or similar style collector permitted. NO exhaust pipes allowed in 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 muffler (officials reserve the right of reject improper mounted exhaust systems).

MUFFLERS: - No car will be allowed to race without mufflers. No modifications of any type allowed to the muffler. The ONLY legal mufflers will be: Lobak part #'s 30 12 30, 35 12 35 3" or 3 ½" inlet/outlet with 12" body, Kooks #R300-10 or Kooks Stafford Spec #R35-35-10. . 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.

MUFFLERS WILL BE MOUNTED WITH THE ID NUMBER FACING UP FOR EASY INSPECTION

MUFFLERS MUST BE REMOVABLE FOR INSPECTION.

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

13. 602 CRATE MOTORS

GENERAL ENGINE REQUIREMENTS: - Only the GM Performance Factory Sealed Circle Track Crate Engines will be allowed to compete.

The GM part number 88869602 factory sealed circle track "602" crate engine is the only engine permitted. This engine has the "Bottle Cap" style seals, and will be the only engine allowed in competition. This engine requires specific changes made to it to compete, Any service work requiring the removal of any seal bolts must also be scheduled with, and approved by Chemung Speedrome Officials before the seal bolts are removed. Tampering

with seals will result in penalties and loss of eligibility of the engine to compete in the division. All engines must be sealed and documented to compete at Chemung Speedrome. All of the parts specified and/or that come stock OEM on these engines must remain as delivered, with no modifications or alterations of any kind.

CARBURETOR: - A Holley four-barrel model #0-80541-1 650 cfm 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 4150/4160 series. Polishing, grinding, resizing or reshaping of part or orifice is not permitted. The body, base plate, metering block, and bowl must be a standard Holley 0-80541-1 650 cfm part, OEM type gaskets, jets and power valve must be used. The diameter of every hole in carburetor must pass the standard Chemung Speedrome pin and tooling gauges as part of our routine tech process.

a. Body of carburetor and metering block: No polishing, grinding or reshaping of any part. Drilling of additional holes or plugging holes is not permitted.
b. Boosters may not be changed. Size or shape must not be altered. Height must remain standard. NO epoxy allowed for securing boosters.
c. Venturi area must not be altered in any manner. Casting ring must not be removed.
d. 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.
e. Base plate must not be altered in shape or size.
f. Butterflies: They may not be thinned or tapered. The Butterflies must remain as manufactured and must maintain the Holley production tolerance thickness. Idle holes may be drilled in butterflies. Screw ends may be cut even with shaft, but screw heads must remain standard.
g. Throttle Shaft must remain standard and must not be thinned or cut in any manner.

CARBURETOR ADAPTOR PLATE / SPACER: - One spacer ALLOWED and must be Canton part # CAN85-160 **ONLY**. Only one .075 - .100 maximum thickness gasket per side. NO modifications to the spacer are allowed.

CARBURETOR LINKAGE: - Throttle linkage must be mechanical type. **NO** cable types. (2) two return springs are **MANDATORY**. Toe strap **MANDATORY**.

Chemung Speedrome carburetor checking tools shall be final.

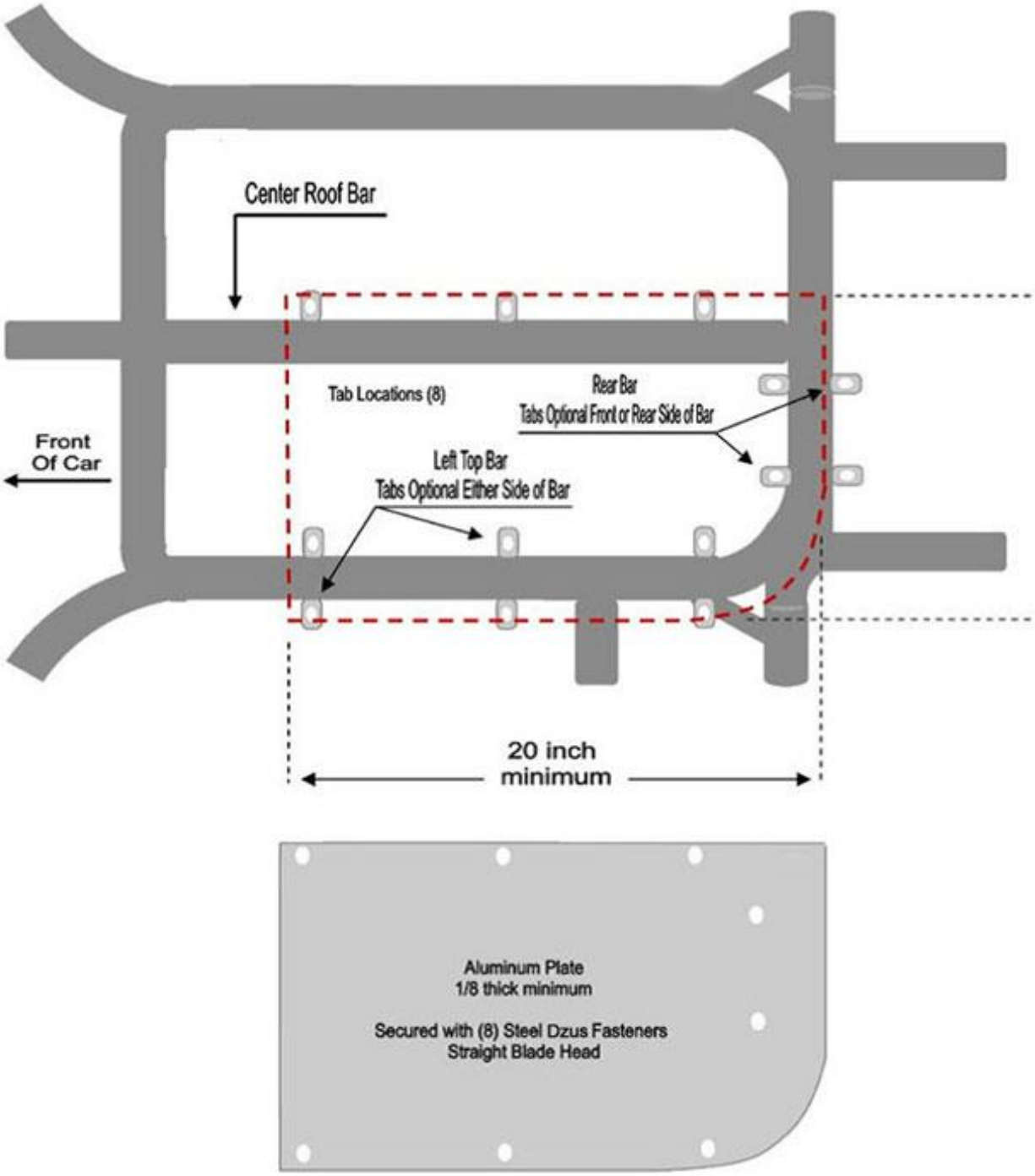
IGNITION SYSTEM: - Stock ignition system that is supplied with the 602-crate Engine only. Engine must retain stock firing order.

ALTERNATOR: **-** A functioning 12-volt single alternator system with an internal voltage regulator and one (1) output wire must be used. External voltage regulators are not permitted. The alternator must be mounted on the front of the engine. Any type of pulley style will be permitted.

ENGINE CHANGES: - To run the "602" engine you must change the oil pan and pickup tube. These changes must be done for ground clearance reasons. See the following for the part numbers needed.

Oil Pan: Champ Pan # CP106KORB With pickup # 1011SB OR
Canton Pan # 11-102T With pickup # 20-032

These are the only brand and part numbers that will be allowed.


Center Roof Bar
Tab Locations (8)
Rear Bar
Tabs Optional Front or Rear Side of Bar
Front
Of Car
Left Top Bar
Tabs Optional Either Side of Bar
20 inch
minimum
Aluminum Plate
1/8 thick minimum
Secured with (8) Steel Dzus Fasteners
Straight Blade Head