



The Trinidad and Tobago Rally Club

Vehicle Regulations

TTRC General, 2WD & Amalgamated

Classes

Version 1.2

Date Issued 1st April 2024

Introduction

The Trinidad and Tobago Rally Club (TTRC) is a non-profit motorsport club located in the Caribbean Island of Trinidad & Tobago. The club was founded in 1977 and is the NGB (National Governing Body) for the sport of rallying in Trinidad & Tobago, and is the sole local body recognized by the Ministry of Sport and Community Development of by the government of Trinidad & Tobago.

What do we do?

The conducts:

- The organization, execution and supervises Treasure Hunt events.
- The organization, execution and superintends Stages Rallying
- The organization, execution and superintends training of marshals for the sport.
- The organization, execution and superintends the development of drivers/Co-Drivers

The following safety regulations were developed to promote fun, fair and safe competition. If you encounter any issues such as spelling or grammatical errors or a dispute, please don't hesitate to notify a member of the TTRC Executive Committee, and we will gladly address them as needed.

Unless a modification is otherwise stated within this rule book, then the modification is strictly not allowed. Anyone can contact a TTRC Executive Committee member for confirmation.

These regulations will be in effect from 1st April 2024.

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General Details

Recognised Classes

All vehicles entering a TTRC (Trinidad & Tobago Rally Club) event must conform to a class below, unless an ASR (Additional Supplementary Regulation) stated otherwise. Only 4-wheeled vehicles are eligible.

Unless a modification is otherwise stated within this rule book, then the modification is strictly not allowed. Anyone can contact a TTRC Executive Committee member for confirmation.

For the TTRC club championship, only TTRC classes (*Modified, Super Modified, Group A*) will be eligible for championship points. Local and/or foreign competitors are allowed for the championship.

For TTRC events the below classes are eligible for the event:

- TTRC –TTRC Vehicle Regulations 2024 for Modified, Super Modified, Group A.
- TTASA - Trinidad & Tobago Automobile Sports Association classification 2023 for Group 1,2,3,4
- Radical

Note - No open wheel cars are allowed entry to a TTRC event.

Applications by vehicles interested in competing with suspension and/or wheels not contained within the limits of the body of the vehicle will be rejected.

Use of Scales for Weighing

All vehicles entering a TTRC (Trinidad & Tobago Rally Club) event can be weighed on the club scales at any time during the event. If a vehicle is found to be underweight it will be excluded from the event. A vehicle can be called to the scales multiple times for weighing during an event.

A vehicle's minimum weight specified will be below in the class you are subscribed to. Note the following methods for weighting.

- Without driver - TTRC – TTRC Vehicle Regulations 2024 for Modified, Super Modified, Group A.
- With Driver - TTASA - Trinidad & Tobago Automobile Sports Association classification 2023 for Group1,2,3,4
- Radical

Tires

All cars are mandated to run the tires for the class they are competing. The specific tire details for each class are below in each class section. *Eg. Spec Miata cars must run the spec tires for the class. Rally cars can run tires that comply with TTRC class rules, Group 1 will run their class rule of rim max size of 15" diameter x 7" width with a max tire of 205mm ETC.*

All tires cannot exceed the body width. Fenders flares are acceptable.

2024 TTRC Vehicle REGULATIONS

2WD Cars

2wheel drive cars will be grouped as follows:

Modified

Modified (M) (See Section 1.0 for class regulations)

M1 – 0 to 1600cc / 900kg

M2 – 1600cc to 2000cc / 960kg

M3 – 2000cc to 2500cc / 1050kg

M4 – 2500cc to 3000cc / 1150kg

Subtract 3 Kgs per 10ccs or part thereof for cars up to 1,600cc to a minimum of 600Kgs.

Super Modified

Super Modified (SM) (See Section 2.0 for class regulations)

SM5 – 1600cc to 2000cc

SM6 – 2000cc to 3000cc

Forced induction cars must use a factor of 1.5 x Engine cc rating to determine class.

To calculate weight for this class – For every 10cc (actual engine cubic capacity) add 3kg to the base weight of **600kg**. For cars running with 1000cc or less, the minimum weight is 600kg

Examples:

1600cc car is as follows: $1600/10 = 160 \times 3 = 480 + 600$ base weight = 1080kg

1800cc car is as follows: $1800/10 = 180 \times 3 = 540 + 600$ base weight = 1140kg

2000cc car is as follows: $2000/10 = 200 \times 3 = 600 + 600$ base weight = 1200kg

Maximum Vehicle weight must not exceed **1310kgs**.

Rotary Cars

For Cars with Rotary Engines

CC equivalent = 2 x swept volume

12A = 2292cc

13B = 2608cc

Forced induction cars must use a factor of 1.5 x Engine cc rating

Historic

For cars Homologation prior to 1986 and built to their date-appropriate FIA Appendix J groups 1 - 4, N and A, as well as the Historic General Regulations.

Homologation papers here: <https://historicdb.fia.com/>

Period FIA Appendix J here:

<https://argent.fia.com/web/fia-public.nsf/whistj?open&lang=a>

- H1: 0 – 1600cc
- H2: 1601cc and over

4WD Cars

4WD Cars will be grouped as follows:

Group A

– As per the FIA homologation documents as they pertain to the car **AND** TTRC Group A 2024 Rule Book, inclusive of specific allowances made by the TTRC Executive. See Section 3.

Group A cars are permitted to replace body panels with non OEM replacements however the replaced panels must all function as original and be fabricated from multi-layered composite material. The Minimum weight for all cars must be met as advised by these rules, regardless of any replaced panels.

General Regulations

COMPETITORS ARE ADVISED THAT THE EVENT ORGANISER RESERVES THE RIGHT TO CHECK SPECIFICATIONS OF ANY VEHICLE WITHOUT THE VEHICLE BEING OFFICIALLY PROTESTED.

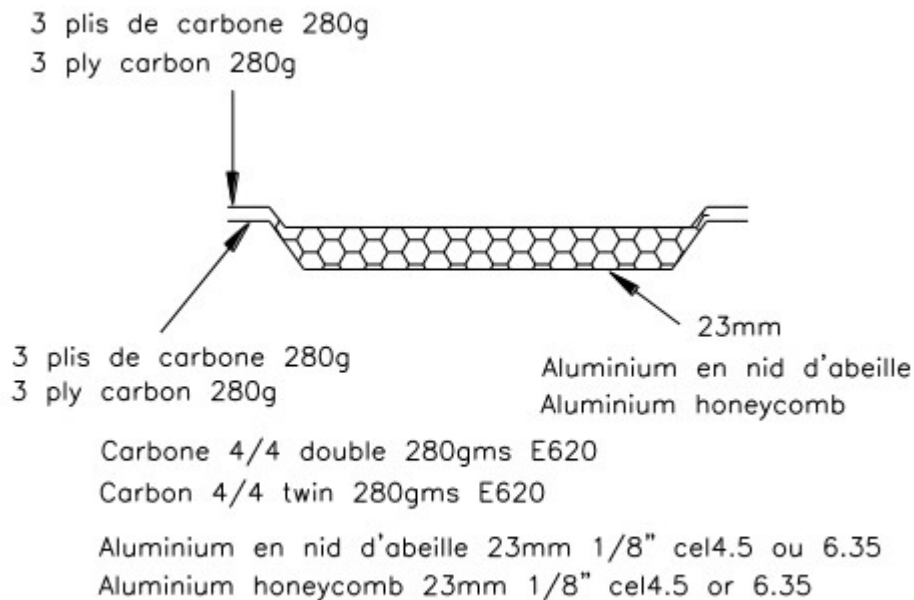
- 1. PRODUCTION** – the word production will be taken to mean any car or part thereof listed in the Glass's Guide (UK), Japanese Motor Vehicles Guide (Japan), Used Car Buyers' Guide (US: Kelley Blue book or N.A.D.A. yellow book) or any other source for used car sales that the organizers deem fit including internet sources.
- 2. FUEL** – Restricted to VP Leaded - C9, C12, C16, Q16, Ralltmax, VP Unleaded 103, 109 and ALL SUNOCO Equivalents, pump gasoline and pump diesel. Any competitor being scrutineered for compliance on this list will on request declare which fuel is being used. This is subject to a sample at any time by the Scrutineer and tested accordingly. Any competitor who wishes to use a fuel not stated above shall send an application in writing to the TTRC (no less than 7 days prior to an event) for consideration. The use of methanol as a fuel or for water injection or any other purpose is NOT allowed.
- 3.** All modifications are forbidden unless expressly stated in the regulations specific to the group in which the car is entered, by the general regulations or "Safety Equipment".
- 4.** It is the duty of each competitor to satisfy the Scrutineers and the Stewards of the event that his vehicle complies with these regulations in their entirety at all times during the event.
- 5. MINIMUM WEIGHT** – Minimum weight is defined as **(EXCEPT FOR CARS IN GROUP A CLASS)** is the real weight of the empty car as it competes (without persons or luggage aboard) with tools, jack and spares. All liquid tanks (lubrication, cooling, braking, heating where applicable) must be at the normal level, with the exception of consumable liquid tanks which must be empty. Additional headlights must be removed before weighing. It is permitted to complete the weight of the car by one or several ballasts provided that they are strong and unitary blocks, fixed by means of tools with the possibility to fix seals, placed on the floor of the cockpit or roll cage, visible and sealed by the Scrutineers. At no time during the event may a car weigh less than the absolute minimum real weight stated in these regulations. In case of a dispute during weighing, the full equipment of the driver and co-driver will be removed, including their helmets. Headphones external to the helmet, tools, spare parts including tyres and wheels, shall be left in the car. If a vehicle is underweight for the class it was registered for, it will be disqualified from the event.
- 6.** Suspension parts or wheels made partially or entirely from composite materials are prohibited.
- 7.** Only the following accessories may be installed in the cockpit: spare wheels, tools, spare parts, safety equipment, communication equipment, ballast, windscreen washer container. Containers for helmets and tools situated in the cockpit must be made of non-flammable material.
- 8.** The original fitting of the air bags may be removed and they must be deactivated.
- 9. FUEL TANKS** - Fuel tanks may be replaced by foam-filled fuel cells (manufactured by a recognized manufacturer) either in the original location of the tank or in the luggage compartment.

There must be an orifice to evacuate any fuel which may have spread into the tank compartment. The position and the dimension of the filler hole as well as that of the cap may be changed as long as the new installation does not protrude beyond the bodywork and guarantees that no fuel shall leak into one of the interior compartments of the car. If the filler hole is situated inside the car, it must be separated from the cockpit by a liquid-tight protection. Tanks may be ventilated through the car roof.

11. Carbon brake discs are forbidden; brake lines, pipes and fittings may be replaced.
12. Electronic management of engines, transmissions & steering is allowed, no electronic controls of differentials & suspension. **(EXCEPT FOR CARS IN GROUP A CLASS)**
13. The top 1/3 of the wheel diameter must be covered by the wheel arch when viewed from above.
14. Throughout the car, any nut, bolt, screw, pipe or hose may be replaced and have any kind of locking device (washer, lock nut, etc.).
15. Interior insulation, lining, padding and minor interior trim must be removed. External decorative strips may be removed. Any parts following external contour of the bodywork and less than 25 mm thick will be considered as decorative strips. Hubcaps must be removed. The inner door and side panels may be replaced.

It is permitted to remove the soundproofing material from the doors, provided that this does not modify the shape of the doors. In the case of a two-door car, the trim situated beneath the rear side windows may also be removed but must be replaced with panels made from non-inflammable composite material.

It is permitted to remove the trim from the door together with the side protection bar in order to install a side protection panel which is made from non-inflammable composite materials. The minimum configuration of this panel must comply with that shown on Drawing 255-14



255-14

16. Jacking points may be strengthened, moved, and increased in number.
17. The fitting of under-body protection is authorized, provided that these have no other function and are removable.
18. Electric window winders may be replaced with manually-operated winders and vice-versa.
19. Strengthening of suspension parts is allowed.

- 20.** Inversion of the driving side is possible if the original car and the modified car are mechanically equivalent and the parts used are available from the manufacturer for the model in question.
- 21.** All wiring may be replaced; switches, fuses, and relays are unrestricted. Except for Group N, battery location is unrestricted. If mounted in the cockpit the battery must be located behind the front seats. In this case, the protection box must include an air intake with its exit outside the cockpit if the battery is unsealed. If the battery situated in the cockpit is a dry battery, the terminals must be insulated.
- 22.** Roof vents and any other mechanisms for increasing cockpit airflow are unrestricted
- 23. NOISE** - The check which is done for exhaust noise is as follows: 1 meter from the end of the tail pipe at an angle of 45 degrees @ 4500rpm under no load to a maximum of 108 db's on 'A' scale (slow).
- 24.** A functional starter must be fitted and be operable by the driver when seated.
- 25.** Cars must be fitted with a gearbox including a reverse gear and be able to be operated by the driver when he is normally seated.
- 26.** Cutting of holes in the front bodywork for lights and brackets is allowed and original lights may be replaced as long as they fill the original holes. Extra lights must be mounted below the highest point of the bonnet. Additional driving lights must be wired in such a way that they automatically go off when the headlight main beam is 'dipped'.
- 27.** Tires must have 10% of their width treaded or grooved at a minimum of 2mm depth. They must be mounted safely on the class-specified wheel rim.

28. Front windscreens must be OEM or equivalent replacement laminated glass only. All other non-front windshield are free to be swapped to polycarbonate. The car must still meet the minimum weight for the class.
29. All accessories which have no effect on the vehicle's performance are allowed without restrictions, such as those concerning the aesthetics or interior comfort (lighting, heating, radio, steering wheel, gauges, etc.), on the condition that they do not influence the performance of the car. Heating/A/C systems are unrestricted.
30. Fuel lines may be changed.
31. Additional safety fastenings for the windscreen and the side windows may be fitted provided they have no aerodynamic effect.
32. Fluid reservoirs are unrestricted as long as they are secured and sealed.
33. Only water is allowed to be injected into the intake manifold on vehicles with "water injection" systems. No methanol, alcohol, or any other hydrocarbons are allowed in the "water injection" system. **(EXCEPT FOR CARS IN GROUP A CLASS)**
34. No Nitrous Oxide injection is allowed.
35. The block may be bored by up to 1 mm and be classified according to original cubic capacity, or be bored/sleeved more than 1 mm and be classified according to its actual cubic capacity. Bearings, bolts, gaskets, seals, oil pump and oil pump pick-up are unrestricted.
36. Alternative pistons may be used provided they comply with original manufacturer's general specification - i.e. weight (10% tolerance) and number of rings. Compression ratio is free and machining of the piston is allowed.
37. The head fitted must be the production head used by the manufacturer for the block utilized and oriented in the same way. Machining, porting and polishing of the head is allowed. Valve springs, guides, lash caps, seats and collets are free.
38. It is permitted to close any unused apertures in the cylinder head and block where these may be redundant.
39. Camshafts, their material, timing, type and dimensions of the pulleys, chains and belts are free. The camshaft followers, shims, rockers and push rods are free.
40. Non-standard clutch discs and pressure plates are allowed.
41. Crankshaft doweling and flywheel bolts are unrestricted.
42. Forced induction systems are unrestricted.
43. Engine management systems and electronics (ignition, fuelling etc.) are unrestricted.
44. Dry-sumping is not allowed, however, modifications to engine wet-sump are unrestricted.

The TTRC Executive has the final say regarding the acceptance or refusal of any car according to the classes/groups and attached rules and regulations. Cars may be reclassified in the spirit of completion and for safety reasons.

SECTION 1 (Modified Class – M1, M2)

1. Definition – Modified four-seater production cars.

2. Engine

- a. The engine may be replaced with any engine from any manufacturer but must remain normally aspirated and in the same general location.
- b. Only the following is restricted:
 - i. Engine must have wet sump which may be modified. An external oil pressure accumulator is allowed.
 - ii. The cylinder head must be the original production unit (or aftermarket equivalent) but may be modified in any way. The valve sizes must be production in engines with 4 or more valves per cylinder.
 - iii. The block must be the production item (or aftermarket equivalent) but may be modified in any way.
- c. It is possible to beat, shape or cut the bulkhead situated in the engine compartment for the fitting of engine ancillaries only.
- d. Cooling: Oil coolers may be fitted. The water radiator, cap and fixation are unrestricted, as are the hoses linking it to the engine. A radiator screen may be fitted. The fan, its drive system and thermostat are unrestricted. The fitting of a water catch tank is allowed.
- e. If the lubrication system includes an open type sump breather, it must be equipped in such a way that the oil flows into a catch tank. This must have a capacity of 2 liters. The oil must only flow from the oil catch tank towards the engine by the force of gravity alone. A fan may be fitted for cooling the engine oil, but must have no aerodynamic effect.
- f. Mountings - unrestricted provided that the angle and position of the engine within its compartment is similar to the original. Supports may be welded to the engine and to the bodywork and their position is unrestricted.
- g. Exhaust and exhaust manifold unrestricted.
- h. Innovation and modifications within the rules is encouraged.

3. Transmission

Transmissions are restricted to H pattern boxes only. No sequential boxes or shift mechanisms allowed. Internals are unrestricted.

4. Steering & Suspension

- a. Unrestricted except for the basic layout which must be similar to the original and fit without alteration to the body shell other than panel-beating to provide clearance. No remote reservoir shock absorbers allowed.
- b. Extra control arms can be added (compression/tension struts, radius arms etc.).
- c. Shock absorber turrets may be fabricated to allow the mounting of the suspension.
- d. Reinforcement bars may be fitted from the suspension mounting points to the body shell, rollcage or chassis.
- e. Strengthening of the mounting points and of the running gear, by addition of material, is allowed.
- f. Power steering may be added or removed. Electronic control of the power steering system is allowed.
- g. Steering boxes may be replaced with steering racks and vice versa.

5. Wheels and Tires

The maximum Rim Width is 7", maximum diameter 15". The wheels do not necessarily have to be of the same diameter or width.

6. Braking System

- a. Unrestricted except for the basic layout which must be similar to the original and fit without alteration to the bodyshell other than panel-beating to provide clearance.
- b. All 4 wheels must be braked on a dual circuit. The Handbrake must lock at least two wheels.
- c. Air cooling pipes and hoses may be added as long as holes made to accommodate them serve no other function.

7. Bodywork/Chassis

- a. Composite materials are allowed. . Replaced panels must all function as original and be fabricated from multi-layered composite material.
- b. Widening of the wings/bumpers - Increase of width of maximum 140 mm in total is allowed. This increase may be obtained by means of an extension or a new part.
- c. A Grille covered opening in the engine bonnet (including the radiator grille) is allowed with a surface of 1050cm" maximum. In the opening made in the bonnet it is permitted to add a plastic part serving as trim (air scoop or similar).
- d. Upper radiator support - The upper front cross member may be cut, replaced or modified between the headlamps. This cutting or modification must not affect the rigidity of the chassis structure.
- e. Strengthening of the chassis and bodywork is allowed.
- f. Unused supports (e.g. spare wheel holder) situated on the chassis/bodywork can be removed, unless they are supports for mechanical parts which cannot be moved or removed.
- g. Windscreen washer (size, position and nozzles), wipers, motor, position, blades and mechanism are unrestricted but there must be at least one windscreen wiper provided for the windscreen.
- h. The trim situated below the dashboard and which is not a part of it may be removed. Dashboards may be modified or changed, but must function and look similar to the original.
- i. Lightening of production panels will be allowed, including bonnet, doors, tail gate/trunk. Interior door panels must however be covered to protect the safety of the driver and co-driver from sharp edges.
- j. Front and rear windows may be replaced with polycarbonate or lexan type (Window Nets may be used)
- k. Fenders may be modified to the extent necessary to provide tire clearance, fender flares may be added in order for the body to fully cover the tires when viewed from above.

SECTION 2 (Super-Modified Class – S3, S4)

1. Definition - Modified two and four-seater production cars.

2. Engine

- a. Modifications are unrestricted but must retain production block and cylinder head castings (or aftermarket equivalents).
- b. Exhaust and exhaust manifold unrestricted.
- c. Engines must be located in their original general location.

3. Transmission

Unrestricted

4. Steering & Suspension

Unrestricted

5. Wheels

Maximum rim width 10", maximum diameter 18" **6.**

Brakes

Unrestricted. Must have 4-wheel brakes on dual circuit, handbrake must lock at least two wheels.

7. Bodywork/Chassis

- a. Transmission tunnel may be modified or replaced with one fabricated from steel of original thickness as well as housing and brackets for a rear axle
- b. Bonnet, trunk lid, doors and wings (fenders) may be replaced with composite panels. Replaced panels must all function as original and be fabricated from multi-layered composite material. Rear wings, front spoilers and wheel arch extensions may be fitted. The rear wing must not be taller than 6" above the height of the original roof-line (which may not be lowered in relation to the sills) and no wider than the panel on which it is mounted (roof or trunk lid). Wheel arches, bumpers and splitters must extend no more 6" from the original plan of the vehicle.
- c. The front bulkhead may be reshaped (including cutting and welding) to allow engine fitment.
- d. Suspension design and pick-up points are unrestricted as long they maintain structural integrity and are safely modified/manufactured. This includes altering the bodyshell to accommodate strut turrets and other suspension mounts.
- e. Front inner wings and lower 'chassis' legs may be replaced with a tubular structure to mount the engine, ancillaries and front suspension. Structural integrity must be maintained.
- f. Glass may be replaced with polycarbonate (Lexan). Nets may be used in place of front door glasses - see safety.
- g. Open top cars must have a roll cage fully surrounding the passenger compartment in accordance with the safety regulations. Nets must be fitted to the roll-cage structure over the side and top openings.

8. Electrical System

Unrestricted

9. Fuel System

Unrestricted

SECTION 3 (Group A – 4WD)

- 1. Definition** – Group A refer to cars that meet the homologation requirements of the FIA Group A Regulations. Also included in this Group are later model cars (than the last date of FIA homologated Group A) which meet the homologated Group A standards as well as the specific allowances made by the TTRC. The Minimum Weight for ALL Group A cars is 1230kg

2024 TTASA Vehicle REGULATIONS

GENERAL REGULATIONS

No regulation hereafter shall supersede these General Regulations except where specifically stated

COMPETITORS ARE ADVISED THAT THE EVENT ORGANISER RESERVES THE RIGHT TO CHECK SPECIFICATIONS OF ANY VEHICLE WITHOUT THE VEHICLE BEING OFFICIALLY PROTESTED.

1. PRODUCTION – the word production will be taken to mean any car or part thereof listed in the Glass's Guide (UK), Japanese Motor Vehicles Guide (Japan), Used Car Buyers' Guide (US: Kelley Blue book or N.A.D.A. yellow book) or any other source for used car sales that the organizers deem fit including internet sources.

2. Eligibility: Unless otherwise stipulated, the following information needs to be available to the organizers in such form as to convince them of its authenticity, or will be obtained from other technical sources as determined by the organizers, before any vehicle can be eligible for competition: Original Manufacturers' brochure, owners' manual and/or FIA Homologation papers, listing in Buyers' Guide. All material that is used to confirm the specification of a vehicle must be presented on demand.

3. Diesel Engines: Diesel engine types are not allowed.

4. Displacement Variance: 0.25% variance in total declared engine CC's will be allowed either due to measurements/maintenance purposes.

5. Modifications: All modifications are forbidden unless expressly stated in the regulations specific to the group in which the car is entered, by the general regulations or "Safety Equipment".

6. Competitor's Duty: It is the duty of each competitor to satisfy the Scrutineers and the Stewards of the Meeting that his vehicle complies with these regulations in their entirety at all times during the event.

7. Minimum Weights: Minimum weight is the real weight of the car as it competes. Cars will be weighed with driver onboard and a "driver factor" of 180 LBs must be added to all minimum weight calculations. A scale error of 0.25% is allowed. It is permitted to complete the weight of the car by one or several ballasts provided that they are strong and unitary blocks, fixed by means of bolts, nuts and washers with the possibility to fix seals, placed on the floor of the cockpit, and visible to the scrutineers.

8. Suspension Parts: Suspension parts or wheels made partially or entirely from composite materials are prohibited.

9. Original Equipment Manufacturer, Air Bags: The Original Equipment Manufacturer (OEM) air bags shall be removed.

10. Approved Fuel Tanks: Approved fuel tanks manufactured by a recognized manufacturer, baffled or foam filled, are strongly recommended for all internally mounted tanks. There must be an orifice to evacuate any fuel which may have spread into the tank

compartment. The position and the dimension of the filler hole as well as that of the cap may be changed as long as the new installation does not protrude beyond the bodywork and guarantees that no fuel shall leak into one of the interior compartments of the car. If the filler hole is situated inside the car, it must be separated from the cockpit by a liquidtight protection. Tanks may be ventilated through the car roof.

11. FUEL – Any pump fuel and racing fuels that is publicly available for purchase are allowed. Methanol is not allowed as a primary source of fuel.

12. BRAKES: - Carbon brake discs are forbidden; brake lines, pipes and fittings may be replaced.

13. Electronic Control Unit: Only Electronic Control Unit management of engines is free as specified per car Classification. Electronic controls of differentials, suspension, transmission etc., are allowed only if supplied by the OEM manufacturer for same specific car model. No cross family-type conversions are allowed.

14. Wheel Arch: The wheel arch when viewed in Plain View must cover the entire wheel.

15. Fasteners and Hoses: Throughout the car, any nut, bolt, screw, pipe or hose may be replaced and have any kind of locking device (washer, lock nut, etc.)

16. Interior Trim: Interior insulation, lining, padding and interior trim are recommended to be removed. External decorative strips may be removed. Any parts following external contour of the bodywork and less than 25 mm thick / wide will be considered as decorative strips. Hubcaps must be removed. The inner door and side panels may be replaced.

17. Jacking Points: Jacking points may be strengthened, moved, and increased in number.

18. Windshields: Laminated front windshields are mandatory unless when deemed allowable otherwise as per Group Classification. Additional safety fastenings for the windscreen and the Side windows may be fitted provided they have no aerodynamic effect.

19. Windows: Windows, front and rear may be replaced with polycarbonate or window nets, all Classes.

20. Suspension Parts: Strengthening of suspension parts is allowed.

21. Inversion of Driving Side: Inversion of the driving side is possible if the original car and the modified car are mechanically equivalent and the parts used are available from the manufacturer for the model in question.

22. Wiring: All wiring may be replaced; switches, fuses and relays are unrestricted. Battery location is unrestricted. If mounted in the cockpit, the battery must be securely mounted in a battery box or clamped and must be firmly bolted to the chassis, away from fuel tanks and lines. Battery lug connections must be in good condition and insulated to prevent short circuits.

23. Roof Vents: Roof vents and any other mechanisms for increasing cockpit airflow are unrestricted.

24. Engine Starter: A functional starter must be fitted and be operable by the driver when seated.

25. Gearbox: Cars must be fitted with a gearbox including a reverse gear and be able to be

operated by the driver when he/she is normally seated.

26. Pedal Controls: All the controls i.e. Brake pedals, can be replaced by aftermarket products, their location must be in the same general location. Original items can be modified to make them more accessible or more easily usable; for example, the addition of an extension to the handbrake lever, or an additional flange to the brake pedal, etc.

27. Fuel Lines: If original fuel lines are changed, they must be of a braided type, using compression fittings.

28. Fluid Reservoirs: Fluid reservoirs are unrestricted as long as they are secured and sealed.

29. Composite Body Panels: will be allowed as a replacement for metal bonnet, front fenders, doors, rear wheel arches, trunk lid and tail gate, provided that the minimum weight restriction is respected at all times.

However, cars cannot be lightened below the minimum weight and then have ballast put back to make up the weight.

30. Replacement Composite Bonnet: The replacement composite bonnet, doors, trunk lid and tail gate must match the original metal panels exactly otherwise the Scrutineers may reject them at their sole discretion. The shape of the wheel arch/fenders are free but must cover the wheel as per Item 14, above.

31. Window Net: In the case where it is not possible to wind up or have permanently fixed in place the driver's door glass, a net of proper quality must be securely affixed in the space normally allocated to the glass. The net must be attached to either the original door/window frame or, in the case of a composite door, must be secured to the roll cage.

GROUP 1 – Production Cars up to 1600cc

Eligibility

This Class is restricted to Production Cars of maximum engine displacement of 1600 cc. No Four-wheel/All-wheel drive or turbocharged cars allowed in this Class.

Engine

0-1600cc. Maximum four valves per cylinder engines allowed can be modified, but must retain standard valve sizes and crankshaft without modification. E.g. GA16, 4AFE, 4AGE, etc.

0-1600cc. Four & more valve per cylinder with variable valve timing, cam timing singular or combo engines allowed. NO MODIFICATIONS TO INTERNALS OF ENGINE. E.g. Nissan VVL, Toyota 4AGE 20 valves, Honda B16 V-TEC, etc.

Engine swaps are permitted provided that the cylinder block belongs, and is identifiable as belonging to a series production model of car from the same manufacturer of which 2500 units have been made in any one-production year. Engine swaps must be homologous, i.e. retain the same number of cylinders and configuration e.g. in line 4 cylinder.

Should a competitor wish to use a questionable engine type, they must consult the Race Committee in writing giving all particulars of the unit at least 2 months prior to its intended use.

Intake / Induction:

Carburetor Engine: Maximum of one Throttle Butterfly Valve per cylinder not exceeding 36mm for 4 Valve, 38mm for 2 Valves in diameter for venturi/choke.

Fuel injection: OEM Style Plenum must be maintained. Stock throttle body must be maintained. Engine Management is free. Air Cleaners are allowed. Ducting of air to the air cleaner or carburetor is not permitted.

Weight Restrictions:

Vehicle weight without driver for OEM non-variable valve timing engines, irrespective of number of valves, shall be calculated at 1.10 lbs per cc of engine displacement.

Honda Civic with B16A engine, minimum weight: 2024 lbs Weight Factor: 1.269 lb per cc

Honda Civic with B16B engine, minimum weight: 2116 lbs Weight Factor: 1.327 lb per cc

Water Pumps: Electrical water pumps are not allowed

Ignition System: Free unless otherwise stated

Gear Boxes: Restricted to original OEM model H-pattern synchromesh gear boxes only.

Must have functional reverse gear.

Gears 4 & 5 ratios are free.

6 speed boxes are allowed providing they came as standard equipment from the OEM Manufacturer. Internals shall remain standard as delivered from the factory.

Sequential or electronic gear change boxes are not allowed.

OEM Flywheels can be modified, single plate clutch assembly is mandatory.

Differential: Limited slip differentials may be installed. Final drive ratios are free.

Exhaust System: Exhaust outlet must terminate rearward of bodywork not more than 10cm (4in).

Brakes: Braking System unrestricted except for the basic layout, which must be similar to the original and fit without alteration to the body shell other than panel beating to provide clearance. All 4 wheels must be braked on a dual circuit. The handbrake must lock at least two wheels. Air-cooling pipes and hoses may be added as long as holes made to accommodate them serve no other function.

Suspension: Unrestricted except for the basic layout, which must be similar to the original and fit without alteration to the body shell other than panel beating to provide clearance. No remote reservoir shock absorbers allowed.

Extra control arms can be added (compression / tension struts, radius arms etc.)

Shock absorber turrets may be fabricated to allow the mounting of the suspension. The new turret must be of the same height as the original turret +/- 20mm and the maximum diameter at the top is 170mm.

Steering / Control:

Power steering may be added or removed. Electronic control of the power steering system is allowed.

Steering box may be replaced with steering racks and vice versa

Bodywork & Chassis

Composite materials allowed for fender flares and air scoops.

Widening of the wings/bumpers - Increase of width of maximum 140 mm in total is allowed. This increase may be obtained by means of an extension or a new part.

No aerodynamic devices allowed unless factory fitted.

Grille-covered opening in the engine bonnet (including the radiator grille) is allowed with a surface of 1050cm² maximum. In the opening made in the bonnet it is permitted to add a plastic part serving as trim (air scoop or similar).

Upper radiator support - The upper front cross member may be cut, replaced or modified between the headlamps. This cutting or modification must not affect the rigidity of the chassis structure.

Strengthening of the chassis and bodywork is allowed.

Unused supports (e.g. spare wheel holder) situated on the chassis/bodywork can be removed, unless they are supports for mechanical parts, which cannot be moved or removed.

Windscreen washer (size, position and nozzles), wipers, motor, position, blades and mechanism are unrestricted but there must be at least one windscreen wiper provided for the windscreen.

The trim situated below the dashboard and which is not a part of it may be removed. Dashboards may be modified or changed, but must function and look similar to the original.

Lightening of production panels will be allowed, including bonnet, doors, tailgate and trunk, only if the car is not carrying ballast to meet its minimum weight.

Windows: Lexan or other polycarbonates windows are allowed but not the windshield.

Track width measured hub to hub must be standard +/- 1 inch.

Electrical System: Unrestricted

Fuel System: Fuel pumps, filters and lines may be substituted providing they meet the safety requirements.

Fuel Type: Only commercial available pump fuel is allowed, maximum RON 95 octane.

Rims: 15" diameter x 7" width maximum

Tires: Maximum Tire Width shall be 205mm. The Approved tires are:

- KUMHO ECSTA V720 200TW
- MAXXIS VICTRA VR-1 200TW
- NANKANG NS2R 180TW
- TOYO R1R 200TW

GROUP 2 – 2WD Production Cars, Naturally Aspirated, Up to 2000cc 4 Valve & 2300cc 2-Valve

Definition – Modified two and four-seater 2WD production cars fitted with normally-aspirated piston engines up to 2000ccs 4 valve and 2300ccs 2 valve and 12A & 13B ROTARY engines.

Engine:

Modifications are unrestricted but must retain production block and cylinder head castings. 12A and 13B rotary engines porting are free.

Engine swaps out of Family are not allowed.

Dry sump systems are not allowed

Engines must be located in their original location

In order to determine the classification of a car using an engine of the NSU Wankel patents (Rotary Engines), the manufacturers claimed cylinder displacement will be increased by a factor of 1.8

Transmission:

H-Pattern OEM gear box shall be retained. Gear box ratios are unrestricted. Manufacturer's location and layout must be maintain as the original. Final drives and differentials are free. Axles are free. Paddle shift, only if OEM gearbox being used. Sequential boxes are not allowed.

Steering:

Power steering may be added or removed. Electronic control of the power steering system is allowed.

Steering boxes may be replaced with steering racks and vice versa.

Suspension:

Suspension system shall be same type as fitted by the OEM without alteration to the body shell mounting points Panel-tire clearance modification is allowed.

Extra control arms can be added (compression / tension struts, radius arms etc.)

McPherson strut and damper/shock absorber turrets may be modified and relocated + / - 20mm with a maximum diameter at the top of 170mm

Reinforcement bars may be fitted from the suspension mounting points to the body shell, roll cage or chassis

Strengthening of the mounting points and of the running gear, by addition of material, is allowed.

Dampers/shock absorbers that have no function other than damping are unrestricted as are their mounting brackets/turrets.

Wheels & Tires:

Wheels, Maximum rims width 8", maximum dia. 15". No Grooving of tires is allowed. Maximum Tire sizes 225 x 15" with Tread Wear 100 UTQG and above.

Brakes:

Braking systems shall have 4-wheel brakes on dual circuit. Handbrake if fitted must lock at least two wheels.

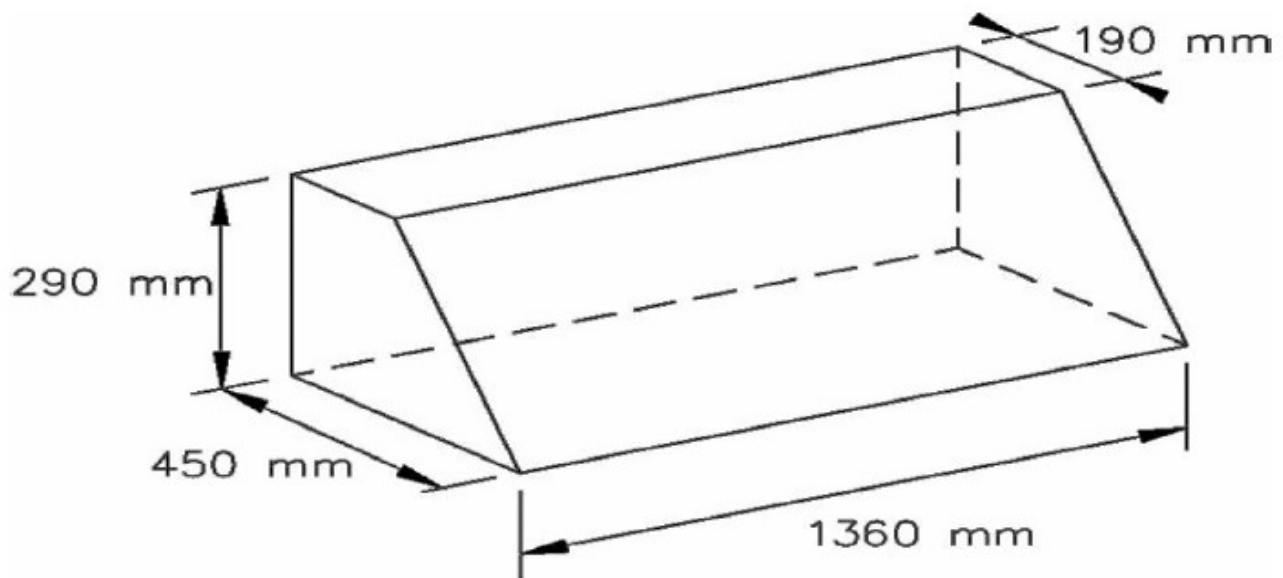
Carbon brakes are not allowed.

Bodywork / Chassis:

Transmission tunnel and floor may be modified to allow the passage of the exhaust only.

Front aerodynamic device/front bumper – The material and the shape are unrestricted and limited by the original plan and overall length of the car. The maximum width increase allowed is 6 inches overall. Openings may be made in the bumper but the total area must not exceed 2500cm. A splitter can be fitted, but cannot extend beyond the front bumper when viewed from above and not extend further back than the front edge of the front wheels.

Rear aerodynamic devices must have a maximum dimension defined in drawing 279-4. This device must join the bodywork and it must be entirely contained within the frontal projection of the car without rear-view mirrors.



The base of the box including the drawing must be the one with the largest dimensions. It must be positioned horizontally. The total volume may be extended section by section, with a part of the largest base remaining in contact with the bodywork, which means that at any point of the rear aerodynamic device, each section must not exceed the section 450mm x 290mm x 190mm, supports included. This aerodynamic device must be contained within the frontal projection of the car, and within the projection of the car seen from above.

Wheel arch extensions may be fitted but cannot be more than 6" wider overall than the original plan view of the car.

"Skirts" are not allowed. All devices designed to fully or partially fill the space between the sprung part of the car and the ground is forbidden. No protection can play a role in the aerodynamics of the car.

The front bulkhead may be reshaped (including cutting and welding) to allow engine fitment.

No electronic controls of suspension components are allowed.

Front inner wings and lower “chassis” legs may be modified to mount the engine, ancillaries and front suspension. Structural integrity must be maintained.

The original side and rear windows may be replaced with polycarbonate (Lexan). Nets may be used in place of front door glass. A polycarbonate (lexan) windscreen of the same thickness as original may be fitted.

Open top cars must have a roll cage fully surrounding the passenger compartment in accordance with the safety regulations. Nets must be fitted to the roll-cage structure over the side and top openings.

Electrical System: Unrestricted

Fuel System: Unrestricted

Weight Chart: Minimum weight of car without driver: 1400lb

Balance of Performance: The Technical Committee shall monitor the vehicle's performance with regards to “Balance of Performance (BoP)” adjustments (eg., weight, tire/rim size) and reserves the right to make alterations as deemed necessary to achieve fair competition.

Engine Capacity CCs	Number Valves	Multiplier: cc-wt. Factor	Car Weight alone	Car & Driver @ 180 Lbs
0-2300	2	0.696	Min 1600 lbs (for 2300cc)	Min 1780lbs
0-2000	3 or more	1.09	Min 2180lbs (for 2000cc)	Min 2360lbs
2063cc (1146x1.8)	12A Rotary	0.975 for S&B 1.00 for “peri”	2011lbs / 2063lbs	2194lbs / 2243lbs
2354cc (1308x 1.8)	13B Rotary	1.00 Peri-port allowed	2354;bs	2534lbs

GROUP 3 – 2WD Production Cars, NA up to 4000cc, forced induction up to 1600cc, 12A, 13B & 20B Rotary engines

Definition – Modified two and four-seater 2WD production cars

No four-wheel drive cars are allowed.

No composite or tubular chassis are allowed.

Normally aspirated engines up to 4000ccs.

12A, 13B and 20B Rotary engines.

Forced induction engines up to 1600ccs.

Engine

Modifications are unrestricted, unless stated elsewhere in these rules, but must retain production block and cylinder head castings

Induction system: Water or other liquids can be introduced into the intake system

Engine (non-family) swaps including motorcycle engines are permitted.

Engines must be located in their original general location

Rotary multiplying factor 1.8

Forced-induction multiplication factor 1.7

Transmission:

H Pattern boxes unrestricted except for the basic layout which must be the same as the original. Housing manufacturer is free.

Launch control and flat shift allowed. Differential modification is free. No active differentials are allowed.

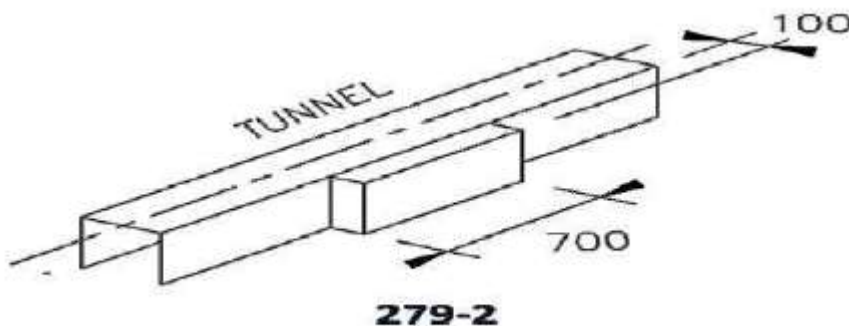
Front and Rear axles are free. Sequential boxes allowed. No Paddle shift allowed unless OEM supplied.

Steering: Unrestricted but must remain in original placement

Wheels, Tires & Rims: 13" dia. X 11", 14", 15" and 16" dia. X 10" wide Maximum tire width 245mm. 17" and 18" dia. X 8" wide. Maximum tire width 225 mm, exclusively DOT spec'ed tires.

Brakes: Brake systems shall have 4-wheel brakes on dual circuit. Handbrake if fitted must lock at least two wheels. Carbon fiber components not allowed.

Bodywork/Chassis



The front bulkhead may be reshaped (including cutting and welding) to allow engine fitment only. Engine bulk heads must be hermetically sealed between the engine and passenger compartment

The transmission tunnel may be modified or replaced with one fabricated from steel of original thickness as well as the housing and brackets for a rear axle. The floor structure between the front windscreen and the point on the floor that the front of the back seat would be can only modified to accommodate exhaust systems, roll cages, battery boxes, seats, fuel and oil tanks. Any material removed to accommodate the above items must be replaced with material of the same type and thickness. The floor area between the front of the rear seat section and the rear of the car may be replaced with a lighter material but must still remain sealed. Original brackets inside the body structure can be removed. Lightening of the interior panels above the floor is allowed.

Bonnet, trunk lid, tail gate and doors may be replaced with composite panels. Replaced panels must look the same and all function as original and be fabricated from multi-layered composite material. Front and rear wheel arches (fenders) may also be replaced with composite material.

Rear wings, front spoilers and wheel arch extensions may be fitted. The rear wing must not be taller than 6" above the height of the original roof-line (which may not be lowered in relation to the sills) or wider than the body at the point where it is mounted and a maximum of 60" wide. Wheel arches, bumpers, splitters and any other aerodynamic devise must not extend more than 6" front, rear or sideways from the original plan of the vehicle.

Suspension design and pick-up points are unrestricted as long they maintain structural integrity and are safely modified / manufactured. This includes altering the body shell to accommodate strut turrets and other suspension mounts.

Front inner wings and lower chassis may be modified to mount the engine, ancillaries and front suspension. Structural integrity must be maintained.

The original side and rear windows may be replaced with polycarbonate (Lexan).

Open top cars must have a roll cage fully surrounding the passenger compartment in accordance with the safety regulations. Nets must be fitted to the roll-cage structure over the side and top openings.

Electrical System Unrestricted.

Glass / Windows

Front windscreen shall be laminated type or Polycarbonate minimum thickness 1/8". All other glass can be substituted with polycarbonate minimum 1/16" thick. Drivers and front passenger window can be replaced with nets fitted to roll cage.

Fuel System: Unrestricted but shall meet safety requirements of Regulations herein.

Exhaust System:

Unrestricted however exhaust outlet shall exit behind the driver location or behind midpoint of wheel base whichever is rearmost.

Weight Chart

Minimum car weight without driver: 1400lbs

Engine Capacity CC	# Valves	Multiplier cc-wr. factor	Car Weight lbs. Min.	Car + Driver (180lbs)
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0-4000	2	1.0	0.60	2400 (for 4000cc)	2580
0-4000	3 or more	1.0	0.78	3120 (for 400cc)	3300
1146	12A Rotary	1.80	0.78	1609	1789
1308	13B Rotary	1.80	0.78	1836	2016
1962	20B Rotary	1.80	0.78	2755	2935
0-1600 forced induction	2 or more	1.70	0.78	2122	2302

GROUP 4 – 2WD and 4WD

Group 4 2WD and 4WD cars will run as a single class for championship points and awards.

Definition:-Cars perfectly legal for the open road and are available for sale through a dealer network of a manufacturer recognized by the FIA. These cars must be manufactured in quantities of either 2500 units or 200 units as per FIA homologation.

Closed Wheel AWD and 2WD vehicles allowed

AWD cars must be production base original body, no tubular chassis are allowed.

Tubular 2WD chassis with recognized mass-produced bodywork are permitted.

2WD cars may relocate engine and or gearbox from original location.

A different Engine, gearbox, rear axle or transaxle may be fitted.

Engine - Modifications unrestricted. However, all forced induction engine must have a data logger fitted that monitors the boost and other engine parameters. This will allow boost levels to be monitored and adjusted to ensure fair performance between all cars.

- 5000 cc maximum allowable capacity.
- 2600cc maximum allowable forced induction capacity
- 12A Mazda Rotary engines allowed = 1146 cc
- 13B Mazda Rotary engines allowed = 1308 cc
- 20B Mazda Rotary engines allowed = 1962 cc

Equivalency Factors

Forced Induction Piston Engine total swept volume - multiply by 1.7

Naturally aspirated Rotary Engine total swept volume - multiply by 1.8

Forced Induction Rotary Engine total swept volume - multiply by 1.3

Weight Calculation Factors:

Minimum Weight of any car – 1200 lbs without driver

4 Wheel Drive /All-Wheel Drive - 0.70 lbs/cc

0-5000cc 2 Wheel Drive Piston – 0.625 lbs/cc to a maximum of 2763 Lbs *

2 Wheel Drive Rotary 12A & 13B + Motorcycle based engines – 0.70 lbs/cc

2 Wheel Drive Rotary 20B – 0.59 lbs/cc.

Racing weight Calculation examples:

(2WD) NA Motorcycle race chassis 1340 cc X .70 = (938) 1200 + 180 = 1380 lbs.

(2WD) NA Mazda 13B race Chassis = 2354 X 0.70 = 1648 + 180 = 1828 lbs.

(2WD) NA Mazda 20B race Chassis = 3532 X 0.59 = 2084 + 180 = 2264 lbs.

(2WD) NA Piston engine race chassis = $2738 \times 0.625 = 1712 + 180 = 1892$ lbs.
(2WD) NA Piston engine race chassis = $3500 \times 0.625 = 2188 + 180 = 2368$ lbs.
(2WD) NA 0- 5000cc race Chassis = 5000×0.625 to a maxi $2763 + 180 = 2943$ lbs.
(2WD) FI M/C 1340cc race Chassis = $1340 \times 1.7 \times 0.70 = 1595 + 180 = 1775$ lbs.
(2WD) FI 1804cc race Chassis = $1804 \times 1.7 \times 0.625 = 1917 + 180 = 2097$ lbs.
(2WD) FI Mazda 12A race Chassis = $2063 \times 1.3 \times 0.70 = 1878 + 180 = 2058$ lbs.
(2WD) FI Mazda 13B race Chassis = $2354 \times 1.3 \times 0.70 = 2143 + 180 = 2323$ lbs.
(2WD) FI 2600cc race Chassis = $2600 \times 1.7 \times 0.625 = 2763 + 180 = 2943$ lbs.
(4WD) FI 1800cc race Chassis = $1800 \times 1.7 \times 0.70 = 2142 + 180 = 2322$ lbs.
(4WD) FI 2047cc race Chassis = $2047 \times 1.7 \times 0.70 = 2436 + 180 = 2616$ lbs.
(4WD) FI 2185cc race Chassis = $2185 \times 1.7 \times 0.70 = 2600 + 180 = 2780$ lbs

Rim & Tire Restrictions

2WD - 13 inch width X 19 inch diameter maximum allowed. Tire size for 2wd cars will be limited to 325 mm.

For 16 inch diameter and below rims, maximum tire size 330 mm.

AWD - 10 inch rim width X 19 inch diameter maximum allowed. Tires sizes for 4wd cars will be limited to 305 mm. in width.

A maximum of 8 Slick tires of any make or compound are allowed for qualifying and racing per event. Rain tires quantities are free.

These tires must be declared to the scrutineers and registered before qualifying commences.

Body Work for Production based chassis.

The body structure of the vehicle between the front and rear windscreens must be identified as having been derived from series produced vehicle generally available for purchase by the public, of which 2500 units were manufactured in any one production year.

Unlimited lightening or substitution of panels or body structure may be carried out provided that in the opinion of the scrutineers an unsafe condition is not produced. However, the passenger compartment must still be sealed from the engine compartment, wheel arches and fuel cell etc.

Front and rear windscreen can be substituted with a polycarbonate material such as LEXAN.

Body Work for Tubular based chassis

Only 2WD cars can use tubular type chassis made of steel, "i.e. space frame". No Composite chassis. These chassis must carry a recognized mass-produced body style. Body work can be made from any metal or composite material. Examples of these are from SCCA GT2 Regs. These basically are a production base body shape fitted to a specially built tubular steel chassis. Chassis derived from one make sports car series like those currently used. I.E. SX4 and Megane. Production based two-seater sports cars, manufactured to 200 per annum minimum like Lotus Elise are also eligible for this group.

Suspension and Running Gear

The principle of the suspension may be changed. For example, strut suspension

may be substituted by wishbone type suspension. A live rear axle may be substituted by independent rear suspension.

Transmission, final drives and trans-axle types are free.

Traction control and launch control are allowed.

Brakes - Free. Carbon fiber components are not allowed.

Fuel

The fuel used must be commercially available gasoline of either the automotive or aviation type or an approved Racing blend. The use of Ethanol or other such substances as a primary or secondary injected fuel will be allowed. Methanol can only be used as a secondary fuel source.

No nitrous oxide or such injected systems allowed.

Group 4 Procedure for Balance of Performance (BoP)

To create fair competition in the Group, data loggers will be fitted to forced induction engines. At the end of each race, Race Control may request a competitor's boost level history for review. To maintain Equivalency in Performance, Race Control shall have the right to alter boost levels of a car for the next.

Alternately, Event Control shall also have the right to added pre-determined weights to the lead cars to achieve Equivalency in Performance. Any car that does not use a data logger will not be included in the results.