



REGULATIONS AND SPECIFICATIONS FOR THE 2017 NORTHERN REGIONS MOTORSPORT GTA V8 SUPER SALOONS CHAMPIONSHIP

MSA NORTHERN REGIONS MOTORSPORT CIRCULAR NR 09/17 (160953/144)

1. CONTROL

These regulations are drafted by the Super Saloons technical committee in consultation with the series sponsors and drivers for final approval and publication by MSA. MSA shall have overriding authority in respect of all aspects of the championship series. Clubman's Association Super Saloons shall be responsible for the normal administration of the series, subject to the aforementioned. All dispensations issued previously have been cancelled.

2. DEFINITIONS

- 2.1 Super Saloon V8 Supercars are cars which comply with these regulations and the term may not be used for any other car competing under the control of MSA.
- 2.2 The Technical Committee will be responsible for determining the eligibility of vehicles as described in paragraph 3 and the application of the control parameters outlined below in paragraphs 2.2.1 – 2.2.4.
 - 2.2.1 Base weight.
 - 2.2.2 Intake restrictor size. 2.2.3 Engine rev limited. 2.2.4 Number of tires per event.
- 2.3 Series Production Super Car – are cars with two (2) or four (4) doors manufactured in numbers exceeding 1000 unit per annum including all model variations.
- 2.4 "Wheels" – comprise of the rim and tire assembly.

3. ELIGIBILITY OF CAR

- 3.1 Prior to the first race in the 2017 championship series, or subsequently during the series for new cars or new competitors, each competing vehicle will be subject to an inspection, which will cover general compliance, safety requirements, finish and appearance. This inspection will be carried out by the Super Saloon Technical Committee. Successful completion of this inspection will result in the issue of a logbook, without which the car cannot be raced in the series. Subject to 14 days notice in writing, this logbook may be withdrawn if the standard of turnout of the vehicle falls below the acceptance limit.
- 3.2 The engine must be a product of the corporation of the make of car being used in competition. The engine must have an Engine Acceptance Document (EAD) issued by Super Saloons prior to competing in the series.
- 3.3 The engine must be based on a series production car V8 engine. Maximum capacity for 8 cylinder 2-valve engines is 6 litres and 8 cylinder multi-valve engines are 5 litres. Turbocharged and/or supercharged engines are prohibited.
- 3.4 Cars must be constructed using a body style the same as that of any series production GT (Grand Turismo) two door coupe or GTS (Grand Turismo Sport) four door sedan car produced anywhere in the world.
- 3.5 Chassis must conform to basic design, technical and safety parameter as specified by Super Saloons. Technical drawing and specifications must be submitted to Super Saloons for approval. Only chassis builders approved by Super Saloons will be permitted to construct chassis eligible for the series.
- 3.6 Manufactures models and body styles eligible for the series in 2017 must be approved by Super Saloons
- 3.7 Commercial vehicles are not eligible. 3.8 GT and GTS cars eligible for an invitation class will be determined by Super Saloons

4. MODIFICATIONS

4.1 General Specifications the intent of the following regulations is to maintain the recognizable external features of the manufacturer's model while providing the necessary safety and performance modifications.

4.2 Chassis

4.2.1 Chassis configuration will be full-frame, providing all suspension mounting points, front engine, rear-wheel drive and front-wheel steering. The chassis must be completely constructed of steel tubing. The use of monocoque or semimonocoque construction is prohibited. The chassis must incorporate a full roll cage, including driver side impact bars. The roll-cage must be a fully welded, integral part of the chassis. Carbon fibre, composite type materials are not permitted in any structural components. The floor in the driver/passenger compartment must remain flat and horizontal, relative to the car and rocker panels. It may not be curved, angled or recessed and must be made of steel and/or aluminium only. The driver/passenger floor shall be flat between the trailing edge of the front wheels and leading edge of the rear wheels and be flat across the total width of the car as raced. The floor of the car from the leading edge of the rear wheels must be flat across the total width of the car but may be angled upwards to meet the lower section of the rear bumper.

Dimensions and Specifications: Chassis base main frame rails: Minimum 44.5 x 44.5 x 2.0 mm square tubing or 40.0 x 60.0 x 2.0 mm rectangular tubing. Chassis upper main frame and vertical elements: Minimum 44.5 x 44.5 x 1.6 mm square tubing. Roll cage main frame: Minimum 44.5 x 2.0 mm or 50.8 x 1.6 mm round tubing. Roll cage secondary elements: Minimum 32.0 x 2.0mm or 38.0 x 1.6 mm round tubing. Driver's side impact bars: Minimum 32.0 x 2.0 mm or 38.0 x 1.6 mm round tubing. Maximum wheelbase – 2625 mm. Maximum width measured at the wheels – 2050 mm. Maximum overall body width – 2060 mm. Minimum height of roof from road – 1150 mm.

4.2.2 Cars must weigh a minimum of 1240 kg including the driver. For weighing purposes competitors must be seated in the car, with seat belts fastened, and the required race wear must be worn. Cars will generally be weighed after each race but they may also be weighed at any other time at the discretion of the Technical Consultant.

4.2.3 Front bumper fitment dimensions: The centre line of the front wheels to the leading edge of the splitter may not exceed the following dimensions: Chevrolet Corvette cars: 1140 mm Ford Mustang cars: 1130 mm Jaguar: 1080 mm Ford Falcon: 1240 mm Chevrolet Lumina cars: 1240 mm 4.2.4 A front diffuser may be fitted with a single element on either side of the front splitter. The maximum allowable height from the bottom face of the splitter to the upper edge of the ramp may not exceed the following dimensions:

Chevrolet Corvette: 200 mm

Ford Mustang: 200 mm

Jaguar: 200 mm

Ford Falcon: 170 mm

Chevrolet Lumina: 170 mm

4.3 Fire Walls There must be a firewall between the engine compartment and driver compartment, made of steel and/or aluminium.

4.4 Bulkheads There must be a steel and/or aluminium bulkhead separating the driver compartment from the compartment containing the fuel tank cell. All interior panels may be made from aluminium or composite material.

4.5 Bodywork

4.5.1 SAMCAR approved bodywork:

2002 – 2004 Chevrolet Corvette C5 2005 – present Chevrolet Corvette C6

1999 – 2004 Ford Mustang

2005 – present Ford Mustang

2008 Jaguar XKR

2008 – present Jaguar XKR ,
present SAMCAR Chevrolet Lumina
present SAMCAR Ford Falcon

SCM will be the approved body supplier for the SAMCAR Chevrolet Lumina and Ford Falcon. Competitor wishing to use a different body style must obtain prior approval from Super Saloons.

- 4.5.2 The external shape of the body cannot be changed except where specifically authorized. The original roof line from and back window angle must be maintained within $\pm 1^\circ$ tolerance when the racecar and a standard road car are compared. The original silhouette front bumper to grill to bonnet to front windshield to roof and back window to boot lid to rear bumper must be maintained. Passenger compartment door windows must remain open. No poly carbon windows may be fitted. Both passenger and driver windows must remain open at all times during a race or practice. The only deviation of the silhouette will be to allow a power bulge in the bonnet to accommodate the air cleaner housing. The overall length of the car must conform to the approved bodywork specifications for the model plus the front spoiler allowance of 100 mm. The measurement from the centre line of the front axle to the leading edge of the spoiler will be specified by SAMCAR. Wing extensions must completely cover the wheels as viewed from above and may not confuse the identity of the car. Cars must have the original tail lamps and radiator grill or sticker replicating the original radiator grill and headlamps and front indicator units, either original, replicas or stickers replicating the original headlamps or indicator units, must be in place but need not necessarily be functional. Templates may be used to check body profiles.
- 4.5.3 The fitting of a front spoiler is permitted. The front spoiler must be of the air dam type, and must follow the shape of the front bumper as viewed from above. The front spoiler may not protrude beyond the bumper line by more than 100 mm at any point or extend sideways beyond the front wing extensions. The front spoiler under tray must be flat and horizontal to the driver/passenger floor. The front spoiler extensions cross sectional measurement from the under tray to the upper surface may not be less than 20 mm. The front spoiler under tray may have a 50 mm radius blending into the front inner wheel arch. The radiator air intake duct, brake cooling ducts and engine air box ducts may be located in the front spoiler below the bumper line, providing that the total air entry area below the bumper line does not exceed 2000 mm². The ramps which run from the upper surface of the front spoiler extensions and blend into the wing extensions are permitted, providing the area between the ramp and the spoiler extensions is enclosed. The upper surface of the ramp may not have any side fences. No additional wicker plates or gurney tabs are permitted on the front spoiler.
- 4.5.4 The fitting of a rear wing is permitted and must be mounted so as to comply with the following: The highest point of the wing, excluding the end plates, may not be higher than the roof of the car. The maximum width of the wing (endplate to endplate) may not exceed 2050 mm. The trailing edge of the wing, excluding the end plates, may not extend rearward beyond 1165 mm behind the centre line of the rear axle.
- 4.5.5 The fitting of a rear diffuser is permitted. The fitting of the rear diffuser will be a controlled diffuser. The fitting of a rear diffuser is optional. The Super Saloon approved diffuser may extend the rear bumper of the Corvette by 100 mm. On all other cars the diffuser upper point must be flush with the rear bumper.
- 4.5.6 The ducting of air to the air cleaner on the Corvette will be via a duct 30 mm below the split of the bonnet to the front bumper. The template for this cut out is available from Super Saloons.
- 4.6 Jack Points The installation of on-board jacking systems is permitted.
- 4.7 Towing Eyes all cars must have permanently installed towing eyes, one front and one rear, to be used for flat-towing the vehicle. These towing eyes must be easily accessible without removal or manipulation of bodywork, and must remain within the perimeter of the bodywork when viewed from above. Front-facing towing eyes may be attached to the roll cage on the roof of the car due to the light manufacture of the front bumper frame.

- 4.8 Fuel Tanks/Cells A safety fuel tank/cell must be located behind the rear axle. Proper bracing is required to protect the fuel tank/cell in the event of a rear end crash. All fuel caps must have a minimum of a 3 mm hole in the cap and a bracket attached to the tank or filler pipe to facilitate the lock-wiring of fuel caps.
- 4.9 Suspension – General Suspension shall be coil over design. Titanium springs are prohibited. Suspension mounting points shall be incorporated in the chassis framework. Suspension components shall be heavy duty, reinforced, modified or racing design. Any device that permits changing the cars ride height during competition is prohibited. Hubs, bearings, spindles, axles, u-joints, and rod ends must be heavy duty or racing type. Aluminium spindles or rear axle tubes are not permitted. Active suspension systems, driver or computer controlled shocks and ASSR traction control are specifically prohibited.
- 4.10 Front Suspension Only basic double wishbone type front suspension, incorporating coil over shocks may be used. The coil over unit must act directly on the lower control arm. The maximum length of the front element of the lower control arm measured from centre to centre of the rose joints, may not exceed 500 mm. The front upright must be a fabricated component constructed from sheet steel and tubing welded together.
- 4.11 Rear Suspension Only basic type live solid axle, three or four bar link, with parallel radius rods, coil over shock with lateral location by watts linkage is permitted. The radius arm lengths, measured from centre to centre of the rose joints, may not be longer than half of the wheelbase.
- 4.12 Anti-Roll Bars one front and one rear anti roll bar are permitted. The anti roll bar must act directly on the upper or lower wishbone or rear axle housing using a simple pushrod system. Cars may use cockpit adjustment for the front and rear anti roll bars.
- 4.13 Shock Absorbers Shock absorbers are a controlled component and only PENSKE 7300 plus 8100 and 8300 series shock absorbers and canisters including series 8660 canisters are eligible. PENSKE 8300 series shock absorber will use the matching canister part number P-PS-8300-CD PENSKE PS 8760-RM canisters may be used but will carry no weight penalty. Only four shock absorbers are allowed per car. Shock absorbers may have one remote canister per shock absorber. Shock absorbers may have any form of spring seat adjustment. Damping Adjustment: Shock absorbers may have dual adjustment facility allowing simultaneous or individual adjustment of bump and rebound. The shim stack and gas pressure settings are unrestricted. Shock absorbers may only be fitted with one of the PENSKE pistons as listed below: Linear/Linear Part Number: PI-1100 PI-1200 PI-2100 PI-2200 Linear/Digressive Part No: PI-DL00 PI-oo5-1DG VDP piston Part Number: P1-VP5 P1-VDPL55 2 degrees P1-VDPL55 1 degree
Cars may use BILSTEIN shock absorbers: Linear/Linear Part Number: B46-BRK Linear/Digressive Part Number: B46-V38 Digressive/Digressive Part Number: B46-699A (Either face of this piston can be used for rebound or compression face) Digressive/Digressive Part Number: B46-7028A (Either face of this piston can be used for rebound or compression face)
Locally produced KW Shock absorbers may be fitted.
- 4.14 Engine Mounts the engine must be located along the centre line of the chassis, within 25 mm. The crankshaft centre line to ground measurement must not be less than 190 mm. The position of the engine rearward relative to the centre line of the front axle may not be more than 50 mm from the face of the foremost cylinder head.
- 4.15 Propshaft Only a heavy duty one-piece steel propshaft is permitted. A minimum of one steel 'loop' is required, located within 300 mm of the front universal joint to contain the propshaft in the event of a U-joint and/or propshaft failure.
- 4.16 Rear Axle Only live solid axle, utilizing steel banjo housing is allowed. Aluminium tube axle housings are not permitted. Only Detroit-locker differentials will be permitted. Final drive ratios are restricted as follows: Eight cylinder two valve engines: 3.89 3.70 3.50 3.25 4.1 Eight cylinder multi-valve engines: 4.11 3.89 3.70 3.7 3.5-0
- 4.17 Brakes the braking system is free except for the following:

- 4.17.1 Separate master cylinders front and rear are required and must be operated by a single brake pedal.
- 4.17.2 Brake calipers are free or restriction but are limited to one unit per wheel.
- 4.17.3 Non-metallic brake discs are not permitted.
- 4.17.4 ABS anti-lock systems are not permitted
- 4.17.5 Ducting of air is the only type of cooling permitted
- 4.17.6 Parking brakes are not required.
- 4.17.7 Brake lines must be steel tubing or metal-braided hose.
- 4.17.8 Brake balance is restricted to adjustment by the driver of a pedal box balance bar and inline pressure restrictor control

5 WHEELS AND TYRES

Supplier of Hoosier/ Goodyear tires will solely be Tirace CC. Wheel rim diameter must be 16 inches. The supply of racing tires will be controlled by Super Saloons and supplied to competitors as the 2017 Super Saloon tire schedule. Race tires Competitors must use the new tires allocated for the event in official practice and both races. In addition any previously marked race tires may be used at an event. Only marked race tires may be used for official qualifying and all races. If a driver does not take part in official qualifying or race in heat 1 or heat 2 at an event, the driver will carry the tyres allocated forward to the next race meeting. When required, wet weather tires may be used for official qualifying and all races. Practice Tires: Practice tires may be purchased from Tirace.

Wet Weather Tires: Four wet weather tires per season may be purchased from Tirace at the discretion of the competitor. General: Replacement of damaged tires will be at the discretion of the Super Saloon technical consultant. All tires must be submitted to the designated tire scrutineer for marking prior to the start of qualifying. Any car found to have an unmarked race tire or tires on it during qualifying or the race/s, will be excluded from all results for the event.

Control tire sizes:

Front Hoozier 25.0 x 13 x 16 Compound R45B/R35

Rear Hoozier 27.0 x 14 x 16 Compound R45B /R35

Goodyear tyres front 25.0x13x16 Compound R430

Goodyear tyres rear 27.0x14x16 Compound R430

Filing, buffing or any other disguising of the tire sidewall is prohibited. Tire warmers, chemical treatment or any means to artificially enhance tire performance is prohibited.

The "Club Challenge" Class GTAM run in conjunction with Class GTA will be restricted to Hoosier Tyres

6. Gearbox

Four forward speeds and a reverse gear. The gearbox must be mounted directly on to the engine via a bell housing/adaptor assembly. This bell housing/adaptor assembly must not exceed 200 mm in length. The Super Saloon control sequential shift mechanism is permitted. Super Saloon approved transmission JERICO Transmission ratios are controlled and only a final ratio as specified may be used. 1st Gear Ratio 1.63 2nd Gear Ratio 1.33 3rd Gear Ratio 1.13 4th Gear Ratio 1.1

7 ENGINES

- 7.1 The engine block must be of the manufacturer's production or a Super Saloon approved heavy-duty version. The block may be bored and or sleeved. Crankshaft main bearing caps may be substituted. No angled machining of the deck surface is allowed. Blocks must be of the same material as the production engine.
- 7.2 Crankshaft The crankshaft is unrestricted provided the angles of the crank throws remain the same as the production crankshaft. Minimum mass as per E.A.D.
- 7.3 Connecting Rods The connecting rods are unrestricted provided they are made of steel.

- 7.4 Pistons Any aluminium alloy pistons may be used.
- 7.5 Camshafts the position of the camshaft/s as well as the firing order must remain standard. The camshaft/s is a controlled component and only the camshaft/s specified in the E.A.D. is permitted. Any cam followers may be used. Camshaft/s operation may not include any mechanism to vary the valve timing.
- 7.6 Cylinder Heads The cylinder heads must be of the manufacturer's standard production or a Super Saloon approved replacement. Valves must be steel. Valve springs are unrestricted but must be conventional steel coil springs. Specification and standardization must be in accordance with the E.A.D.
- 7.7 Intake Manifold Intake manifolds for carburetted or fuel injected engines must be of the manufacturer's standard production of Super Saloon approved as per the E.A.D. and available to any competitor.
- 7.8 Dry sump systems are required. The oil pump must be mechanically driven by the engine.
- 7.9 Clutch and Flywheel The clutch unit is unrestricted but no carbon type clutches are permitted. The Flywheel must be manufactured of steel.
- 7.10 Exhaust manifolds are unrestricted providing the system terminates in a single outlet pipe.
- 7.11 Any fuel pumps may be used.
- 7.12 The water pump must be fitted in the standard position and mechanically driven by the engine. 7.13 The distributor must remain in the standard position and must maintain the same firing order as the factory produced engine.
- 7.14 Compression Ratio as per E.A.D.
- 7.15 Balancing and finishing of components are free.
- 7.16 The following components are not restricted: Rings, bearings, gaskets, bolts, studs, nuts, pulleys, belts, filters and spark plugs.
- 7.17 Fuel Injection Fuel injection will only be allowed on multi-valve engines. Fuel injection systems must utilize butterfly throttle control (no slide or radial throttles). All injectors must be mounted in the intake manifold with a maximum of 1 injector per cylinder. The throttle body butterfly diameters will be specified for each engine type in the E.A.D. Competitors using fuel injection systems must use the Super Saloon engine control unit (ECU).
- 7.18 Carburettor Engines are restricted to one Holley model 4150 series HP four-barrel carburettor. The maximum venturi diameter is 35 mm and the throttle bore 44.5 mm. The carburettor spacer may have a maximum thickness of 25.4 mm.
- 7.19 Ignition System Rev Limiter All engines must have a MSD ignition system or ECU providing a rev limiter facility. Cars with 2 valves per cylinder engines will have maximum RPM limited to 7000 rpm. Cars with multi-valve engines will be limited to 8000rpm.
- 7.20 Final control of engine performance will be based on the air intake restrictor system. The air intake restrictor size for each engine type eligible for the series will be indicated on the E.A.D.

8 OIL CATCH TANKS

Engines must be fitted with an oil catch tank so as to prevent spillage of oil onto the track. These catch tanks must be constructed of translucent material or be fitted with a translucent panel in order to gauge the contents and they must be empty at the start of the race. Minimum capacity is 4 litres.

9 RADIATORS

Radiators and cooling fans for the cooling of water, engine oil and transmission oil are free of restriction provided that the basic location of the engine water radiator is not changed. The ducting of air from the back of the water radiator is not permitted.

10 FUEL

Fuel must conform to the specifications as described in GCR 240. Competitors must use the Super Saloon control octane booster to increase the octane of the base fuel. Control fuel of the same brand

used by the competitor may be supplied by Super Saloon for use at a race meeting (official timed practice and race/s) during the course of the season.

11 EXHAUST

A gas-tight exhaust system must be fitted and must not extend more than 10 mm outside the bodywork and must not be directed at the floor of the car (i.e. it may not terminate in a position, which will cause fumes or excessive heat to enter the car). The exhaust may pass through the passenger compartment provided it is completely sealed from the passenger compartment by a tube or tunnel. The exhaust system shall be fitted with an effective silencer. The noise emitted from the system must not exceed 110 DB at 3500 RPM when subject to the test procedure as prescribed by MSA.

12 ELECTRICAL EQUIPMENT

The electrical equipment, including batteries, wiring and charging equipment, is free of restriction provided that:

- 12.1 The battery charging equipment must be operating at the start of the race.
- 12.2 The starter must be capable of starting the engine at the start of the race.
- 12.3 Brake lights must be in working order.

13 GENERAL

- 13.1 Any approved driver seat may be fitted.
- 13.2 A safety harness with a minimum of 5 mounting points must be fitted.
- 13.3 Any steering wheel may be used.
- 13.4 The dashboard is unrestricted and any instruments may be fitted.
- 13.5 The front windshield may be replaced with a polycarbonate (Lexan) material conforming to the stock windshield dimensions and of a least 5 mm thickness. The windshield below the bonnet line may be cut so as to provide clearance for mechanical components. Side and rear windows may be replaced with windows made of clear polycarbonate (Lexan) material of at least 2 mm thickness.
- 13.6 All windows must remain transparent over at least 75% of their area. The side window on the driver's side may be removed completely but it is recommended that a safety net be utilized.
- 13.7 Electrical cable and fluid pipes routed through the passenger compartment must be adequately insulated and meet the necessary safety requirements.
- 13.8 Data logging of car and driver performance is permitted. Any combination of the following specified parameters may be logged during unofficial practice, official practice, qualifying and during races. Engine: oil pressure – oil and water temperature – fuel pressure and temperature – exhaust gas temperature (maximum two cylinders) and single lambda reading – battery voltage – RPM. Transmission: Gearbox and differential temperature. Chassis: vehicle speed through GPS input – vehicle speed through input from single RPM – sensor mounted on the prop shaft – lateral, longitudinal and vertical G-forces – steering input – throttle position – front and rear brake line pressure – ambient temperature – barometric pressure – lap times.
- 13.9 All cars must have an on-board fire extinguishing system with a minimum capacity of 2 kg. Nozzle outlets must be located in the driver compartment as well as engine and fuel cell compartment. The extinguisher triggers must be identified with a red "E" or an approved fire extinguisher sticker and be accessible to both rescue personnel and the driver.
- 13.10 Provision for sealing of engines, transmissions and final drive for technical inspection: Engine – Cross-drilling of two intake manifold bolts and two oil pan bolts. Transmission – Two of the top cover bolts cross-drilled. Differential – Two centre portion to banjo housing bolts cross-drilled.