



Technical Regulations MSF Saga Cup 2022

Version 1.0
10 Apr 2022



Malaysia Speed Festival



TECHNICAL REGULATIONS – SAGA CUP CATEGORY

(The regulations are subject to change, which will be published via Additional Supplementary Regulations – ASR)

1. GENERAL

1.1. Eligible cars

- It being 4-wheeled production PROTON Saga or PROTON Saga Iswara car, below 1500cc. The chassis designation “LM”
- All variants and models of this particular vehicle are valid

Approval for entry is at the discretion of the Promoters.

2. SPECIFIC REQUIREMENTS FOR SAGA CUP CATEGORY

2.1. Defining what is a ‘Saga Cup’ category vehicle:

- Interior regulations based on the old FIA Group N regulations:
The interior of the vehicle includes the minimum items which would define it visually to a casual observer as a car which may be driven on the street with daily amenities, such as:
 - o Air-conditioning switches and blower switches;
 - o OEM full length dashboard with all listed panels including steering column cover and indicator stalks, switches, and centre console with gear shift cover;
 - o OEM Front door trim panels on both driver's and passenger's side;
 - o OEM glass all around
 - o complete list of interior items refer to paragraph 4 ‘Interior’.
- Equipped with a welded or bolted-in roll cage which compiles to MAM and FIA specifications, and is welded to the body and chassis at more than 6-points. The rollcage may be constructed to increase bodyshell rigidity with additional strengthening points to the pillars and suspension pick-up points.; refer to 5.1 for details.
- Suspension hard points may NOT be altered. Subframes may be modified as required but must be based on the original structure and engineering concept of the original subframe. If the subframe is modified beyond what would be acceptable for Street usage, will not be accepted.
- Organiser’s decision to accept or decline a car’s categorisation shall be final.

3. GENERAL MODIFICATIONS

3.1. Modifications made to the vehicle cannot compromise the safety or structural integrity of the vehicle.

3.2. Outline for modifications to Saga Cup category vehicles:

- Original OEM fuel tank is required, in the original location with original refuelling hose and orifice.
- An inboard FIA specification fuel surge tank is allowed:
 - limited to one 5-litre surge tank only.
 - Petrol lines inside the vehicle, if any, must be certified safety fuel lines.
 - A fire-proof bulkhead and/or protective cover and/or compartment must enclose the fuel pump.
 - A pre-event inspection and approval is necessary and if they meet the organisers safety standards, will be registered and approved. An appointment minimum 1-week prior to the event is required.
- Spare wheel well may be cut and covered. Cover must be metal and must be welded to the body. No plastic or ABS or composite material permitted.

3.3. Brakes

- OEM brake calliper & disc rotors must be retained.



- Brake Pads & Brake Hoses may be replaced with aftermarket items.
- Vented Front Discs & Rear Brake disc systems are not allowed.

3.4. Suspension

- Adjustable suspension top-mounts are not permitted. OEM-type front and rear suspension top mounts only.
- Original rubber suspension bushes may be replaced with hard rubber, polyurethane, and nylon material bushes. Mounting points must remain OEM and standard. Rose-joint / spherical bearing suspension components to replace the rubber bushes is not permitted.
- OEM suspension types, mounting points and location must be used. Aftermarket coilover types may be used.

3.5. Exhaust System

3.5.1 Exhaust system must exit with sideways or rearward-facing exhaust outlets.

If rearwards, the outlet/s shall be between 100mm and 450mm above the ground and shall not protrude more than 100mm beyond the rearmost portion of the automobile.

If directed sideways, the outlet/s must be located rearward of the midpoint of the wheelbase. In any case, they shall not project beyond the maximum width of coachwork /body when seen from above.

3.5.2 A muffler/s must be fitted, which are subject to particular examination by scrutineers.

4. INTERIOR

4.1. Interior of participating cars to be as such:

4.1.1. Fitted with OEM equipment as listed below:

- Air-conditioning and blower switches. Blower, compressor, condenser and evaporator may be removed.
- OEM dashboard required. To be presentable.
- OEM Front door trim panels on both driver's and passenger's side.
- OEM glass all around. Front windscreen is to be 2-layer glass.
- Passenger side front seat is not required

4.1.2 Fitted with OEM full length dashboard with all listed panels. Refer to diagram 2016a:

- Instrument Panel and cowling
- Steering Column cover and indicator stalks
- Centre console and switches
- Gear console and gear shift cover.

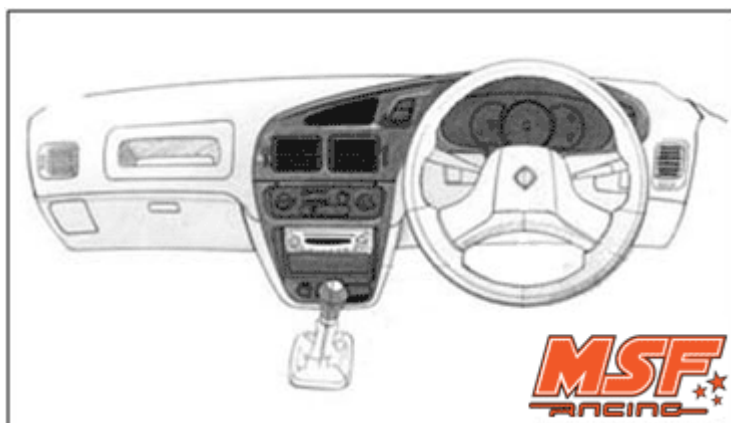


Figure 2016a

4.1.3 The following items may be removed:

- A, B, and C pillar trim
- interior trim from the rear of B-pillar and Front seats
- headlining
- carpet

5. SAFETY EQUIPMENT

5.1. Minimum requirement 4-point Safety cage must be installed.

- It must be secured at minimum four (4) points on the floor with secure bolts or welded plates.
Mounting points for the main hoop is the base of the B Pillar

5.2. Safety cage specifications.

Safety Cage Specifications. Only steel circular tubes are allowed for use.

5.2.1. Specifications are

Dimensions (mm)		Use
*Recommended	45 x 2.5 (1¾" x 0.095") or 50 x 2.0 (2.0" x 0.083")	• Main rollbar (A in Diagram 5-1)
*Minimum requirement	38 x 2.5 (1½" x 0.095") [CDS only] or 40 x 2.0 (1.6" x 0.083") [Mild Steel]	• Main rollbar (A in Diagram 5-1)

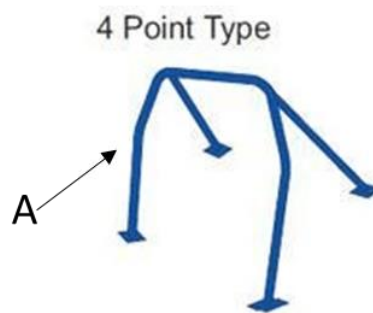


Diagram 5-1

5.2.2. Mount plates

Mount plate size: 80mm x 90mm

Mount plate thickness: 3mm

Reinforce plate thickness: 3mm

5.2.3. Welding: full welding around the diameter of the tubing. It is not permitted to grind or plate the welding.



5.3. Compulsory general safety items

- 5.3.1. Cut-off switches for electrical and fuel systems are compulsory with an external switch/lever. A sticker identifying the electrical cut off switch must be affixed near the switch.
- 5.3.2. Competition safety harness & Competition bucket seat is recommended.
- 5.3.3. A Fire Extinguisher must be fitted. Minimum is 1kg CO2 or Powder unit

5.4. Items in passenger compartment

- 5.4.1. Any battery placed within the passenger compartment must be of sealed Dry cell type. It must be installed securely within a secure box with lid cover.
- 5.4.2. Oil Catch tank within Engine bay must be of non-flammable material ie alloy or steel material
 - must be securely mounted
 - must be enclosed with no leaks or gaps
 - must have hoses that are securely attached
 - plastic bottles are not permitted.

5.5. General safety

- 5.5.1. No fluid leaks of any kind.
- 5.5.2. No loose items within engine bay.
- 5.5.3. Poorly engineered and poorly attached bars inside the cabin are not allowed.
- 5.5.4. Cache tanks, items, pumps, etc that involve lubricant and/or oil are not permitted in the passenger cabin of the cars, excluding items mentioned in 3.2 and 5.4.

6. BODYWORK

6.1. Composite material for certain bodyparts are allowed, all parts must still retain the OEM factory body look and style. Parts replaceable are

- Front Bonnet
- Rear Bootlid
- Front wings / fenders
- Front bumper
- Rear bumper.

Floorboard and any other part of the fundamental steel monocoque chassis body may not be cut and replaced with anything other than metal for the purposes of lightening.

6.2. Headlights and tail lights are ~~recommended~~ to be taped up.

6.3. All Tail/Rear lights must be functional. Brake Lights must be functional.

6.4. Front and rear Tow Hooks must be attached and Arrow Stickers in fluorescent Red must be affixed.

6.5. Bodywork modifications are not permitted to the front and rear wheel arches.

- Wheel arches need to be stock size and shape
- Tyres must not protrude beyond OE bodywork
- all OEM glass must be retained. Not permitted to change to perspex or acrylic
- welding to the bodyshell for strengthening and safety bars is permitted

7. DRIVER ATTIRE

7.1. Drivers are required to wear proper auto/motor Helmets. Minimum requirement is SIRIM Approved. No Bicycle Helmets allowed. It is highly recommended to use helmet which use double-D type strap fasteners.

7.2. Drivers are required to wear proper racing attire: Flame Retardant club-level Racing suit



complying minimum SFI 3.2A/1 and/or EN533. Similar Flame Retardant shoes and gloves required.

7.3. Use of Hand And Neck Restraint (HANS) device is recommended.

7.4. Prohibited to wear non-flame retardant suit or open-toe shoes.

8. POWERTRAIN

8.1. There is no maximum engine capacity restriction for this category.

- Original 4G1x engine block to be used, to be visually stock externally;
- No additional welding or plates permitted to be added on to increase bore or stroke, other than what may be contained within the original engine block

8.2. 4G15 or 4G13 engines only. Engine Block and Cylinder Heads must be original 4G15 or 4G13.

- The numbers of attachment points to the bodyshell must remain as standard production.
- Reverse heads not permitted.
- OEM single Carburettor compulsory, with OEM inlet manifold only.
- Exhaust manifolds may be replaced. Titanium material not allowed.
- Oil sump may be modified. Dry sump systems not permitted.
- Forced-induction not permitted.

8.3. Engine & Transmission mounting and location

- Original engine mounting points on the body / subframe must remain. Additional brackets to provide stiffer engine locating and mounting, is permitted.
- Rubber Engine mountings may be replaced

8.4 Distributor: Must use original distributor, housing, and cap. Triggering may be replaced with electronic or optical triggering to replace the original contact points.

Coil on plug and any other form of programmable and / or digital electronic ignition is not permitted.

8.5. Gear box

- OEM Proton Saga gearbox with original Clutch Engagement using cable.
- Final Drive ratio may be modified.
- Gear ratios may be changed and modified. However, Dog Engagement gears are not allowed.

8.6. Fuel information

- Fuel blends that contain oxidisers and oxygenates in any alcohol forms (methanol, nitro-methanol, ethanol, butanol, etc) are allowed.

Ethanol blends are allowed.

100% methanol is not permitted.

- Nitrous Oxide system is not allowed in any category.
- Water-methanol injection into the intake manifold is not a fuel, and is permitted

9. TYRES

9.1. Saga Cup category to use tyres size 195/50-15 which are non-semi slick.

For list of semi-slick tyres in MSF, please refer to the list of semi-slick tyres at the series website at www.msfracing.com

10. AERODYNAMIC DEVICES

Aerodynamic devices and equipment refers to:

- Rear Spoilers and Front spoilers
- Frontal Canard fins
- Front Splitter
- Rear Diffuser



- Wing End Plate
- Rear Wing
- Side Skirt
- Gurney Flap
- Vortex Generator fins

Aerodynamic devices are open and not limited.

11. COMPETITION NUMBER & VEHICLE PRESENTATION

11.1. Competitors are obliged to carry the MSF partners' logos in the mandatory sticker areas.

11.2. Official MSF Sticker Board of MSF Series Sponsors must be located in the area below the front windows behind the front wheel.

11.3. Official MSF Tyre Partner sticker must be placed on the wheel arches, either front or rear arches on both sides.

11.4. Official MSF Title Sponsor sticker must be placed on the front windscreen area.

11.5. Other official MSF Partner stickers must be placed at the front or rear wings on both sides.

11.6. Competition numbers are to be placed in 2 locations:

- Door Numbers: Must be placed on doors on the side of the vehicle, to be clear and of contrasting colour to the body colour. General dimensions for each number digit to be A3 Size (11" Wide x 16" High). Competition numbers must be of a contrasting colour to the car and reflective stickers are recommended.

Objectives are for the numbers to be clearly visible to the Time Keepers, Marshals, and Race Control.

- Windscreen Numbers: Must be placed on the left front of windscreen, below Category Partner sticker. Must be 6" high in Arial Narrow font using White or fluorescent Yellow sticker.

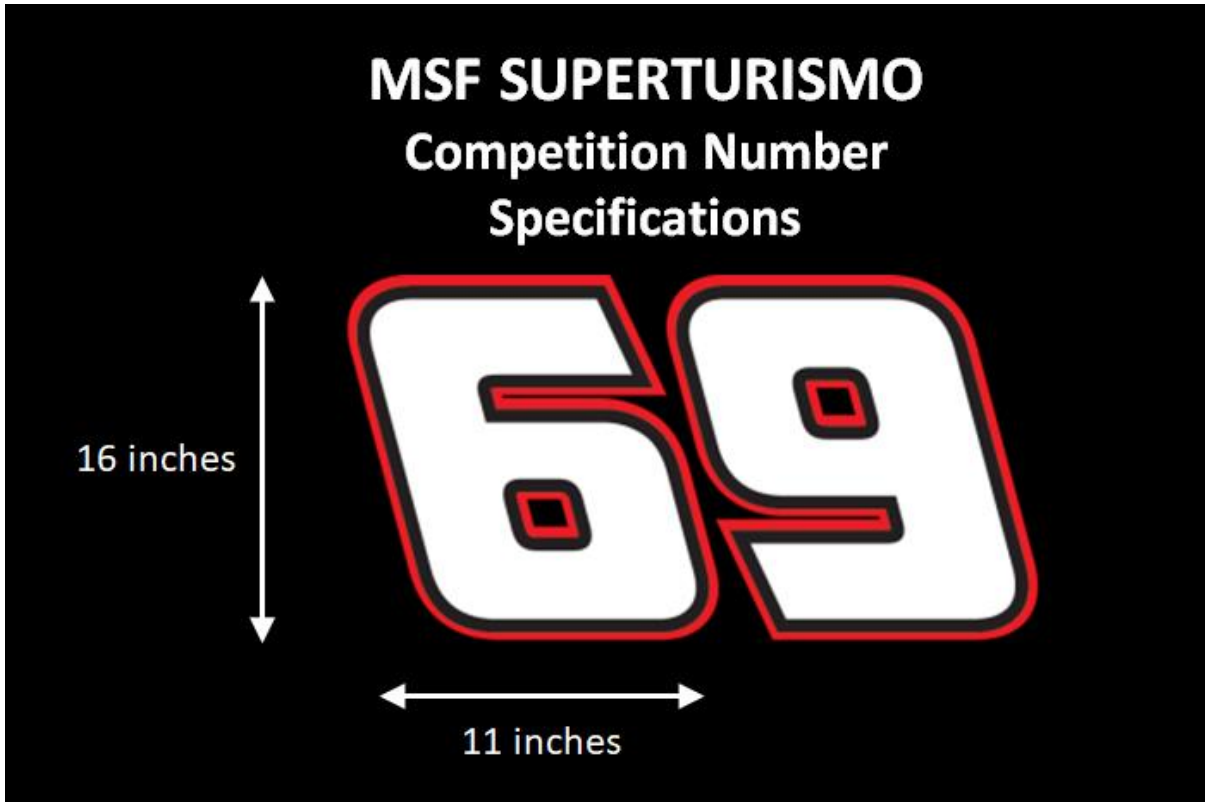
11.7. Competitors & team own sponsors may be located at all other locations such as:

- Front Bonnet.
- Roof.
- Rear Door/fender.
- Rear Bootlid or Tailgate.
- Front & Rear bumpers.

12.8. A rejection fee of RM 2,000.00, for every deleted Partner /Sponsor sticker, is required of any Competitor that does not apply any MSF Partner /Sponsor stickers.

Copyright 2022 Matrix Motorsports Promotion Sdn Bhd 508407-T
Creators, Owners, Official Promoters
MSF Racing Series





Sticker Placement for MSF Cars 2022.