

SEPANG 1000 KM
2025
TECHNICAL REGULATION

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SEPANG 1000 KM 2025

PART II. TECHNICAL REGULATIONS

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

SECTION A – GENERAL

NOTE:

FIA Group N and Group A Cars must have current and valid homologation

Eligible cars must be mass-produced, Series Production cars, having at least 4 seats and in accordance with the dimensions defined by the FIA for Touring Cars.

Hybrid cars are defined by vehicle having two power sources to power the vehicle. The control system on these vehicles is free; however, the other mechanical parts of the car are subject to this regulation.

It should be clearly understood that if the following texts do not clearly specify that you can do it, you should work on the principle that you cannot.

READ IT, do not rely on memory. The clauses in the regulation are to be read as follows:

‘shall’, ‘must’ and ‘will’ indicate a compulsory requirement.

‘Should’ indicates a recommendation.

‘May’ indicates an option.

All parts of the car shall be identical to those used in the production model except where otherwise permitted by these regulations.

Standard: The word 'Standard' used within these technical regulations as a description of components is to be interpreted as 'The specified component from the manufacturers' or partners' original parts list for the model / engine shown on the entry form or registration form. No modifications permitted beyond the repair or adjustment processes specified by the manufacturer. Checking will be by comparison to spare parts supplied by the manufacturers official agent'.

Production: refers to original specification parts and components intended for a certain market and/or country. To avoid dispute, the competitors must clearly states in the vehicle specification sheet, the actual market and/or country for which the vehicle was intended.

Original Equipment/ Stock: refers to optional accessories made by the chassis manufacturer. The accessories must be mass produced and offered for sale to the general public.

STANDARD PART: Is a part, the specification, features, location and method of operation of a part are as provided when new by the motor manufacturer for the model and date of car.

STANDARD PATTERN PART: Replacement part that has a similar form shape and features as the standard part and is made using similar materials and manufacturing processes e.g. A standard part manufactured by a non-original equipment supplier that is fully interchangeable with the standard part.

Where clearly permitted in these regulations a part may be:

- i) Re-worked, provided that the part remains identifiable as to its origin. The extent of the rework will only be as allowed by these regulations. Complete substitution is forbidden, or
- ii) Removed, or
- iii) Added, or
- iv) Substituted, by another of similar function but different performance characteristics. The limitations on the specification of the substituted part will be stated.

Where a part is defined as 'free' then it may be reworked, removed, added or substituted.

Rework of adjoining parts is only permitted where specifically allowed by these regulations.

It is permitted to repair a part, however the method of repair shall be such that the physical characteristics related to its function shall be the same as a new standard part.

Lightening of a component is allowed provided the component is non-structural and it is done in a neat and safe manner (e.g. no rough finishing etc). The scrutineers will have the right to ask a competitor to replace part(s) and/or component(s) that are deemed dangerous.

Threaded fasteners are free, provided the material type is not changed. Titanium is prohibited for any parts.

The words "Variable Cam Engine" refers to engines, which have a device that alters the characteristic of the cam timing or advance. This may be actuated via hydraulic pressure or electrically.

CHASSIS: Chassis must be as per manufacturer's dimensions and design. VIN numbers will be checked to ensure the chassis is that of a standard car. VIN numbers must be clearly visible and readable by the Technical Director / Scrutineer.

It is the responsibility of the entrant to ensure that the car meets the criteria set forth in this technical regulation.

In the case of any dispute, the interpretation of this Technical regulation or the Technical Bulletin, is up to the Technical Delegate.

SECTION B – GENERAL INFORMATION

GENERAL

The Organiser reserves the right to amend the present regulations in agreement with the local ASN. The regulations are subject to change, which will be published via Additional Supplementary Regulations.

To be eligible, all cars must comply with the prescriptions of the present technical specifications. Any unauthorised modification is strictly prohibited.

Only the organiser decides on the admission of a car and the decision taken is final. This point is explicit and completely accepted by all the competitors and drivers by submitting their entry. Any protest against the classification of admission of a car following the organiser's decision is consequently not possible.

Art. 1 ELIGIBLE CATEGORIES

Categories eligible for the 2025 Sepang 1000 km are as follows:

Malaysia Touring Sixteen Hundred (MT-1600) Category

1.1 MTC – Turbo Class

1.1 MT2 – Naturally Aspirated Class

Art.2 STANDARD TECHNICAL REQUIREMENTS

2.1 GENERAL

The provisions of Art. 253 for Group N of Appendix J of the FIA International Sporting Code apply in full.

2.2 ADDITIONAL FASTENERS

Two additional safety fasteners must be fitted for each of the bonnet and boot lids. The original locking mechanisms must be rendered inoperative or removed.

2.3 DRIVER'S SEAT

The original driver's seat must be replaced by an FIA-homologated competition bucket seat (8855/1999 standard) with five (5) passages for the safety harness straps.

The original seat mountings may be removed. This is not considered as a structural part. The use of the competition seat mountings homologated with the bucket seat is recommended. Hans compatible seats are recommended.

2.4 TOWING DEVICE

All cars will be equipped with a rear and front towing-eye. It can be steel tow hook with minimum 50mm inside diameter or Strap type. This towing-eye will only be used if the car can move freely. It will be clearly visible and painted in yellow, red or orange.

For steel tow hook maximum protrude from the front body work is 6cm and 3cm at the rear part.



2.5 SAFETY HARNESS

A safety harness equipped with a turn buckle release system and having a minimum of five (5) anchorage points, homologated by the FIA in accordance with Article 253.6 of Appendix J, is compulsory. Hans compatible harness is recommended.

2.6 EXTINGUISHERS – EXTINGUISHING SYSTEMS

Automatic extinguishers homologated in accordance with Article 253.7.2 of Appendix J are recommended. During events, all plumbed-in extinguisher systems must be in an 'Armed' condition (ie be capable of being operated without the removal of any safety device) at all times whilst taking part in practice sessions or races including until released from parc ferme. (Manual should be armed).

2.7 HEAD AND NECK SUPPORT (HANS)

Head and Neck Supports (HANS) safety device is compulsory for all categories.

2.8 HELMETS (FIA Appendix L Chapter III Art. 1)

All drivers must wear crash helmets which meet one of the standards listed in FIA technical list N° 25 of Appendix J.

Only helmets approved in accordance with FIA standard 8858 (Technical List N°41), 8860 (Technical List N°33) or 8859 (Technical List N°49) are authorised.

No helmet may be modified from its specification as manufactured, except in compliance with instructions approved by the manufacturer and one of the FIA listed standards organisations, which certified the model concerned.

Any other modification will render the helmet unacceptable for the requirements of the present article.

2.9 MATERIAL OF THE EQUIPMENT AND PARTS

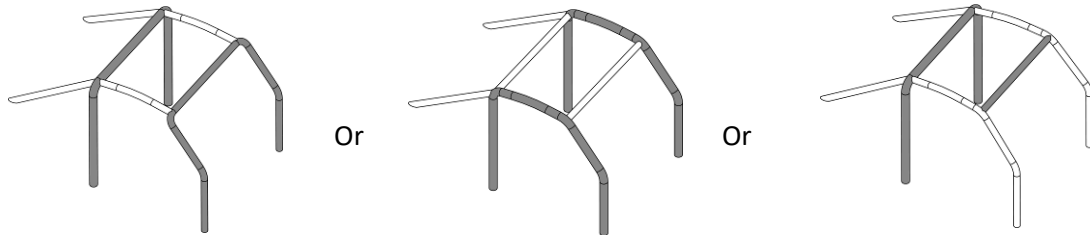
- i) The use of titanium, ceramics, magnesium, or composite or reinforced fibre materials is prohibited, unless it corresponds exactly to the original material.
- ii) The use of fire-resistant, fibreglass-based composite material, is authorised only for deflectors and air ducts for radiators and engine.

- iii) For these parts, the use of carbon or Kevlar is also authorised on condition that only one layer of fabric is used and is affixed to the visible face of the part.

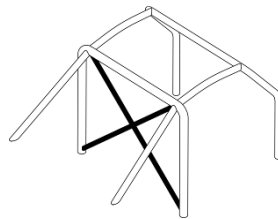
2.10 ROLLOVER STRUCTURES

Rollcage must comply with minimum specifications outlined in FIA 2020 Appendix J-253-8, particularly in Art 8.3.

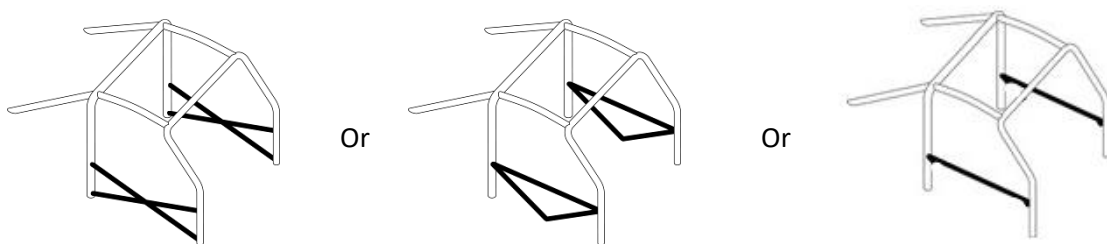
Main Cage



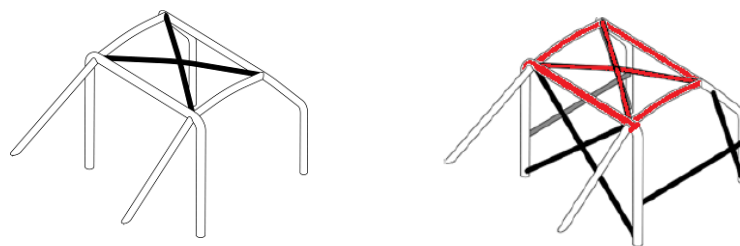
(+) Diagonal Member



(+) Door Bars



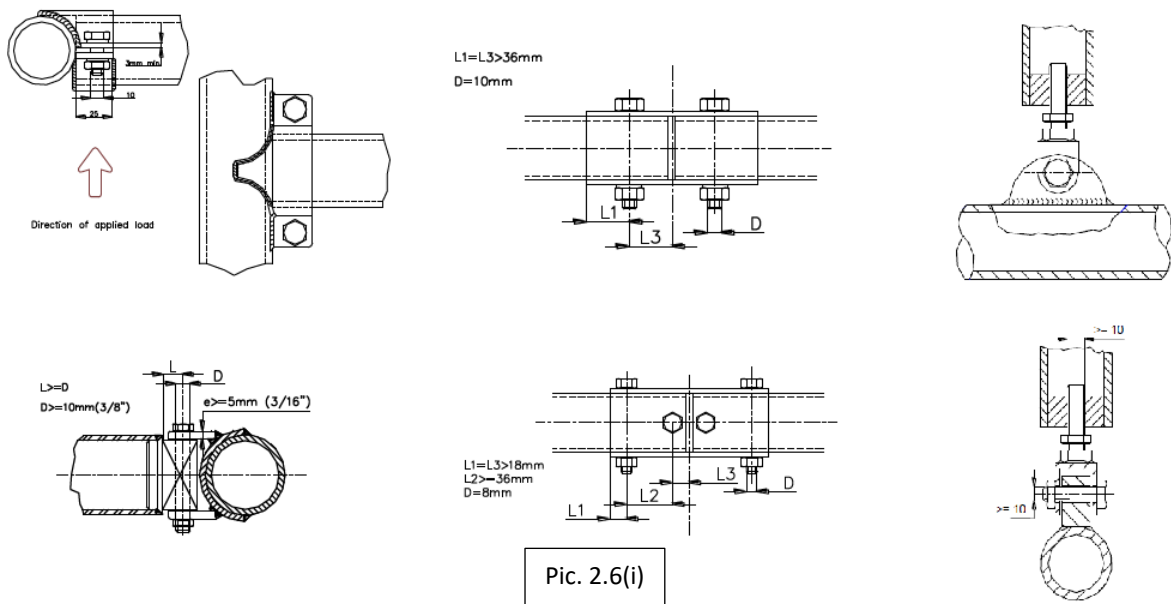
(+) Roof Reinforcement



FIA Appendix J – 253 – 68

Roll cage mounting points may be welded or bolted to the body (pic 2.6 (i)). They may be attached to the boot and rear wheel arches. Minimum number of points must be six (6) for touring cars. **Only chromoly and CDS material will be accepted.**

Safety roll bar that is near longitudinal and near to vertical single piece tubular hoop located along the right or left side of the vehicle, the front pillar must follow the windscreen pillar (pic 2.6 (ii)).



Pic. 2.6(ii)



Should removable members be used in the construction of a safety cage, the dismantable joints used must comply with a type under FIA Article 253.

2.11 LIGHTS

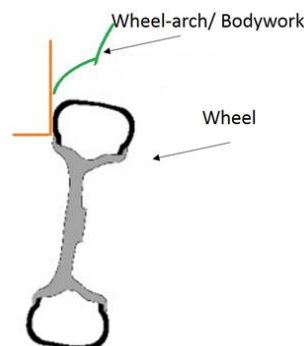
All front, tail and brake lights must be operating at all times during the race or practice. Cars with malfunctioning lights will be flagged in with mechanical flag (Black with Orange Disc) to carry out repairs on lights. The Clerk of the Course shall immediately inform the Competitor, who must remedy the situation during the next pit stop, unless

the Clerk of the Course, for safety reasons at his own discretion, decides to order the immediate stopping of the car in order for repairs to be carried out.

Note: Headlight flashing is permitted during qualifying to signal a flying lap and during the race to indicate overtaking to back markers or lapped competitors. Flashing headlights are strictly prohibited while the car is in motion within the pit lane. Each flashing sequence must not exceed 2 seconds or contain more than 4 flashes. **The STROBE LIGHT is strictly forbidden and it is reserved exclusively for Official Vehicles.**

2.12 WHEEL VISIBILITY

The upper part of the tyre, down to the flange over the wheel must be within the perimeter of the wheel-arch/ bodywork when in plan view and viewed from the front. Kindly refer to the respective article(s) of each category/ class for the specification/ dimension.

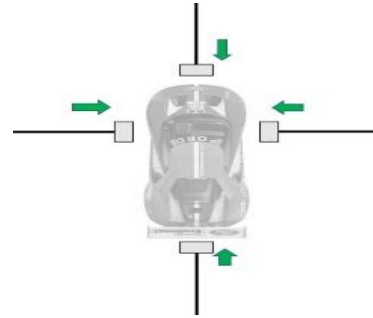


2.13 CHECKING TOOLS

The organiser will have a stock of equipment/ tools at event(s) for use in eligibility checks on the following components:

- i) Ground Clearance
- ii) Vehicle Weight
- iii) Bore & Stroke
- iv) Fuel Tester
- i) Ground Clearance
 - a) No part of the car, with the exception of the rims or tyres, must touch the ground when all the tyres situated on the same side of the car are deflated.
 - b) In order to check this point, the air valves of the tyres on the same side of the car will be removed.
 - c) This test shall be carried out on a flat surface.

The measurement will be conducted in a designated area during technical scrutineering. The measuring tools are available to the participating teams to check the minimum ground clearance after consultation with the technical director.



2.14 ANTI-THEFT SYSTEM

The locking system of the anti-theft steering lock at the steering wheel column must be rendered inoperative.

2.15 BALLAST

Any ballast required must be attached to the shell/chassis via at least 4 mounting points using bolts. Where ballast is fitted, it must be fitted in the passenger's location. Refer diagram to Appendix 1.

2.16 MINIMUM WEIGHT

Minimum racing weight will not include non-compulsory items such as driver cooling system, team camera, radio, etc.

2.17 FUEL

Only unleaded Petrol (max. Ron-97) available at pump stations in the local market can be used during the event without any additional additions and accessible in the market nationally, since this word is well known.



SECTION C – MALAYSIA TOURING PRODUCTION SIXTEEN HUNDRED (MT-1600) CATEGORY

(The team must formally submit a written request to the Technical Delegate to confirm the eligibility of their vehicles and/or engines if the technical specifications deviate from production standards. The organizer may at its sole discretion approve vehicles and/or base engines of the different eligibility)

C1. MALAYSIA TOURING CAR (MTC) – TURBO CLASS

SPECIFIC MODIFICATION (UNDER ARTICLE 277 OF FIA APPENDIX J) VALID FOR MALAYSIA TOURING CAR (MTC) – TURBO CLASS CAR

(Other specification not mentioned, please refer to respective articles of FIA at www.fia.com)

1) GENERAL SPECIFICATION

Permitted Vehicles

FIA Article 254 : Group N Cars 1051cc to1600cc

FIA Article 255 : Group A Cars 1051cc to1600cc

FIA Article 277 : National Series Production Cars 1051cc to 1600cc

(2,500 units minimum production)

The Malaysia Touring Car (Turbo Category) are the touring car or the large-scale series production cars, petrol engine, cars are based on Turbo charged mass production engines is allowed up to 1600cc for only Two Wheel Drive (2WD) (front or rear wheel drive), models and are fundamentally different from each other. Only the Supercharged / Turbocharged Engine capacity. Eligible Cars are those cars of which at least 2,500 identical units must have been produced in 12 consecutive months and which have been available for sale. The supercharge / turbocharge system must be kept original and inlet restrictor apply. The restrictor design must be complied with the technical drawing.

The organizer will have the right to grant special dispensation for cars which do not fit the above criteria. To ensure stability and to safeguard the investment of the competitors, the minimum production date will be pegged at the year 2015 until the current year in the Gregorian calendar.

To create a more level playing field for competition, the organiser has the ability to apply fine adjustments in the performance of individual makes to allow each model to be competitive. A calculation tool allows the targets for balancing the different car models to be met, without human interpretation or decision-making, using mathematical formulas based on the quantified, public, specific, measured data obtained during each race.

The following modifications is subject to be applied either reduce or add at any time by notice:

- i) Minimum weight of the car
- ii) Ride height
- iii) Size of Restrictor

iv) Any other technical modification that the organiser may deem necessary.

Only the chassis and engine of the same manufacture brand may be used for conversion to the MTC class.

Bodywork and all other components must adhere to the model of the registered for the competition.

Model of the manufacture by BMW M2/M3, Honda Civic Type R FK8, Honda Civic Type R FL5, Toyota GR Yaris and VW Golf R chassis and the suspension component are prohibited to use in the MTC.

2) SPECIFIC MODIFICATONS

M1. SEALING

Engines must have two bolts on the camshaft covers drilled with 3mm holes for the purposed of sealing. Similarly, two bolts on the oil sump pan must also be drilled with 3mm holes. It is the competitor's sole responsibility to ensure that all metal seals and any additional paint seals, are kept in a clean and unbroken condition. Only the scrutineer can give permission for seals to be broken and / or removed.

M2. MINIMUM WEIGHT

The following minimum Car dry weight (excluding Driver and fuel) must be respected at all times during the Event. BOP can/ will be implemented after the Official Pre-Season Testing and/or Official Practice of Round 1.

M2.1 BALANCE OF PERFORMANCE (BoP)

- i) Balance of Performance device (data logging weight & ride height) appointed by the Organiser is mandatory.
- ii) For the BoP outcome, organizer will confer with the MTCC committee members to determine a different sized restrictor or handicap weight to be used for a fairer competition.
- iii) Balance of performance is also determined by GPS to measure the straight-line speed from 100km/h to 170km/h.
- iv) All relevant data will be shared with M-Touring Production.
- v) Standard Restrictor sizes before any adjustment for General Model:

Weight (kg)	Diameter of the Restrictor (mm)			G16E
	Below 1050cc	1051cc – 1399cc	1400cc – 1600cc	1618cc
1030 kg	29	28	27	24
1080 kg	30	29	28	25
1130 kg	31	30	29	26

***Engine restrictor only applicable for 2025. Teams to prepare the restrictor 1 size up and down during the race weekend. BOP for Restrictor will be changed (if required) by decision of Technical Director.**

vi) BoP for the Specific Model:

Make	Model	Engine	BOP Ballast Weight (kg)	Turbo Inlet Restrictor (mm)	Total min. Racing Weight (kg)
Honda	City Hatchback	L15 B/C	Nil	28	1,080
Honda	CRZ	L15 B/C	Nil	28	1,080
Honda	Civic FK7	L15 B/C	Nil	29	1,130
Honda	Civic FE	L15 B/C	Nil	29	1,130
Suzuki	Swift Sport ZC33	K14 C	-30	N/A	1,000

*Weight of the car is measured with a maximum of 3 litres of fuel.

These minimum weights must be respected at all times during the event, in particular when the car crosses the finish line. It is permitted to complete the weight of the car by one or several ballast, provided that they are strong and unitary blocks, fixed by means of tools with the possibility of affixing seals, and placed on the floor of the cockpit or the luggage compartment, visible and sealed by the Scrutineers. The ballast must be attached to the shell/chassis via 8.8 class bolts, with a minimum diameter of 8 mm, and counter plates, according to the drawing below. The minimum area of contact between shell/chassis and counter plate is 40 cm² for each fixing point. The ballast must not have sharp edges. The scrutineer would have the rights to reject any ballast which is deemed unsafe.

If a car loses a part during a Qualifying Session or a Race, the weight of this part may be taken into account during weighing at the discretion of the Stewards, following consultation with the Technical Delegate.

M3. ENGINE

M3.1 GENERAL

Maximum four (4) stroke piston engine with the cylinder capacity with single supercharger / turbocharge not exceeding respective class limit. The engine must be fully production without modification. The position of the engine must be in accordance to the original layout from the original model that the engine came from.

The elastic components of the engine mountings may be replaced by others, regardless of their material, provided that they have the same dimensions as the original ones and that the position of the engine

Where a minimum component weight is specified, this must be respected unless the production component is lighter than the specified minimum. Should a production component be chosen, this component must not be altered or modified in any way.

M3.2 MAXIMUM ENGINE CAPACITY

M-Touring Production is open to all 1600cc class as market definition.

The organiser has the right to accept any turbo vehicle more than 1600cc will require MTCC Committee approval after all concerns have been considered.

The volume generated in the cylinders as defined as:

$V = 0.7854 \times \text{Bore}^2 \times \text{Stroke} \times \text{No. of Cylinders}$.

The results would be rounded up to 2 decimal places.

M3.3 CYLINDER HEAD

Not exceed 1600cc. Head studs are open following standard size

M3.4 CAMSHAFT

Remain original production with no modification allowed.

M3.5 VALVES

Remain original production with no modification allowed.

M3.6 CYLINDER BLOCK

Remain original production with no modification allowed.

M3.7 PISTONS AND RINGS

Remain original production with no modification allowed.

M3.8 CRANKSHAFT

Remain original production with no modification allowed.

M3.9 CONNECTING ROD

Remain original production. Rod bolts are open following standard size

M3.10 ENGINE BEARINGS

Remain original production with no modification allowed.

M3.11 ENGINE PULLEYS

Remain original production with no modification allowed.

M3.12 TELEMETRY

All forms of data transmission from the moving car are forbidden, apart from two-way radio communication.

Impulse generators giving information on timing are authorised, provided that they are separate parts which have no connection with the control of the engine.

An on-board data recording system, without an accelerometer, is authorised.

M4. AIR INTAKE SYSTEM**M4.1 IDLE UP AND COLD RUNNING ENRICHMENT COMPONENTS AND EXHAUST GAS RECIRCULATOR**

May be removed, provided that any aperture downstream of the throttle body(s), created by their removal, is plugged.

M4.2 INTAKE MANIFOLD

Remain original production with no modification allowed.

M4.3 THROTTLE BODY

Remain original production with no modification allowed.

M4.4 AIR FILTER

The air lines upstream of the air filter box are free and the air lines downstream of the air filter box towards the throttles are free. The air filter box is free under the following conditions:

- i) There must be a filtering cartridge in the box. This cartridge is free as long as it filters the dust particles. All the air admitted to the engine must pass through this air filter.
- ii) Only one air outlet from the filter to the throttle body. Engine breather from the engine to the intake must be rendered inoperative and must be completely blocked.
- iii) The use of fiber glass and/or composite material is authorized provided that it is fire-resistant. The position of installation of the air filter box in the engine compartment is free.
- iv) K&N type filter units do not require a filter box

M5. FUEL & IGNITION SYSTEMS

Spark Plugs, high tension cables, ignition coils are free.

M5.1 FUEL INJECTORS

- i) Any commercially available fuel injectors may be used but the number is limited to one injector per cylinder.
- ii) Fuel regulators and fuel rail are free
- iii) Engine Control Unit (ECU) are free

M.6 SUPERCHARGING/TURBOCHARGER

M6.1 The original supercharging system must be kept.

M6.2 No additional supercharging device relative to the original is authorised.

- M6.3** The restrictor must be check and approve by MTC Technical Delegate
- M6.4** This diameter may be revised at any time by MTC Technical Delegate.
- M6.5** All the air necessary for feeding the engine must pass through this restrictor.
- M6.6** The turbo speed sensor must not be situated between the restrictor minimum diameter and
- M6.7** The plane tangent to the top of the blades of the impeller wheel.

Drawing details:

- i) The maximum internal diameter of the restrictor is X mm.
- ii) This diameter must be maintained for a minimum length of 3 mm.
- iii) This length is measured upstream of plane A.
- iv) Plane A is perpendicular to the rotational axis of the turbocharger and is at a maximum of 47 mm upstream of plane B, measured along the neutral axis of the intake duct.
- v) Plane B passes through the intersection between the most upstream extremities of the wheel blades and a cylinder of X mm diameter the centreline of which is the rotational axis of the turbocharger.

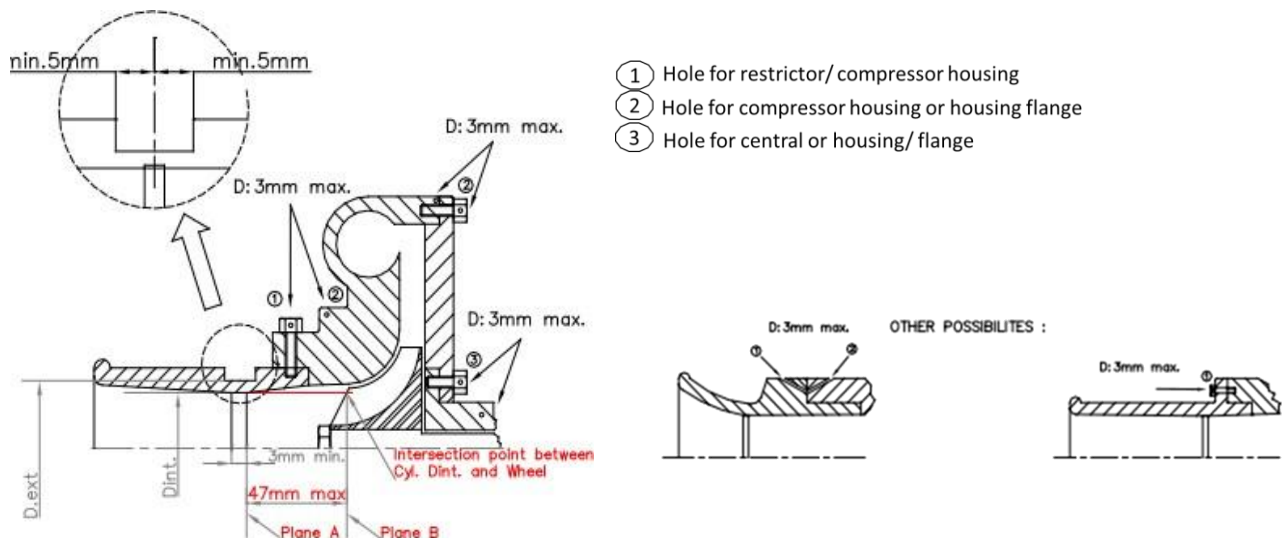
This diameter must be complied with, regardless of the temperature conditions. The external diameter of the restrictor at its narrowest point must be less than $X+6$ mm, and must be maintained over a distance of 5 mm to each side.

The mounting of the restrictor onto the turbocharger must be carried out in such a way that two screws have to be entirely removed from the body of the compressor, or from the restrictor, in order to detach the restrictor from the compressor. Attachment by means of a needle screw is not authorised.

For the installation of this restrictor, it is permitted to remove material from the compressor housing, and to add it, for the sole purpose of attaching the restrictor onto the compressor housing.

The heads of the screws must be pierced so that they may be sealed.

The restrictor must be made from a single material and may be pierced solely for the purpose of mounting and sealing, which must be carried out between the mounting screws, between the restrictor (or the restrictor/compressor housing attachment), the compressor housing (or the housing/flange attachment) and the turbine housing (or the housing/flange attachment)



Drawing M6.7

M7. EXHAUST SYSTEMS

- M7.1** The exhaust manifold not modification allowed. The exhaust tail pipe must exit at the rear of the vehicle.
- M7.2** The exhaust system is free downstream of the turbocharge exhaust outlet.
- M7.3** Variable exhaust systems are prohibited. If the vehicle is originally equipped with such a system, it must be rendered inoperative.
- M7.4** The exit of the exhaust pipe must be situated at the rear of the car, within the perimeter of the car, and be less than 10 cm from this perimeter.

M8. LUBRICATION SYSTEMS

M8.1 CATCH TANK

(Oil/Air Separator): Compulsory. Minimum capacity; 2000cc.

M8.2 CAM COVER(S)

May be internally baffled to inhibit oil being dispersed into breather hose(s). Breather hose adapter fitting is free. However, the outside appearance and dimensions of the rocker cover(s) shall remain original.

M8.3 OIL SUMP

The original sump may be reworked to:
To fit internal baffles, and/or gates.

M8.4 OIL PUMP

The original oil pump may be reworked and modified to:

- i) Increase its capacity provided that it remains in the original location.
- ii) The discharge valve spring may be substituted to vary the oil pressure.
- iii) The oil pickup may be reworked or substituted.

M8.5 ENGINE OIL COOLERS AND OIL COOLER DUCTING

Free, provided that:

- i) They are located within the body work, and
- ii) The ducting serves only to deliver air to the oil cooler.

M9. COOLING SYSTEM

M9.1 A new radiator may be used on the following condition:

- i) It must come from a model of automobile of a manufacturer produced more than 2500 units.
- ii) Be Mounted in the Original Location. The fixing is free design.
- iii) The radiator cap and its locking system are free.
- iv) The original expansion chambers may be replaced by others provided that the capacity of the new chambers does not exceed 2 litres and that they are placed in the engine compartment.
- v) The liquid cooling lines external to the engine block and their accessories are free.
- vi) Lines of a different material and/or diameter may be used.

M9.2 WATER PUMP

Must retain original standard, but the water pump drive pulley is free.

M9.3 INTERCOOLER

A new intercooler may be used on the following condition:

- i) It must come from a model of automobile of a manufacturer produced more than 2500 units.
- ii) Be Mounted in the Original Location. The fixing is free design.

M9.4 THERMOSTAT

- i) The thermostat is free, as is the control system and the temperature at which the fan cuts in.
- ii) Provided that they are fitted in the original location without any modification to the bodywork, the radiator and its attachments are free, as are the screens and the air cooling lines upstream of the radiator.

M10. TRANSMISSION

M10.1 GENERAL

- i) The gears and the method of engagement (synchromesh or dog clutch) is free.
- ii) The inside of the original housing is free but only steel or aluminium alloy parts may be used, except for the bearings and gearshift forks which may be made from bronze or from copper-based alloy as well.
- iii) Housing in aluminium
- iv) An alternative non-production or sequential gearbox with maximum 6 gears may be fitted in replacement to the original gearbox. **Paddle shifts are permitted.**
- v) Limited Slip Differentials (LSD) are permitted.
- vi) **Gearbox mounting is free, should be minimum 3 mounting.**
- vii) The original gearbox housing may be equipped with two (2) oil circuit connections.
- viii) The sole purpose of these orifices must be to connect the outflow and inflow lines of the oil circuit.
- ix) Modifications to the bodywork for the passage of the new gearshift control are authorised only if they are not at variance with other points of these regulations.

M10.2 GEAR RATIOS

Gear ratios are free. However, entry/entrance need to submit their gearbox ratio and final drive as a declaration.

M10.3 GEAR SELECTION

Modifications to the bodywork for the mounting and passage of any new gearshift control are authorised only if they are not at variance with other points of these regulations.

M10.4 DIFFERENTIAL

Free. Electronically and hydraulically control differential are not allowed.

M10.5 TRACTION CONTROL/ LAUNCH CONTROL SYSTEMS

Only Factory OEM control systems are allowed. All forms aftermarket or motorsport of traction control and launch control are prohibited. All sensors on the wheels, drive shafts and differential are prohibited. ABS is permitted.

M10.6 CLUTCH

Maximum number of plates are (2) and diameter of friction plate must not smaller than 183mm. The friction disc(s) must not be made from carbon. The clutch must be fixed to the engine flywheel. The original location of the clutch must be retained.

M10.7 TRANSMISSION COOLER

Oil radiators, as well as a system for circulating the oil without generating pressure, are authorised.

M10.8 FLYWHEEL

- i) Free provided that the material is the same as the original flywheel. The minimum weight is 4000 grams.
- ii) The original flywheel may be lightened to comply with the authorised weight through the removal of material only, provided that the original flywheel may still be identified.
- iii) The starter crown may not differ from the original.
- iv) If the original vehicle is fitted with a double type flywheel, this flywheel may be replaced by a single flywheel, provided that the starter crown keeps the same characteristics as the original one (number of teeth, head and foot diameter, width of the teeth).
- v) In all cases, the external diameter of the friction disc of the clutch mechanism must not be less than 183 mm

M11. SUSPENSION

M11.1 FRONT RUNNING GEAR

- i) The joints may be of a different material from the original ones (e.g. harder silent blocks, aluminium, Uniball joints, etc.).
- ii) The position of the rotational axis of the pivot points may be moved by a maximum of 20 mm in relation to the original position of the rotational axis.
- iii) The original suspension part may not undergo any modifications, with the exception of the making of circular grooves for the fitting of stops, the fitting of spin locking devices (grub screws, pins, bolts or similar) for the eccentric bushes and the machining of the tapered bores for the fixing of the ball joints to transform them into cylindrical bores, the diameter of which corresponds to the largest diameter of the original tapered bore.
- iv) This means that, after removing the new joint of the suspension part, an original suspension joint can be fitted and that the original operation of the suspension part can be restored.
- v) If the original housing of a joint is non-cylindrical, the machining of this housing so as to obtain a cylindrical shape is permitted.
- vi) In the case of an original crimped joint in a suspension part, it must be possible, after removing the new joint, to fit the original joint in its housing.
- vii) However, it is not necessary for the initial operation of the suspension part to be restored.
- viii) The suspension ball-and-socket joints situated on the arms at the lower triangle on the wheel side may be freely replaced, provided that the fixation points on the arms are not modified.
- ix) The position of the new rotational point may be moved by a maximum of 20 mm, following all the axes in relation to the initial rotational point.
- x) The steering rods the steering joints and their connecting parts are free but must be made from ferrous material.

- xi) The upper joints of McPherson suspension parts of the front running gear are free provided that the original mounting points, on the bodyshell side, are retained and that the adjustment of the mounting point of the suspension part involves a maximum displacement of 20 mm following all the axes.
- xii) This means that the upper joints, adjustable or non-adjustable, may assume an eccentric position of a maximum of 20 mm in relation to the original articulation point.
- xiii) Modifications to the bodyshell are not authorised, but three (3) holes of a maximum diameter of 10.5 mm may be bored in the upper bell housing of the shock absorber for the mounting of the upper joint support if, in the original bell housing, there are no, or not as many, fixation holes.
- xiv) If an original McPherson part is bolted on to the wheel uprights, the wheel camber of the front running gear may be adjusted by this bolted connection.
- xv) Holes for the mounting of suspension parts may be made at the anchorage points of the bodyshell, of the cradle or the front cross member, if these are original parts.
- xvi) In relation to the original articulation points, these holes must be situated at a maximum distance of 10 mm at right angles to and parallel to the transversal axis of the vehicle.

M11.2 POWER-STEERING

- i) The driving pulley of a hydraulic power-steering pump is free.
- ii) A hydraulic power-steering pump may be replaced with an electric power-steering pump, provided that this electric pump is fitted on any series vehicle and is commonly on sale.

M11.3 REAR RUNNING GEAR

- i) The joints may be of a different material from the original ones (e.g. harder silent blocks, aluminium, Uniball joints, etc.).
- ii) New mounting and rotational points must be situated at a maximum of 20 mm from the original mounting and rotational points.
- iii) The original suspension part may not undergo any modifications, with the exception of the making of circular grooves for the fitting of stops and the fitting of spin locking devices (grub screws, pins, bolts or similar) for the eccentric bushes.

M11.4 MULTI-LINK REAR SUSPENSION

- i) Holes for the mounting of suspension parts may be made at the anchorage points of the bodyshell, the cradle or the rear cross member, if these are original parts.
- ii) In relation to the original articulation points, these holes must be situated at a maximum distance of 10 mm at right angles to and parallel to the transversal axis of the vehicle.

M11.5 SINGLE-LINK REAR SUSPENSION

- i) The original suspension parts may be modified in order to allow the adjustment of the camber and the toe.
- ii) The addition of material must be done by using a material which follows the shape of the original part and is in contact with it.
- iii) The combination and the standard fitting of the spring and of the shock absorber, as well as the original distance between the rotational axis of the running gear and the central axis of the wheel upright, may not be modified.

M11.6 REAR RUNNING GEAR – GENERAL

Any other modifications to the bodyshell, apart from those modifications authorised to the rear running gear, are prohibited.

M11.7 OTHER PROVISIONS

The geometry of the running gear is free within the limits of the original adjustment possibilities set out in these regulations.

M11.8 STABILIZERS/ANTI-ROLL BARS

- i) The original stabilisers may be replaced by stabilisers of free design, but they must remain in their original position (ahead of the front wheel centre line, behind the rear wheel centre line).
- ii) The stabilisers must be made from ferrous material and must not be adjustable from the cockpit.
- iii) The new mountings of the stabilisers must not have any other function.

M11.9 TRACK

The tracks are free. Track extenders may be used if they are immovably attached to the wheel hubs.

M11.10 REINFORCEMENTS

Strengthening of the suspension parts and the suspension mounting points through the addition of material is allowed provided that the material used follows the shape of the original part and is in contact with it.

The suspension reinforcements must not create hollow sections and must not allow two separate parts to be joined together to form one.

M11.11 WHEEL BEARING

The wheel bearings may be replaced by strengthened bearings of the same type and same diameter as the original ones.

M11.12 SILENT BLOCK – ARTICULATION

The silent blocks for the mounting of the cradles and/or the cross members may be of a different material from the original (e.g. harder silent blocks, aluminium, nylon rings)

as long as the position of the cradle and/or cross members in relation to the bodyshell remains identical to that of the original following the three (3) axes of reference.

The cradles and/or cross members, the bodyshell and the original mounting points may in no way be modified by this action.

The original suspension part may not undergo any modifications, with the exception of the making of circular grooves for the fitting of stops.

This means that once the free mounting parts have been removed, the original mounting parts (for example the original silent blocks) may be refitted and that the cradles and/or cross members may then be remounted on the chassis or the bodyshell in their original locations and resume their original position.

M11.13 SUSPENSION TRAVEL LIMITER

A strap or cable for limiting the suspension travel may be affixed to each suspension. To this end, holes of a maximum diameter of 8.5 mm may be bored on the bodyshell side and on the suspension side.

M11.14 SPRINGS

i) COIL SPRINGS

Coil springs are free, provided that they fulfil the following conditions:

- a) Their number is free, provided that they are mounted in line with one another and that their type corresponds to the original type of spring.
- b) The shape, dimensions and material of the spring seats are free.
- c) The spring seats may be made adjustable if the adjustable part forms part of the seats and is distinct from the other original parts of the suspension and the chassis (it may be removed).

Modifications to the bodyshell are not authorised, but three (3) holes of a maximum diameter of 10.5 mm may be bored in the upper bell housing of the shock absorber for the mounting of the upper joint support, if there are no, or fewer than three (3), fixation holes (see Article 9.1 for the upper joint of a Mc Pherson suspension).

Whatever the position of the original springs, it is allowed to replace them with concentric coil springs on shock absorbers.

ii) LEAF SPRINGS

The length, width, thickness and vertical curve are free.

iii) TORSION BARS

Torsion bars may be replaced but the replacements must be made from steel. Their diameter must exceed 80 % of the homologated diameter. For vehicles with torsion bars, coil springs may be added on the axle concerned, provided that they are concentric to the shock absorbers.

M11.15 MISCELLANEOUS

Parts for preventing the springs from moving in relation to their mounting points are authorised.

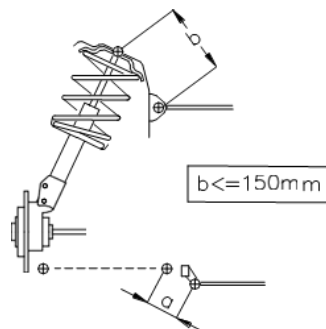
M11.16 SHOCK ABSORBERS

- i) Free, provided that their number, their type (telescopic, arm, etc.), their working principle (hydraulic, friction, mixed, etc.) and their attachment points remain unchanged.
- ii) Gas-filled dampers will be considered as hydraulic dampers.
- iii) The damper tanks may be attached on to the unmodified shell of the car, provided that this does not result in modifications which are not authorised by these regulations.
- iv) If, in order to change the damping element of a McPherson suspension, or a suspension operating in an identical manner, it is necessary to replace the entire McPherson strut, the replacement parts must be mechanically equivalent to the original ones and have the same mounting points.
- v) In the case of a McPherson suspension, the shape, dimensions and material of the spring seats are free and they may be adjustable.
- vi) In the case of an oil-pneumatic suspension, the spheres may be changed as regards their dimension, shape and material, but not their number.
- vii) A tap, adjustable from the outside of the car, may be fitted on the spheres.
- viii) Whatever the type of the shock absorbers, the use of ball bearings with linear guidance is prohibited.

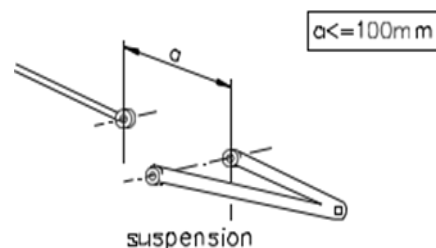
M11.17 REINFORCEMENT BARS

- i) Reinforcement bars may be fitted on the suspension mounting points to the bodyshell or chassis of the same axle, on each side of the car's longitudinal axis, provided that they are removable and that they are bolted to the bodyshell or chassis.
- ii) The distance between a suspension attachment point and an anchorage point of the bar cannot be more than 100 mm (M11.17 (ii)), unless the bar is a transversal strut homologated with the safety cage, or unless it is an upper bar attached to a McPherson suspension or similar.
- iii) In the latter case, the maximum distance between an anchorage

Point of the bar and the upper articulation point will be 150 mm (Drawings M11.17 (i) and M11.17 (ii)).



Drawings M.11.17(i)



Drawing M11.17(ii)

For the fixation of a transversal strut between two upper points of the bodyshell, a maximum of three (3) holes on each side, of a maximum diameter of 10.5 mm, will be authorised.

The mounting rings of the upper transversal struts may be welded to the bodyshell.

Apart from these points, the upper bar must not be mounted on the bodyshell or the mechanical parts.

M12. BRAKES

M12.1 FRONT BRAKES

The front brakes are free, provided that they are mounted on the fixation points of the original brakes and that they comply with the following prescriptions:

- i) if it is different from the original, the complete front and rear braking system,
- ii) the maximum number of pistons per wheel is four (4) piston size at 44mm maximum and monoblock are prohibited.
- iii) the maximum diameter of the brake disc is 330mm
- iv) the brake discs must be made from ferrous metallic material.

M12.2 REAR BRAKES

The following prescriptions apply to the complete braking system:

- i) The rear brake callipers may be replaced but must not have more than two (2) pistons per wheel. The brake lines and their fitting method are free.
- ii) The original handbrake may be removed or replaced by a hydraulic valve operated manually and without any intermediate system by the driver.
- iii) if, in its original version, a car is equipped with servo brakes, this device may be disconnected or removed, but the master cylinder and/or the pedal box must remain in their original compartment.
- iv) Modifications to the body shell are authorised provided they have no other function than to allow the fixing of the master cylinder and/or the pedal box.
- v) The balance of the braking forces between the front and rear axles may only be adjusted by the driver mechanically.

M12.3 MASTER CYLINDERS/PEDAL BOX

Free. Modifications to the body shell are authorised provided they have no other function than to allow the fixing of the master cylinder and/or the pedal box. The balance of the braking forces between the front and rear axles may only be adjusted by the driver through:

- i) Direct intervention on the position of the centre of the joint, on the linkage lever of the hydraulic pumps of the front and rear circuits.

- ii) Direct intervention on a proportional valve, in which the intake pressure of the rear circuit is adjusted through a pre-loaded spring, variable according to the position of the manual linkage system.

M13. BODYWORK

M13.1 EXTERIOR

- i) Only the aerodynamic elements homologated on the vehicle produced in 2500 units, securely fixed to the car and authorised for road use, are allowed.
- ii) It is permitted to fold back the steel edges or reduce the plastic edges of the wings if they protrude inside the wheel housing.
- iii) The plastic soundproofing parts may be removed from the interior of the wheel arches.
- iv) These elements made from synthetic materials may be changed for aluminium or plastic elements of the same shape.
- v) The soundproofing material or the material for the prevention of corrosion may be removed.
- vi) The removal of external decorative strips, following the contour of the car and less than 25 mm high, is authorised.
- vii) Decorative strips more than 25 mm high may only be removed near the areas reserved for the competition numbers.
- viii) The bumper mountings as free as long as the bodywork and the shape and position of the bumpers remain unchanged.
- ix) The original apertures in the bodywork may be used for the passage of the cooling air.
- x) Original apertures are defined as existing apertures in the homologated bodywork which are open or partially or completely covered by removable parts (e.g. fog lamps, blanking panels, louvres, grills, etc.).
- xi) To allow the passage of the cooling air, the removable parts may be removed, or opened provided that the general appearance of the original part is not modified.
- xii) The connection of the air ducts to the original apertures in the bodywork is free as long as these apertures remain unchanged.
- xiii) The fitting of underbody protection is allowed.
- xiv) Pneumatic jacks are authorised and may be attached to the safety cage.
- xv) Minimum openings allowing the use of air jacks are authorised.
- xvi) The connector for the feeding of compressed air must be situated rearward of the rear axle centreline and must not protrude beyond the surface of the bodywork.
- xvii) The bodywork may be modified over a maximum area of 100 cm² as to create a housing for this connector.
- xviii) The windscreen wiper blades may be replaced by others.

- xix) The cars must have an external rear-view mirror on the left-hand side and on the right-hand side.
- xx) Their shape is free but each mirror must have a reflecting surface of at least 90 cm², able to enclose a 6 cm-sided square.
- xxi) Strengthening of the sprung parts of the chassis and bodywork is allowed provided that the material used follows the original shape and is in continuous contact with it.
- xxii) The above strengthening of the sprung parts authorises for example the reinforcement of the bodywork by welding or by the addition of material.
- xxiii) A second suspension bell housing may for example be placed above and soldered to the original, provided that it follows the original shape and that it is in contact with it.
- xxiv) The term 'suspended parts' means all the parts dampened by the wheel suspension, in other words all parts situated within the rotational points and axes of the suspension parts.
- xxv) Unused supports for accessories or trims (e.g. spare wheel, heat shield...) situated on the chassis / bodywork can be removed.
- xxvi) The side and rear windows, as well as the rear-view mirrors, must be covered with a transparent and colourless safety film with a maximum thickness of 100 microns in order to avoid the shattering and spraying of glass in the event of an accident.
- xxvii) Engine section bonnet/hood openings are permitted up to maximum surface area of 1100cm², including any the original opening, but must be covered by wire netting.

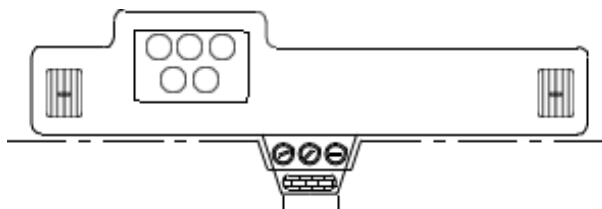
M13.2 WHEEL ARCHES

The original production car contours of the wheel arch /wing must remain but may be increased up to maximum total of 30mm of the original dimensions. The organiser retains the right to reject any wheel arches that do not confirm with this article.

M13.3 INTERIOR

i) DASHBOARD

The original dashboard moulding must be retained, although air vents and control panels inset into this moulding may be removed and neatly covered.



ii) INSTRUMENTS

The instruments are free. However, their installation should not present any risk. Standard switches may be replaced by switches of different design and may be

fitted at different locations on the dashboard or on the centre console. Any openings that result from their removal must be covered. The turn signal control can be removed.

iii) ACCESSORIES

Removal of the additional accessories which have no effect on the car's behaviour, such as those which render the interior of the car more aesthetic or comfortable (lighting, heating, radio, etc.), are authorised provided that they do not influence, even in a secondary manner, the performance of the engine, steering, transmission, brakes or road- holding.

iv) INTERIOR TRIMS

All internal coverings and trims, including the headlining, sound deadening material, the standard seat belts, rear parcel shelf trim and carpets, must be removed from the cockpit, engine compartment, and luggage compartment. It is permitted to remove the weather strips from around the door and boot/ tailgate openings. The inner door panels and inner side panels may be replaced by other fire-resistant panels which completely cover the window winder and door catch mechanisms. These panels must be neat and cover the entire door opening.

Door trim may be original or be made of a metal sheet with thickness of minimum 0.5mm or another composite material with minimum thickness of 2mm. The panel must totally cover the door, handles, locks and window winding mechanisms. In case for the 2-door cars, the trim situated beneath the rear side windows must also comply with the above provisions.

v) WINDOWS

- a) Manual window winders may replace electrical system if fitted. Driver's window must remain fully functional by manual or electronic. The total mechanism may be removed from the front passenger and rear doors with the windows sealed shut. Cooling ducts for interior cooling may be added to rear side windows. It is permitted to replace the glass side and rear windows with polycarbonate, 3mm minimum thickness for side and the rear window.

For safety reason, due to cockpit temperature can reach more than 40°C, the driver's window must be fully operable, either manually or electronically, and must open and close vertically as per standard production car specifications. Sliding-type windows are not permitted.

- b) It is allowed to have net window covering the driver's door window opening forward till the centre of steering wheel if item 13.3 (v) above does not apply.

Details:

- i. The window net must cover the opening forward to the centre of the steering wheel and be able to withstand any load applied at any point.
- ii. The net may be locally modified to preserve the driver's view of the external mirror.
- iii. The net must be affixed by means of a rapid release system so that, even with the automobile inverted it must be possible to detach the mechanism with one hand.

vi) STEERING WHEEL

The steering wheel is free. The locking system of the anti-theft device must be rendered inoperative; a removable steering wheel is permitted.

vii) GEAR CHANGE MECHANISM

The gear change lever and linkage may be altered or replaced to improve the ease of use together with the pedals, which may be strengthened or replaced with stronger units. Modifications to the bodywork for the mounting and passage of the new gearshift control are authorised only if they are not at variance with other points of these regulations.

viii) OTHER PROTECTIONS

All production under-body and under-engine protection may be removed.

ix) WIPERS

The windscreen wiper system is free in location and method of operation, providing that it is fully operational at all times and capable of satisfactorily clearing the area of the screen ahead of the driver. Any rear screen wiper and mechanism may be removed.

x) LUGGAGE AND ENGINE COMPARTMENTS

The soundproofing materials and trim in the luggage compartment may be removed. The soundproofing materials of the engine cover and the decorative materials surrounding the engine may be removed. Unused battery and spare wheel supports may be removed if they are not welded to the bodyshell. The lower fairing of the engine compartment may be removed or modified only by cutting.

M13.4 SPOILERS AND AESTHETIC ACCESSORIES

i) AERODYNAMIC DEVICES

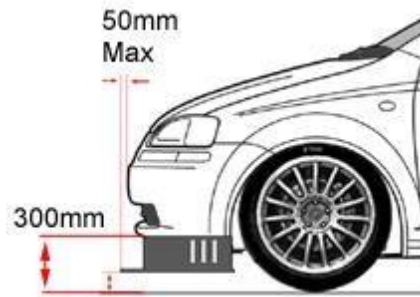
Other than those allowed in this regulation, only those aerodynamic devices which are permanently mounted on the bodywork and which are Series Production parts on the 2,500 units produced for normal road use in the country of origin are permitted. The organiser will be the sole arbiter in any dispute concerning the eligibility of the aerodynamic devices.

ii) FRONT

The only body parts that can be replaced and changed in shape are:

- a) Front bumper; shape resembles to original and no dive planes allowed.
- b) Front fenders' lower edge behind the wheel may not be higher than front door's bottom border (no louvres allowed)
- c) Side sills (these may be added if not present in the production car)
- d) Non-metal material.

Front spoilers may be fitted but may not extend forward from the bodywork by more than 50mm and may not extended past the overall width of the bodywork. The areas that are defined as front spoilers are the front bumper area before the opening of the wheelhouse measuring not more than 300mm from the level ground. The underside of this spoiler may be covered and extended to the centreline of the front wheels.



Pic.12.4(ii)

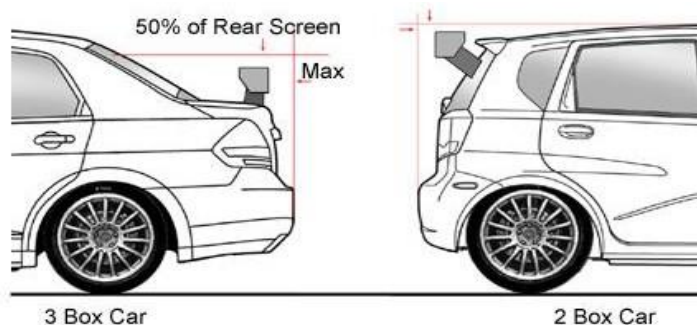
iii) MINIMUM HEIGHT

No part of the car or its suspended parts must touch the ground when two tires on the same side are deflated (5 psi pressure). No system for changing ground clearance when the car is in motion is allowed.

iv) REAR SPOILER

It is permitted to fit a rear spoiler provided that it follows the following:

- For a three box car, the spoiler must be mounted on the boot. The position of the spoiler must not be more than 50% the height of the rear screen.
- For a two box car, the spoiler must be mounted on the rear hatch. The position of the spoiler must not protrude above the highest point of the car when viewed from the side.
- The spoilers must not protrude outside the perimeter of the bodywork.
- The spoiler must be made in one single piece (a single profile and no adjustment flap), two side plates and two brackets.
- The spoiler must be completely contained within the front projection of the car without its rear-view mirrors.
- The angle of the spoiler may be adjusted.



Pic.12.3(iv)

v) ORIGINAL EQUIPMENT BODY ACCESSORIES

It is permitted to fit original equipment accessories side sill extension and rear bumper extension.

M14. ELECTRICAL SYSTEM

M14.1 CABLE

The electric cable assembly of the engine is free. The other electric cable assemblies are free provided that they respect the following conditions.

M14.2 BATTERY

- i) The make and capacity of the battery(ies) are free.
- ii) It must be possible at all times to start the engine with the energy of the battery transported on board the vehicle.
- iii) Each battery must be securely affixed and covered in such a way as to avoid any short-circuiting or leaks.
- iv) The number of batteries laid down by the manufacturer must be retained.
- v) Should the battery be moved from its original position, it must be attached to the body using a metal seat and two metal clamps with an insulating covering, fixed to the floor by bolts and nuts.
- vi) For attaching these clamps, bolts with a diameter of at least 10 mm must be used, and under each bolt, a counterplate at least 3 mm thick and with a surface of at least 20 cm² beneath the metal of the bodywork.
- vii) The battery must be covered by a leak-proof plastic box, attached independently of the battery.
- viii) Location is free.
- ix) If the battery situated in the cockpit is a dry battery, it must be protected electrically by a lid which covers it completely.
- x) Any energy-recuperating system other than that provided by the engine is prohibited.

M14.3 LIGHTING

- i) The original lighting system must be retained, with the exception of the fog lamps, and must be operational at all times during a meeting.
- ii) The headlights must have a road homologation.
- iii) A reversing light may be fitted provided that it will only switch on when the reverse gear is engaged and that the laws in force in this respect are observed.

M14.4 FUSES

Fuses may be added to the electrical circuit. The fuse box may be moved or removed.

M14.5 ALTERNATOR

A more powerful alternator may be fitted. The driving pulley as well as the belt may be replaced but must remain fully operational.

T14.6 CUT-OFF SWITCH

All Cars must be fitted with a cut-off switch to stop all electrical supply to the engine and fuel system.

The cut-off switch must be able to operate from inside and outside and must be located in front of the driver's side of the car. The outside switch must be marked by a red spark in a white edged, blue triangle with a base of a least 12cm.

M15. WHEELS & TYRES

M15.1 The maximum dimensions of the 4 rims + flanges are 8" x 17" minimum 7kg per wheel

M15.2 In all other respects the wheels are free provided that they are made of cast aluminium and in a single unit. Metal inserts are allowed for the passage of the drive to the wheel.

M15.3 Wheel bolts maybe changed to a stud type however the numbers of the fixation point have a minimum number of 4.

M15.4 The tyre supplied by the tyre supplier appointed by the Organiser **MUST** be used by all competitors during the event. **Refer to section B. Sporting Regulations Art. 32**

M16. FUEL FEED SYSTEM

M16.1 PETROL TANK

- i) The original petrol tank may be kept.
- ii) FT3 1999, FT3.5 or FT5 petrol tanks meeting the FIA specifications are authorised.
- iii) It is recommended that the FT3 1999, FT3.5 or FT5 tank be filled with MIL-B-83054 or D-Stop type safety foam.
- iv) They must be placed in the luggage compartment or in their original location.
- v) Changes of the position of the tanks may not give rise to any lightening or reinforcement other than as provided for under Article 255-5.7.1 of the FIA prescriptions, but the opening remaining after the removal of the original tank may be closed by the installation of a panel.
- vi) For endurance races (with refuelling), the filler hole must be situated outside the cockpit.
- vii) For sprint races (without refuelling), the filling of the tank must be carried out in conformity with Article 253 of Appendix J.
- viii) The location of the filler holes is free, apart from in the window panels, and they must not protrude beyond the perimeter of the bodywork.
- ix) If the filler hole is not used, it must be sealed.
- x) An original carbon filter in the tank air vent, as well as its control unit, may be removed.
- xi) An auxiliary tank of a maximum capacity of 2 litre is authorised. It must be situated such that it does not affect the safety of the vehicle in any way.
- xii) The total capacity of all the tanks may not exceed 60 Litres.
- xiii) The connections between the filler holes and the tank ventilation holes must be shielded by a fireproof and liquid-proof protective device.

- xiv) If the petrol tank is located in the luggage compartment of a car with a tailgate, the tank must be shielded by a fireproof and liquid- proof protective device.
- xv) If the original tank is replaced with an FT3 1999, FT3.5 or FT5 tank, the new assembly must not generate an aerodynamic surface or protrude further below the vehicle than the original tank.
- xvi) In all cases, there must be a fireproof and liquid-proof bulkhead between the cockpit and the luggage compartment.
- xvii) In the case of a fuel tank being fitted below the floor of the car, it must be contained in a close-fitting flameproof housing that adds no aerodynamic advantage and has no other mechanical function.
- xviii) This housing must include a crushable structure on all external surfaces, and be secured by using a minimum of two metal clamps 30 mm x 3 mm fixed to the floor pan by bolts and nuts.
- xix) For attaching these clamps, bolts with a diameter of at least 10 mm must be used, and under each bolt a counter plate at least 3 mm thick and with a surface of at above the metal of the floor pan.
- xx) The opening remaining after the removal of the original tank may be closed by the installation of a panel of the same dimensions as the fuel tank aperture.

M16.2 PETROL LINES

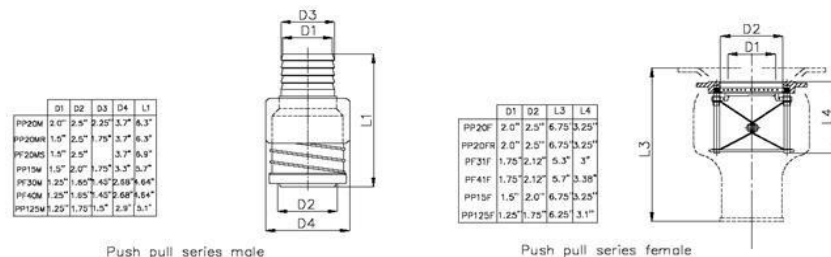
The petrol lines must be of aviation quality. The installation of petrol lines is free provided that the prescriptions of Article 253-3 of Appendix J are respected.

M16.3 PETROL PUMPS

Free; three others petrol pumps in addition to the number are authorised. The pumps must be separated from the cockpit by a fireproof and liquid-proof protective device

M16.4 Original fuel tank CANNOT be modified to suit FIA refuelling equipments. Only FIA or Organizer approved fuel tank are allowed to be use with FIA refuelling equipment.

M16.5 Only FIA approved refuelling couplings as per drawing 252-5 (Version A) are allowed to be use with the FIA refuelling rig. The internal diameter of D1 must not exceed 50mm or 2 inches.



Drawing 252-5 version A

M16.6 The location of the fuel filler inlet must not be higher that the lower edge of the rear glass

C2. M – TOURING (MT2) – NATURALLY ASPIRATED CLASS

SPECIFIC MODIFICATION (UNDER ARTICLE 277 OF FIA APPENDIX J) VALID FOR M - TOURING (MT2) – NATURALLY ASPIRATED CLASS CAR

(Other specification not mentioned, please refer to respective articles of FIA at www.fia.com)

1) GENERAL SPECIFICATION

Permitted Vehicles

FIA Article 254 : Group N Cars 1401cc to 1600cc

FIA Article 255 : Group A Cars 1401cc to 1600cc

**FIA Article 277 : National Series Production Cars 1401cc to 1600cc
(2,500 units minimum production)**

Eligible Cars are those cars of which at least 2,500 identical units must have been produced in 12 consecutive months and which have been available for sale in Asia. The model must be for public sale or produced in the year 2006 till 2025.

For avoidance of doubt, 'standard specification' will always be made with reference to vehicles sold through the applicable time periods. Special edition models are not eligible. Special/ Limited versions are not deemed to constitute a specification reference source for the purposes of these regulations.

Only cars with two-wheel drive (Front Wheel or Rear Wheel Drive) are eligible. Cars with forced induction are not eligible.

Eligible Car:	M- Touring 2 (MT2-G) – Honda GK	1401cc up to 1600cc (MT2 (G))
	M- Touring 2 (MT2-V)– Other Make	1401cc up to 1600cc (MT2 (V))

Only the body or chassis of the family type may be used for conversion to the particular specific model, all other parts/components must adhere to the model of the registered for the competition. **For converted vehicles, all production parts/ components from the identified model for competition must be installed. Vehicle must adhere to the production design and build of material list of the specific model to qualify for competition.**

2) SPECIFIC MODIFICATIONS

Ms 1. INTRODUCTION

Ms 1.1 The following Technical Regulations are set out in accordance with the Organiser specified format and it should be clearly understood that if the following texts do not clearly specify that you can do it, you should work on the principle that you cannot.

Ms 1.2 Everything that is not explicitly authorised and anything that is not specified:

- i) In these Regulations,

- ii) In the Manufacturers' Technical manual,
- iii) In any official Technical Bulletin that maybe published, is strictly forbidden.

The technical modifications specified in these Regulations relate to the use of the vehicle as a race car.

Ms 1.3 Competitors will be personally and solely responsible for ensuring that their cars comply with these regulations for each Event/ Round at which they are entered. Queries concerning eligibility should be referred in writing to the Organiser at least 1 Round prior to an Event/ Round entered, to permit a ruling in advance of any meeting at which it is intended to compete.

Ms 1.4 All Entrants/Drivers are reminded that it is their responsibility to ensure that their vehicle and equipment complies with the entirety of the Technical Regulations at all times during Official free practice, qualifying session and races and that they have taken account of all the safety requirements of these Regulations and Event in which they are participating

Ms 1.5 The Organiser reserves the right to issue additional statements clarifying the Regulations from time to time (Technical Bulletins). These numbered statements will be issued to all registered Entrants/Drivers by email or by formal communication at the Event (e.g. Drivers' briefing, etc.).

Ms 1.6 It is the intention of The Organisers to equalise the performance of the cars by setting minimum weights. The Organisers reserve the right to amend any of the minimum weights specified at any stage of the season. The minimum weights will be reviewed after each round. If changes are to be made subsequent to this review, 7 days' notice will be given. There is no appeal against the application or addition of ballast or other restrictions.

Ms 1.7 Examination of Vehicles:

- i) The Organisers (in addition to any other powers they may have under these regulations) reserve the right before or after any race in the Malaysia Touring Car Championship to designate any one or more of the competing cars for special eligibility scrutineering.
- ii) The Competitor shall immediately place the car under the control of The Organiser/ Scrutineer and be deemed to have permitted all such scrutineering, examination, testing and any relevant procedure/ measure as The Organiser may responsibly require to undertake.
- iii) Competitors must be prepared, with tools and spare parts as necessary, to enable inspection of components, or to have units sealed at the circuit for later inspection by the Scrutineer at the Competitor's expense.
- iv) Any stripping of the engine or any required component will be undertaken by the Competitor and / or mechanic / technician nominated by the Competitor.

Ms 2. SAFETY REQUIREMENTS

Ms 2.1 Kindly refer to Article 2 Safety Requirement Section A of 2025 Technical Regulation.

Ms 2.2 The presentation of the car is fundamental to the image of the Malaysia Championship Series. Thus, cars entered must be of a standard specification appearance and exhibit all items of external trim associated with the appropriate eligible model.

Ms 2.3 In case of serious accident, an alternative age or model body shell may be used provided:

- i) no weight or other benefit is derived,
- ii) the finished car's appearance corresponds with that of the eligible model. The age of the replacement bodyshell dictates the type of external trim to be fitted in order that the car does not present the image of a hybrid, and
- iii) the use of titanium, ceramics, carbon fibre, Kevlar, composites thereof (with the exception of the Drivers' seat) and magnesium is prohibited.

Ms 2.4 Only parts listed at the time of manufacture of the vehicle may be used. If parts have been superseded since the date of vehicle manufacture the replacement part may be used prior consent from The Organiser. Competitors must provide the detail of parts should he be required to.

Ms 2.4.1. Suzuki Swift ZC32S

No	Description	Part Number
i.	Engine and Gearbox Mounting	11610 – 72L00
		11620 – 72L00
		11710 – 72L00
ii.	Front Lower Arm Assembly (RH)	45201 – 72L00
iii.	Front Lower Arm Assembly (LH)	45202 – 72L00
iv.	Front Wheel Hub Assembly	43420 – 80801
v.	Rear Wheel Hub Assembly	43402 – 80J01
vi.	Drive Shaft Assembly Front (RH)	44101 – 72L00
vii.	Drive Shaft Assembly Front (LH)	44102 – 72L00
viii.	Member Suspension Frame (RH)	45891 – 72L00
ix.	Member Suspension Frame (LH)	45892 – 71L00

Ms 2.4.2. GK5 RS

No	Description	Part Number
i.	Engine and Gearbox Mounting	50820T5B013
		50890T5A911
		50850T5A912
ii.	Front Lower Arm Assembly (RH)	51350T5AJ01

iii.	Front Lower Arm Assembly (LH)	51360T5AJ11
iv.	Front Wheel Hub Assembly	44600T5BJ00
v.	Rear Wheel Hub Assembly	42200T5BN51
vi.	Drive Shaft Assembly Front (RH)	44305T5AJ10
vii.	Drive Shaft Assembly Front (LH)	44306T5AJ10
viii.	Beam Assembly, Rear Axle	42100T5AJ74

Ms 3. CHASSIS

Ms 3.1 No chassis stiffening is permitted except that derived from the fitting of a roll cage. Minimum six mounting feet inside the car are permitted, and a 3mm thick plate welded to the chassis to which the cage should be bolted (FIA specification) / welded. Seam welding, strengthening of mounting points and changes in component material of the bodyshell or panels is prohibited. Bodywork repairs to be conducted in structural areas should involve Competitor dialogue with the Malaysia Touring Car Championship Scrutineer to ensure ongoing bodyshell compliance.

Ms 3.2 The following modifications are prohibited:

- i) Unless specifically authorised in these regulations, the lightening of components or panels in any way, whether via removal of metal or otherwise is prohibited. Specifically but not exclusively this includes removal of any unused bracketry welded to the bodyshell or other components: seat rails, seat front cross member, rear seat base frame, roof tin supports, seat belt anchor backplates, rear seat hinge and retaining brackets. Removal of any unused bracketry rear of the main roll over bar is permitted.
- ii) Inner wheel arch modification is prohibited and material may not be removed to allow clearance for suspension components, driveshafts and linkages.
- iii) Front turret central cone repositioning.
- iv) Removal of bonded metal plugs in the floorplan or other areas of the interior and exterior.
- v) Only the body or chassis of the family type of chassis may be used for conversion to that particular specific model; all other parts/ components must adhere to the model of the car registered for the competition.

Ms 4. BODYWORK AND MEASUREMENTS

Ms 4.1 Modifications:

- i) In general, it must be of the standard specification for the vehicle, with no additions or omissions. Mandatory fitment of laminated windscreen. Seam welding, strengthening of mounting points and changes in component material are prohibited.
- ii) **Interior:** Must be of the standard specification for the vehicle.

- a) Rear quarter panel trims, boot side panels, tailgate trim panel and weather proofing plastic sheets can be removed. A basic door trim manufactured from plastic or aluminium only must be fitted to the inside of the Driver's door – this must be to a high standard with no sharp edges and a smooth surface. Windows must be fully operable – either manual lever or electric types allowed.
- b) Door trim may be original or be made of a metal sheet with thickness of minimum 0.5mm or another composite material with minimum thickness of 2mm. The panel must totally cover the door, handles, locks and window winding mechanisms. In case for the 2-door cars, the trim situated beneath the rear side windows must also comply with the above provisions.
- c) Driver's seat must be replaced with the competition seat fitted.
- d) Passenger and rear seats must be removed. Headlining and carpets must be removed. The inner sunroof steel sleeve and mechanism may be removed.
- e) Dashboard facia must remain standard with the exception of minimal material trimming to accommodate roll cage fitment around the A-pillars, but must otherwise remain as originally fitted.
- f) Air-Conditioning System can be removed (Air Conditioning Vent Panel must be remained).
- g) An interior rear-view mirror must be fitted.

iii) Exterior: As per standard specification for the eligible vehicle as manufactured.

- a) The bonnet must be secured by surface-mounted bonnet pins; the rear hatch must be secured either by surface-mounted bonnet pins and locks can be removed.
- b) Unless specifically authorised in these regulations, the use, substitution of, and / or addition of, any parts, material or processes is prohibited, other than welding or repairing material or the fitting of standard replacement parts, for the sole purpose in every respect of restoring the vehicle to the manufacturer's standard specification or to comply with safety requirements.
- c) All, door rubbing strips, weather strips/channels must be retained.
- d) Two external rear-view mirrors, one on the left-hand side and one on the right-hand side must be fitted and be a standard part pertaining to that model.
- e) Bumper mountings are free provided the bodywork and the shape and position of the bumpers remain unchanged.
- f) Bonnet / engine cover must remain in the normal position and, when closed, must not have any non- standard gaps at any of their edges. Fitment of tape etc. to close body gaps (e.g. bonnet to wing) is prohibited.
- g) It is not permitted to increase the width of the wheel arch by the addition of material to, or the deformation of, the outside or inside of the wheel arch. No additional holes may be cut into the bodywork or spoiler to aid cooling, brake ducting, air intake etc. Apertures may not be enlarged.

- h) The removal of underseal from vehicle wheel arches and any areas outside the vehicle wheelbase is prohibited.
- iv) The car, being in normal racing trim with the Driver in the normal seated position, under no circumstance can any part of the bodywork, or of the suspended part of the car including the exhaust system, be below a horizontal plane passing above the ground,
 - i. M-TOURING G (MT2-G) - 70mm (Honda GK5 only)
 - ii M-TOURING V (MT2-V) - 70mm (other makes/ models)

Note: at Maximum 250 kpa Tyre Pressure

Ms 5. ENGINE

Must be of the standard type and specification for the exact vehicle and made of the standard material. All components must be used in their production positions, with no additions or omissions unless expressly stated in these regulations. No modifications are permitted. It is the Competitor's responsibility to ensure that no prohibited modifications have been carried out, even if they are using an engine not assembled by them.

Ms 5.1 ENGINE MODIFICATIONS

- i) Reciprocating parts may not be altered in anyway; this includes lightening or balancing.
- ii) Replacement valves & valve guides may be fitted but must be production or standard (shape, profile and material).
- iii) Fitment of oil catch tank, of minimum capacity 1 litre.
- iv) The fitting of higher specification grade con-rod cap bolts.
- v) Cylinder head - MUST remain to standard specifications. No material may be added to or removed from the cylinder head; inlet and exhaust ports may not be modified in any way and must remain as cast and as per standard specification.
- vi) The head casting material cannot be ground, smoothed, welded or in any way altered, whether to achieve optimisation of gas flow or otherwise. Any attempt to alter the shape of the ports, valve throats or the valve seats is prohibited.
- vii) Standard pistons may not be replaced by forged pistons or 'machined-from-billet' pistons. Piston crowns must not be machined from standard in shape or profile.
- viii) Valve sizes must not be altered from standard specification.
- ix) Up-rated lifters and lightweight spring caps are prohibited.
- x) Fitment of an oil pump from a different production model is prohibited.
- xi) Modification of oil pick-up pipe prohibited.
- xii) Fitment of a nonstandard head gasket whether sourced from other vehicles within the model range or elsewhere is prohibited.
- xiii) Fuel injectors cannot be substituted for non-standard parts.
- xiv) The swapping of engine components or any ancillary components between models is prohibited. This is inclusive of any components in the engine bay such as, but not exclusively, pistons and electronics.

- xv) Standard inlet manifold must be retained and may not be modified by the removal or addition of material.

Ms 5.2 LOCATION

Position and mounting method must be of standard specification. All engine mounts must be of standard design and material rigidity grade. Voids in these standard engine mounts cannot be filled with any material to attempt to stiffen the mounts. No additional engine/transmission supports may be fitted, whether chassis mounted, or otherwise

Ms 6. COOLING SYSTEMS

Water radiators must remain of standard mass production for the model being raced, in design, size and position. The standard radiator fan and fan cowling must also be retained. No modifications are permitted. Radiator conversion within family brand is allowed (i.e MT Radiator to AT Radiator)

Ms 7. INDUCTION SYSTEMS

The complete induction system must be of the standard specification for the vehicle and be retained in its entirety; Components must be used in their standard positions, with no additions or omissions except for the following:

Ms 7.1 Aftermarket air filter can be used to replace the standard part. This must be of the correct specification for the model to which it is fitted.

Ms 7.2 No other modifications are permitted.

Ms 8. EXHAUST SYSTEMS

Ms 8.1 Exhaust emission control devices such as air pumps, associated lines, nozzles, canisters, and electrical/mechanical devices may be removed. Any holes remaining after removing such devices shall be completely plugged. If fitted catalytic converter(s) may be removed.

Ms 8.2 Exhaust manifold(s) are unrestricted. Exhaust tubing design is unrestricted, as long as the exhaust exits behind the driver, directed away from the car.

Ms 9. ENGINE MANAGEMENT – Fuelling, Ignition & Valve Timing

Components must be of standard specification for the vehicle and used in their standard positions, with no additions or omissions. Remapping of ECU is allowed. Piggy back is allowed only to Toyota Vios 1.5 & MyVi 1.5 only.

Ms 10. SUSPENSION

The standard specification suspension configuration must be retained and the standard mounting points and position of the suspension components to the bodyshell and related suspension units must be used and remain as standard. All suspension components (uprights, wishbones, hubs, bottom ball joints, suspension top mounts, steering arms, rear beams, anti-roll bars, supports bolted to the bodyshell or subframe) must be standard, unmodified and remain in their standard position, with no omissions, additions, lightening or modifications allowed to the mounting points and be manufactured from the standard material type except where specifically allowed in these regulations. No additions or modifications may be made to the mounting points. Suspension must be controlled to avoid fouling of wheels on chassis or bodywork.

Ms 10.1 Modifications to the suspension pick up points are prohibited.

Ms 10.2 Modification of the engine subframe or its mounting position prohibited.

Ms 10.3 Spherical joints, rose joints and rod ends are prohibited.

Ms 10.4 Seam welding of front wishbones or engine subframe is prohibited.

Ms 10.5 Dampers other than the control items, or control items with identification tags missing are prohibited.

Ms 10.6 Any mechanism for changing the suspension geometry, other than ride height and camber, is prohibited

Ms 10.7 No additional springing medium may be utilised.

Ms 10.8 Rear suspension and stub axles must remain standard; no strengthening or addition / removal of material is permitted.

Ms 10.9 Absorber is free.

Ms 11. WHEELBASE /TRACK

Wheelbase and track must remain as standard for the vehicle and separately, the acceptance of any minute changes arising solely from adjusting ride height and camber, within the scope of these regulations.

Ms 12. TRANSMISSIONS

Ms 12.1 Must be of the standard coded type and specification for the vehicle. The method of clutch actuation must not be altered in anyway.

Ms 12.2 For clarity, final drive and gear ratios must remain as per standard and it is prohibited to mix and match any components. Gearbox casing codes must

correspond with the gear ratios contained within. Entry/ Entrance need to submit their gearbox ratio and final drive as a declaration.

Ms 12.3 Gearbox casings cannot be altered by the addition or removal of the material, internally, or externally. No modifications to driveshafts or constant velocity joints are permitted. The gearbox must always include a reverse gear, which can be engaged by the Driver sitting in his / her seat with his / her safety harness fastened.

Ms 12.4 Subject for approval by the Organiser with the advice from Technical Delegate, converting an automated gearbox to manual gearbox is allowed provided:

- i) The engine from the production model of the car automatic gearbox must be retained.
- ii) Parts/ Components allowed for the conversion including manual transmission box, flywheel, clutch, pedal, gearchange mechanism and the wiring. ECU must use a same family type available in the market. Gear ratio must be declared.

Ms 12.5 Aftermarket Limited Slip Differentials (LSD) are allowed.

Ms 12.6 External oil cooler is allowed only for automatic transmission (AT/CVT).

Ms13. ELECTRICS

Ms 13.1 To standard manufacturer's specification for the vehicle which must all be fully functional. Spotlights and bumper mounted side lights may be removed.

Ms 13.2 Electrical and Electronic Systems Modifications

- i) The rear wiper, motor, mechanism and wiring may be removed. Rear washer, plumbing, bottle, wiring and switch may be removed.
- ii) Removal of interior light electric components.
- iii) Addition of auxiliary gauges and switches. The main speedometer binnacle must be standard. Any openings which result from alterations must be covered.
- iv) The standard wiring loom must be retained
- v) The vehicle air bags must be disabled and may be removed.
- vi) All other electrical and electronic systems must remain in their standard positions and be of standard specifications.
- vii) Substitution of ignition coils with high power ignition coils is prohibited.
- viii) Fitment of non-standard distributors is prohibited.

Ms 14. BRAKES

The vehicle's original brakes may be only be modified as follows:

Ms 14.1 Brake callipers, rotors, hubs and hoses are unrestricted, provided that the brake components are attached at the manufacturer's original mounting points and that no modifications to the original mounting points are made and that they comply with the following prescriptions:

- i) The maximum number of pistons as per wheel is Four(4)
- ii) The maximum diameter of the brake disc is 295mm
- iii) Brake rotors may only be of a ferrous material.
- iv) Any brake cooling method may be used. No modifications to the original bodywork are permitted, except that bumper grilles may be removed and existing openings may be utilized.
- v) The original rear drum brake may be replaced with a disc brake from the same family of production cars.
- vi) Removal of handbrake system is prohibited.

Ms 15. FUEL TANK / FUEL

Ms 15.1 Standard fuel tank must be retained and utilised. Additional baffles or foam in the tank are not permitted.

Ms 15.2 Tank location and fuel pump must be standard.

Ms 15.3 Fuel filler neck may be enlarged to accommodate the organiser fuel rig nozzle.

Ms 16. WHEELS & TYRES

Ms 16.1 Only single unit wheel's construction is allowed.

Ms 16.2 Minimum weight 4.8kg.

Ms 16.3 No wheel spacer (metal insert) between wheel and hub.

Ms 16.4 Wheel hub and wheel bolt number must remain original as model registered, is prohibited to modify from 4 to 5 or 5 to 4.

Ms 16.5 Upgrade to higher grade steel bolt is allowed.

Ms 16.6 The tyre supplied by the tire supplier appointed by the Organiser MUST be used by all competitors during the event. **Refer to section B. Sporting Regulations Art. 32.**

Ms 17. VEHICLE WEIGHT

The principle is to equalise the performance of the cars. The minimum weights must be respected at all times during an Event. This is measured with a maximum of 3 litres of fuel. Ballast must be added inside the car with mounting points using all four fixing bolts. It is the

Competitor's responsibility to provide and fit their own ballast if it is required. Minimum Weight (excluding Driver) :

General Model:

No.	Descriptions	Automatic		Manual	
1	Displacement (cc)	1500	1600	1500	1600
2	Weight (kg)	990	1,020	1,010	1,050

Specific Model:

Toyota Vios 1.5 (2NR-FE)	970 kilograms
Perodua MyVi 1.5 (MT)	970 kilograms
Perodua MyVi 1.5 (AT)	950 kilograms
Honda GK5 1.5 – CVT (L15Z2)	960 kilograms
Honda GK5 1.5 – MT (L15B)	1000 kilograms
Swift ZC32s (1.6cc) – MT	1000kilograms
Swift ZC32s (1.6cc) – AT	980 kilograms
Swift ZC31 (1.6cc) -MT	1000 kilograms
Mazda 2 (1.5cc) – MT	1000 kilograms
Mazda 2 (1.5cc) – AT	960 kilograms

(Weight may be adjusted if it necessary to balance the lap times if needed for competitiveness purposes.)

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