

# Common Regulations for Competitors: Vehicles

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## General

1. Vehicles competing in events will conform to the Technical Regulations as appropriate.

2. **Categories of Vehicles.** Where the Supplementary Regulations leave any doubt as to the category in which a particular type of vehicle falls for the purposes of the competition, the position shall be governed by the definitions set out in these Regulations.

## Competition Car Log Books (CCLB)

3. Vehicle log books are required for certain sporting disciplines, as detailed in the Specific Regulations. CCLBs are available from International, National 'A' or National 'B' Scrutineers. Vehicle inspections can be arranged by appointment with an appropriate local scrutineer. By reciprocal arrangement the MSA will recognise log books issued by the RIAC (Royal Irish Auto Club). Such log books are considered valid for competitions within the UK.

To obtain a log book, a registration document (where appropriate) of the vehicle, or vehicle identity number is required. A recent colour print photograph (not Polaroid) must be affixed to the CCLB. Single seat racing cars must be shown side elevation, whilst other categories must show a driver's side front three quarter view with the number plate legible.

CCLB continuation sheets may be obtained from the MSA.

CCLB refer to complete cars, and may not be transferred with a bodyshell.

4. CCLBs must be sent to the MSA Technical Dept for any of the following reasons:

Issue of new CCLB.

- Change of engine type or capacity.
- Change of ownership. Change of bodyshell.

**Note:** Throughout these sections an asterisk (\*) indicates a requirement for additional information to be printed in the Supplementary Regulations (SRs).

*Text shown in italics indicates a Regulation which may be amended in the SRs.*

- Change of address.
- Vehicle disposal or dismantle.
- Change of vehicle colour (with new photo).

## Scrutineering [B 47-69]

5. Before taking part in any competition, or practice for any competition, all vehicles must be presented to the event Scrutineers for examination and approval.

- The fact of obtaining a Scrutineer's approval at pre-event scrutiny does not indicate that the Scrutineer is accepting any responsibility for the safety or the road-worthiness of the vehicle, nor does it indicate that the vehicle complies in all respects with the Regulations. Please note that pre-event scrutineering or logbook inspection by a scrutineer is only a spot check of a limited number of key safety and eligibility features of a vehicle's condition. Alone it will not guarantee that the vehicle meets all applicable regulations or standards.

- Subsequent to pre-event scrutiny, any vehicle involved in an accident, or having been modified in any way, must be represented to the Scrutineers for further examination.

- At any time during an event, the Clerk of the Course, or the Scrutineers may order that a vehicle be re-examined, even if this involves stopping a vehicle whilst practising or competing.

- At the conclusion of a competition, a number of vehicles, as agreed by the Clerk of the Course and the Scrutineers, or as ordered by the Stewards, or as laid down in the Regulations, may be required to be presented for Post-Event Scrutiny. No work may be done on such vehicles after finishing the competition except by permission or request of the Scrutineers, until after the examination is completed and the vehicle released. It is the responsibility of the competitor to provide appropriate tools and personnel within an agreed time to carry out the work required.

- The Post-Event Scrutiny will be mainly directed at the vehicle's eligibility and may involve parts of the vehicle being sealed for subsequent stripping and examination [C(d)-52]. This should normally be within a maximum of 30 days, although it can be extended by mutual agreement to 50 days. At the end of the season, series or championship, it should never exceed 30 days.

- Vehicles, or components, may be sealed on the instructions of the Clerk of the Course, Stewards of the Meeting, the Technical Commissioners, or following a protest. Sealing may be by wire seals, special reactive paint, or other suitable method. Such seals must not be broken except with the written permission of the person who originally affixed the seal, or of the MSA, or by the person designated to examine the parts in question. The Technical Commissioner or Scrutineer examining the vehicle or component will report his findings to the Clerk of the Course for his action [C(d)-34].

- Approval of a vehicle will only be in relation to those items of the vehicle which have been examined and will only apply to the event which the vehicle has just completed.

## Competition Numbers (Chart 6)

6. Numbers must be displayed in a durable manner and be black, of a minimum size of 23cm high with stroke width of a minimum of 3.8cm on a white oblong background measuring not less than 48cm x 33cm which must extend at least 5cm beyond the outline of the numbers.

- If on a white vehicle the background must be delineated at 48cm x 33cm by a continuous black line, except for cars of period A to E.
- Numbers must be displayed on each side of the vehicle (front doors, alongside the cockpit or on rear wing end plates) and on the foremost part of the nose.
- Certain types of competition have special requirements which will appear in SRs (Subject to approval by the MSA) [See K 194-198 for Kart Numbers].
- Note. Consideration should be given at all times to the positive identification of vehicles by the competition organisers, whose decisions will be final.
- The numbers must be of the 'Classic' type as shown below:  
1-2-3-4-5-6-7-8-9-0.

- In International events the name(s) of the driver(s) and the national flag of the country must be displayed on the front wings or body work.
- Any means of identifying individual cars during a competition MUST be removed at the finish of the event.

## Technical

The following technical regulations are mandatory and apply to vehicles in all forms of competition (other than karting). In addition vehicles must comply with the appropriate Specific Technical Regulations. Where there are several regulations concerning any particular subject it shall be taken, as a general principle, that one does not override another unless specifically stated.

## General

7. As a general principle in all Technical Regulations, it is prohibited to carry out any tuning or modification that is not specifically permitted. The fact that some modifications are mentioned as prohibited does not imply that others are allowed.

### All vehicles must:

#### 8. Chassis/Body (including aerodynamics)

- (a) Be fitted with bodywork including a driver (and passenger) compartment isolated from the engine,



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wet batteries, gearbox, hydraulic reservoirs, transmission shafts, chains, belts and gears, brakes, road wheels, their operating linkages and attachments, petrol/fuel tanks, oil tanks, water header tanks and catch tanks fuel system components. Excepting for cars of Periods A-E exposed transmission shafts, gears and chains to be guarded such as to prevent their being a hazard.

(b) Where a radiator is not isolated from the driver/passenger compartment a suitable deflector to be fitted to prevent fluid directly coming into contact with the vehicle's occupants.

(c) With the exception of cars of Periods A to D, which in period specification were not equipped with a bonnet or casing of metal or solid flame resistant material covering and surrounding the main engine structure, have a protective bulkhead of non-flameable material between the engine and the driver/passenger compartment capable of preventing the passage of fluid or flame. Gaps must be sealed with GRP or with putty that completely closes any gap at all times.

(d) Magnesium is prohibited for bulkheads.

(e) Have a complete floor of adequate strength rigidly supported within the driver/passenger compartment.

(f) Not have the space normally occupied by passengers encroached upon, but may have the passenger seats removed.

(g) With the exception of cars of periods A to D have bodywork providing a minimum transverse cockpit opening width of 81cm. This width may not be interrupted.

(h) With the exception of racing cars or cars of periods A to D be equipped on all wheels with mudguards which present no sharp edges and cover the complete wheel (flange+rim+tyre) around an arc of 120 degrees. This minimum coverage must:

- (i) be achieved with a continuous surface of rigid material uninterrupted by any gaps, holes, slots or vents.
- (ii) extend forward ahead of the axle line.
- (iii) extend downward behind the wheel to not more than 7.5cm. above the axle line.

(i) Aerofoils or spoilers may only be fitted to single seat racing cars (unless prohibited by an Approved Formula), or where specifically permitted, where FIA homologated, or where complying with National type approval.

(j) If originally fitted with driver/passenger doors, hatchback doors, sliding doors, opening boots or tailgates, these must be secured in the closed position during events.

(k) Have effective means of ventilating closed cars.

(l) Tinted glass in any window which can significantly affect through vision (in or out) or distort the colours of signal flags or lights, is prohibited.

(m) With the exception of Cross Country Vehicles, Racing Trucks and Karts, in all vehicles with the driver seated normally, the soles of his/her feet, resting on the pedals in the inoperative position, shall not be situated to the fore of the vertical plane passing through the centre line of the front wheels. Not applicable to vehicles constructed prior to 1.1.99 or

for those vehicle designs which have participated in an MSA Permitted Championship prior to 1.1.99.

## 9. Seating

- Have a normal adequate seat for the driver.
  - The seat must be rigidly located within the compartment and must not tilt, hinge or fold unless it is a production seat fitted with a serviceable locking mechanism preventing independent operation.
  - It must support and retain the driver within the vehicle.
  - The seat cushion (i.e. the part on which the occupant sits) when uncompressed, must not be less than 15.25cm below the top edge of the adjacent body side or door.
  - Any other seats fitted must similarly comply and all seats must face forward.
  - Cars of periods A to D are exempt from this requirement.
  - If a single seater, the maximum time for a driver to get in or out of the vehicle should not exceed 5 seconds.

## 10. Engines

- If forced induction is used, the coefficient will be 1.7:1 unless stated otherwise in Specific Technical Regulations or SRs.
- Be equipped with a positive method of throttle closing by means of external spring/springs so that in the event of failure of any part of the throttle linkage the throttle(s) are sprung closed.
- Vehicles fitted with electronic throttle control as standard original manufacturer's equipment for that vehicle are exempt from this requirement.

## 11. Suspension

- Be fitted with sprung suspension between the wheels and the chassis.
- Suspension must be controlled to avoid fouling of wheels on chassis or bodywork.
- Cars of periods A and B need not have sprung suspension, if originally built without it.

## 12. Brakes

- Be fitted with brakes that are operative and capable of stopping the vehicle as required.
- Carbon disc brakes are prohibited unless specifically authorised by the MSA for a class or category of car.

## 13. Steering

- Have a steering wheel with a continuous rim not incorporating any reflex angles in its basic shape (except for Drag Race vehicles). Wheels with flat rim segments i.e. 'D' shape wheels are permitted.
- Specifically not permitted are wheels having a non-continuous rim shape similar to that shown in the Drawing 13.
- Cars of periods A and B may have a tiller or alternative to a steering wheel if it formed part of the original vehicle.
- Have steering movement controlled to avoid fouling of wheels on chassis or bodywork.
- Rear wheel or four wheel steering is prohibited unless fitted on a Production vehicle by the

manufacturer, or permitted under the Specific Technical Regulations, or SRs.

## 14. Wheels

- Have not less than four road wheels and tyres (excluding the spare).
- Not be fitted with any wheel spacer exceeding 2.5cm in thickness or of less than hub diameter. Multiple or Laminated Spacers and extended studs are prohibited.
- Have all hub nave plates and wheel embellishers removed.

## 15. Tyres

- Have tyres complying with Specific Technical Regulations and/or Construction and Use Regulations (if Standard Road Tyres), for the duration of the event.
- Tyres, if treaded, must have not less than 1.6mm of tread remaining at the start of an event. Formula Ford 1600 1mm.
- Where freedom of choice of tyres is left to the Competitor, the responsibility rests with each Competitor to ensure that the tyres to be used are of adequate rating having regard to the potential speed of their vehicle and the nature of the event.
- The fitment and/or use of pressure control valves to wheels and/or tyres is not permitted.
- Unless permitted under sporting regulations the use of chemical tyre softeners is not permitted.

## 16. Cooling

- Have any fluid carrying lines or tubes carrying coolants through the driver/passenger compartment painted red, and if non-metallic to be internally or externally metal braided hydraulic pressure hose.
- Screwed hose clips (e.g. 'Jubilee Clips') may only be used in conjunction with a suitably swaged pipe.

## 17. Transmission

- Have the transmission outside the driver/passenger compartment, beneath the floor or secured in casings or coverings of solid material.
- Be equipped with a reverse gear in normal working order unless otherwise stated in Specific Technical Regulations. Racing Cars of periods A to E are exempt from this requirement.

## 18. Oil Systems

- Have any oil lines passing through the driver/passenger compartment protected and, if non-metallic, to be of internally or externally metal braided hydraulic pressure hose.

## 19. Fuel Systems

- Have any fuel lines passing through the driver/passenger compartment protected and, if non-metallic, to be internally or externally metal braided hydraulic pressure hose or fuel lines complying with FIA specifications.

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- They may only be joined by screwed sealing joints or vehicle manufacturers approved joint.
- If fitted with fuel fillers in a closed boot, or under closure, have collector/spill trays incorporated to drain outside the vehicle.
- **Use pump fuel (see definition The Terminology) except, subject to prior written authority having been given by the MSA, where permitted otherwise under SRs, Formula Rules, and/or Championship Regulations.**
- If using LPG, the entire system must conform with Construction and Use regulations and LPG Industry Technical Association Code of Practice No. 11.
- If using non-pump fuel have a 3 inch diameter 'Day-Glo' orange disc affixed immediately adjacent to the Competition Numbers on both sides.

## 20. Electrical Systems

- Have any wet batteries in driver/passenger compartment enclosed in a securely located leak-proof container.
- Have batteries duly protected to exclude leakage of acid and to protect terminals from short circuiting and producing sparks.
- With the exception of racing cars be equipped with battery, generator, self-starter, side, tail, and brake lights. All this equipment to be in normal working order. Exceptionally when taking part in an event held totally off the public highway, need not comply with DoT Statutory Requirements regarding lighting or horn.
- With the exception of racing cars, or cars of periods A to C, have headlights in normal working order with glasses of minimum 182.5sq.cm unless SRs permit their removal.
- Have the battery earth lead, if not readily distinguishable, identified by a yellow marking.
- If required to have a self-starter, be able to demonstrate during the competition that it is capable of starting the engine.
- Be fitted with suppressors as required by the Wireless Telegraphy Regulations.

## 21. Weight/Ballast

- If subject to a minimum weight, that must be the weight of the vehicle in the condition in which it crosses the finishing line (excluding driver and passenger), or at any time during the competition and/or practice (except for certain classes or formulae which include the driver in the total weight).
- Any ballast required must be attached to the shell/chassis via at least 4 mounting points using bolts with a minimum diameter of 8mm each with steel counter plates of at least 400sq.mm surface area and 3mm thickness.
- Provision must be made for the fixation of seals by scrutineers if deemed necessary.
- Where ballast is fitted to touring, sports, sports racing or GT cars it shall be fitted in the passenger's location.
- Single seat racing cars are exempt from the above mounting requirements.

## 22. Exhausts

- Have the exhaust system isolated from the driver/passenger compartment (e.g. beneath the floor or secured in casings of solid material).
- Have no part of the exhaust system protruding to the rear of the bodywork more than 15cm.
- If Racing Car with rear aerodynamic device, not have any exhaust pipes extending rearwards beyond the aerofoil.
- If Racing Car without aerodynamic device, not have exhaust pipes extending more than 60cm beyond the rear wheel axis.
- If Rear Engined Single Seater Racing Car, have the exhaust outlet between 4cm and 60cm from the ground.
- Have all exhaust outlets terminating behind the mid-point of the wheelbase of the vehicle and within 150mm of the outside the bodywork periphery in plan view. Side exhausts not to protrude more than 4cm. For vehicles other than racing cars that are not fitted with enveloping bodywork any side exhaust may not extend beyond the plane through the outside of the front and rear tyres with the front wheels in the straight ahead position. Cars of periods A to E and Drag race vehicle are exempt from these requirements.

## 23. Silencing

The reason for Silencing (SOUND CONTROL) is to reduce environmental impact and to keep Motor Sport running. Environmental Protection legislation has increased the pressure on activities generating noise and Local Authorities have the power to suppress any noise source deemed to be causing a nuisance. Our system of control is acceptable to most Environmental Bodies and must be considered as part of eligibility to Compete in events.

- All competing vehicles are subject to mandatory silencing, unless a specific waiver for that Class, or Formula is granted. Where specified as mandatory, a silencer must be used, irrespective of the exhaust sound generated without it.
- Vehicles which comply with the Technical Regulations of FIA Formulae and Championships set out in the current FIA Yearbook and other FIA approved Championship-ships, Series and Cups which are participating in races for such Formulae, Championships, Series and Cups at meetings which have been entered on the FIA International Calendar are exempt from MSA sound test requirements but must comply with the sound test requirements set out in the appropriate Formulae, Championship, Series or Cup Regulations.
- Silencing is not mandatory for the following categories of vehicle but is strongly recommended, and may be made mandatory in the SRs at the request of the Circuit/Venue owners:
  - (a) All cars of periods A to D. (This does not include events any part of which takes place on the Public Highway where national laws will apply.)
  - (b) Formula 1 and other single seater racing cars of periods E and F.
  - (c) Drag race vehicles.
- For British Formula Three, British GT and British

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Touring Car Championships the sound test shall be conducted as set out within these regulations with the engine running at 3/4 maximum speed, the sound level meter at a height of 0.5 metres above the ground ( $\pm 0.1$  metre) located at 45° to and 0.5 metres distant from the exhaust with a maximum permitted sound level of 118dB(A).

- Special regulations apply to High Speed Oval formulae and are only applicable when racing on high speed oval circuits.
- Temporary Silencers, by-pass pipes or the inclusion of temporary parts to achieve silencing requirements are prohibited. Officials may refuse to carry out Sound Checks on vehicles utilising temporary parts in exhaust systems. Organisers are empowered to exclude in such situations.
- Sound levels may be reduced following changes in EU Regulations.
- Circuit/venue owners/organisers may impose additional restrictions in SRs.

## 24. Sound Test Requirements (Chart 24)

- Measurements will be made at 0.5m from the end of the exhaust pipe with the microphone at an angle of 45° with the exhaust outlet and at a height of 0.5 to 1.0m above the ground.
- Where more than one exhaust outlet is present, the test will be repeated for each exhaust and the highest reading will be used. In circumstances where the exhaust outlet is not immediately accessible, the test may be conducted at 2.0m from the centre line of the vehicle at 90° to the centre line of the vehicle, with the microphone 1.2m above the ground.
- Measurements should be made outdoors with no large reflecting objects (e.g. walls etc.) within 3.0m (in the 0.5m test) or within 10.0m (in the 2.0m test).
- Background sound levels should be at least 10dB(A) below the measured level.
- Where possible measurements should be taken as close as possible to the vehicle, at the defined distances, to avoid background noise.
- Cars of periods A to D falling within Sections C and D should run engines at two thirds maximum RPM.
- The 2.0m test can be made from either side of the car.
- The highest reading registered being the one needing to comply with the maximum noise requirements.
- Sound testing should be carried out BEFORE taking part in any competition.
- The time and location of sound testing should be advised to competitors prior to the event.
- It is stressed that all participants in motor sport, competitors, officials, marshals, etc., should be aware of, and protect themselves from, noise.

## 25. Safety

All vehicles must comply with Safety Regulations as itemised under their Specific Technical Regulations and as detailed under the section headed Safety Criteria [Section C(c)].

## 26. Miscellaneous

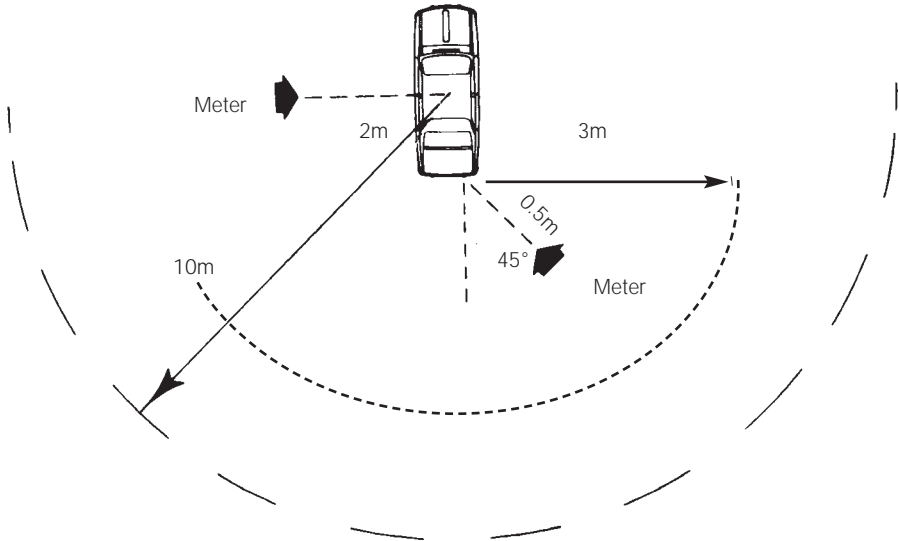
- (a) Be of sound construction and mechanical condition and be well maintained.
- (b) Have positive fastenings for all doors and all hinged or detachable parts of the bodywork.
- (c) Have no temporary parts incorporated in their construction.
- (d) Not necessarily be equipped with seat belts, speedometer, spare wheel or bumpers if the event is held on private property unless specified to the contrary by SRs. Any exposed sharp ends of bumpers etc., must be protected.
- (e) Be prohibited from carrying cameras/videos unless authorised by the Chief Scrutineer and Event Organiser.
- (f) Not be a vehicle of commercial type, such as a van/pick-up which was initially intended solely for commercial or goods carrying, unless permitted by SRs.
- (g) Have a minimum distance of 183cm between the centre lines of the foremost front and rearmost rear substantial load-carrying wheels, unless complying with an Approved Formula, or being a standard production car.
- (h) Except for racing cars, be fitted with a windscreen. If plastic windscreen, sidescreens or rear windows are fitted the thickness must not be less than 4mm.
- (i) Sports cars supplied as standard with plastic sidescreens may retain them in their original thickness.
- (j) Not have skirts, bridging devices or any form of aerodynamic device between the chassis and the ground/track. Any specific part of the car influencing its aerodynamic performance must:
  - (a) comply with rules relating to coachwork.
  - (b) be rigidly secured to the entirely sprung part of the vehicle.
  - (c) remain immobile in relation to the vehicle.
- (k) Under no circumstance can any part of the bodywork, or of the suspended part of the car, be below a horizontal plane passing 4cm above the ground, the car being in normal racing trim with the driver aboard. A gauge of 4cm may be used by Scrutineers before or after races or practice to check the ground clearance.
- (l) Not carry or pass any liquids in or through any tubes comprising part of the chassis structure, or safety roll-over bar.

Appendix 1: Charts and Diagrams

**Chart 24: Maximum Noise Limits**

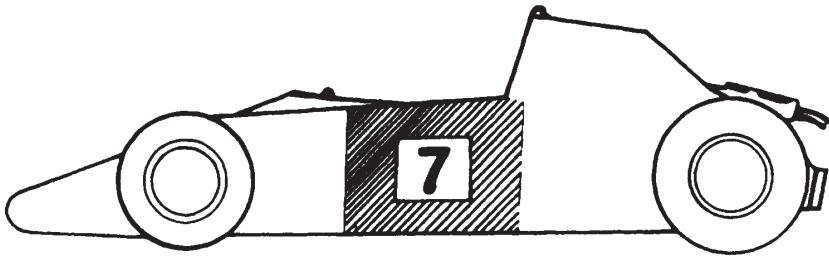
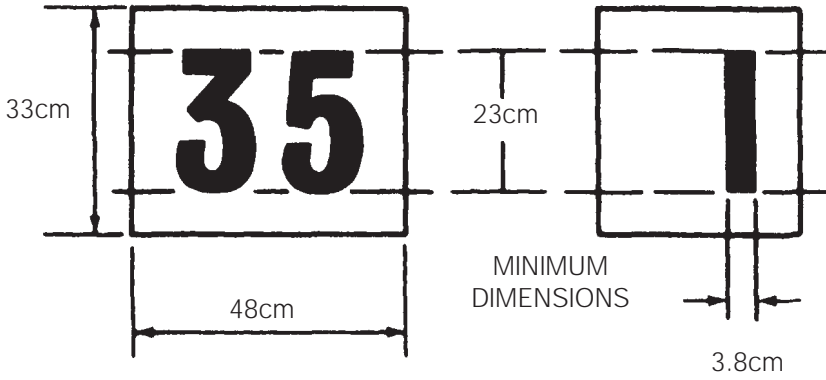
The following table gives alternative distance readings. (Noise measured in dB(A).)

	0.5m	2.0m	
Section 'A'	105	93	CAR RACE (SALOON AND SPORTS CARS) MAXIMUM AT ¼ MAXIMUM RPM
Section 'B'	108	96	CAR RACE (SINGLE SEATER AND SPORTS RACING CARS) MAXIMUM AT ¼ MAXIMUM RPM
Section 'C'	100	88	STAGE RALLY, AUTOTEST, TRIALS, CCV MAXIMUM AT 4,500 RPM
Section 'D'	98	86	ROAD RALLY MAXIMUM AT ¼ MAXIMUM RPM
Section 'E'	100	88	CCV MAXIMUM AT ¼ MAXIMUM RPM
Section 'F'	108	96	AUTOCROSS AND RALLYCROSS MAXIMUM AT ¼ MAXIMUM RPM
Section 'G'			HILLCLIMB AND SPRINT MAXIMUM AT ¼ MAXIMUM RPM –
	110	98	RACING AND SPORTS LIBRE CARS AND CARS COMPLYING WITH I.82 AND I.103
	108	96	ALL OTHER CATEGORIES





**Drawing 6: Competition Numbers**



**Drawing 13: Steering**



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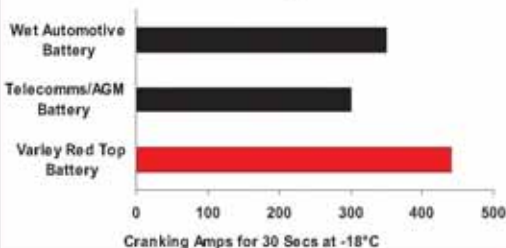
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