

# 1990 MANUAL OF MOTOR SPORT



WITH 1990 NATIONAL COMPETITION RULES

## Classification

For the purpose of attempting records, vehicles shall be classified according to their total cylinder capacity

# VEHICLES WITH POSITIVE DISPLACEMENT RECIPROCATING ENGINES

	RECIPIOCA	1401 = 11011	1441
POSITIVE DISPLACEMENT	Class A	(FIA Class	(11)
Over 8000 cc		(, ,,	(10)
5004 00000 00	Class B	,,	(0)
5001-8000 cc	Class C	"	(9)
3001-5000 cc		"	(8)
2001-3000 cc	Class D	,,	171
	Class E		(/)
1501-2000 cc		11	(6)
1101-1500 cc	Class F	11	(6) (5) (4) (3) (2)
1101-1300 00	Class G		(3)
751-1100 cc	Class H	"	(4)
501- 750 cc		33	(3)
	Class		101
351 - 500 cc	Class J	"	(2)
251- 350 cc		,,	(1)
Below 250 cc	Class K		(.)
Relow 520 CC			

(See Supercharging, below)

VEHICLES WITH ROTARY COMBUSTION (WANKEL-TYPE) ENGINES

According to the above classes, as calculated by the following FIA formula, viz., 1.8 times the volume determined by subtracting the minimum capacity of the working chamber/s from its/their maximum capacity gives the piston displacement equivalence (and hence the relevant class). (See para Supercharging below)

# VEHICLES WITH ELECTRONIC, TURBINE, OR STEAM ENGINES

Such vehicles are allotted to classes on a basis of unladen weight, viz.:

allotted to classes on a c	Class 1
Up to 500 kg	Class 1
	Class 2
501-1000 kg	
Over 1000 kg	Class 3
Diver 1000 kg	

If the engine of a car includes a separate device for supercharging it, the nominal cylinder capacity will be multiplied by a factor of 1.7, and the car will pass into the class corresponding to the nominal volume the

(i) a device designed to and capable of producing positive (above atmospheric) pressure in the A supercharger is deemed to be:

induction system of an engine throughout its operating range, any device which effects a measurable increase in the BMEP.

A dynamic air inlet for ducting air from the atmosphere into the engine intake shall not be considered an a supercharging device.

In competitions other than attempts on records, automobiles shall be classified as follows:

## Ist Category — Racing Cars

Formula Holden Australian Formula 2 Formula Vee up to 1300, 1301-2000, 2001-3000, 3001-5000 formula Ford. Formula Libre (in races) as for Record classes, or as for races. In other speed events)

## and Category — Sports Cars

3001-5000 cc Up to 1300 cc Clubman-up to 1300 cc only. 101-1600 cc 1101-3000 cc

## - Sports Sedans

4001-6000 cc 2001-3000 cc Up to 1300 cc 3001-4000 cc 101-2000 cc

# Ird Category — Production Cars

2001-3000 cc Up to 1300 cc 3001-6000 cc 101 to 1600 cc 1001-2000 cc

# Ith Category (Other Automobiles)

may be specified in Regulations (see Part 3).

## **5th Category (Historic Cars)**

may be specified in Regulations (see Part 3).

NOTES: Organisers are permitted to amalgamate any adjoining classes, but not to use any other class limits than those stated for the relevant category or group.

In all International and National open competitions events shall be conducted only in accordance with the thove categories, unless specific written authority is granted by CAMS to classify otherwise.

SCHEDULE C

ALL AUTOMOBILES SHALL, OF NECESSITY, IN ALL COMPETITIONS:

comply with the definition of an automobile; be fitted with some form of protection between engine and driver's compartment suitable and sufficient in the case of fire for preventing the passage of flame;

1.3 be so constructed that the driver is protected from the entry of foreign matter into the driving compartment from the road or road wheels;

1.4 be equipped with a transmission system so

arranged that:

the propeller shaft and universal or carden joints, if passing through or beneath the passenger compartment, shall be under the floorboards, or fitted in tubes or casings; such floorboards, tubes or casings shall not be of a temporary nature, but shall be joined together and firmly fixed to the coachwork or chassis;

any chains used in the transmission of power or driving any auxiliary component shall be effectively

quarded;

1.5 be fitted so that all fuel tanks are vented

externally to the bodywork;

1.6 not be equipped with any device providing for radio communication between the vehicle whilst in motion and pit and service crews, save in races, special stage rallies and fully route charted rallies; 1.7 if not registered for use on public roads, have

any steering column locking device removed; 1.8 if required to be fitted with roll-over protection by the provision of these rules, be equipped with such protection only in accordance with the pro-

visions of Part 10 of this Appendix;

1.9 unless specifically otherwise approved, use

only Commercial fuel, as defined; 1.10 be fitted with windows (including windscreens) which if of other than glass, are clear, transparent and free of colouring; glass windows must not be coloured or tinted after production;

1.11 have displayed on the dashboard a valid CAMS registration label for the relevant competition (Races, Open Rallies and Off Road Events);

1.12 be fitted with safety harness or seat belts as prescribed in Part 9.

ALL AUTOMOBILES SHALL, OF NECESSITY, IN ALL SPEED EVENTS:

(if fitted with rear hinged bonnets and/or panels) be fitted with at least two independent fastening systems, of adequate strength and limited extensibility, which simultaneously hold the bonnets or panels closed;

2.2 (if fitted with crankcase breather/s discharging to atmosphere) have fitted to such breather/s an oil-trap container (which must be empty at the start of the competition) of at least two litres (for cars of under 2000 cc) or three litres (for cars of over 2000 cc) except in Autocross, Rallycross and other events on unsealed surfaces, save however that Supplement tary Regulations may require fitment for any particular event;

(other than one-car-at-a-time closed spend events) be fitted with a roll bar or roll cage and safety harness complying with such specifications as an determined by CAMS from time to time (see Parts II

and 10):

(NOTE: structurally unmodified fixed roof closed care may compete in events other than National Opini Race Meetings without roll-over protection.)

2.4 be fitted with a fire extinguisher or fire or tinguishing system in working order and of a type and capacity as specified in Part 8 of this Appendix

appropriate;

2.5 be so constructed that, in the event of any breakage, the tailshaft, its components or mounting shall be effectively prevented from striking the ground;

2.6 be fitted with wheels which meet the require ment of specifications determined by CAMS Inm

time to time (see Part 5);

2.7 be so constructed that any aerodynamic device fitted shall be in accordance with spot fications determined by CAMS from time to time (and Part 61:

2.8 comply with any Supplementary Regulation for a specific event which require the filment locking or wiring devices adequate for the prevention of any loosening of any oil drain plug;

2.9 be fitted with a scatter shield if required units the provisions of Part 13 of this Appendix. Notwithstanding the above requirements, the registered for road use shall not, when compelling one-car-at-a-time speed events, be required comply with the provisions of sub-sections 2.4 and 9 of this Schedule.

#### **ALL AUTOMOBILES IN CIRCUIT RACES** SHALL, OF NECESSITY, IN ADDITION TO THE PROVISIONS OF PRECEDING SCHEDULES A & B:

be fitted only with laminated glass in any glass windscreen;

3.2 be fitted with tyres which have not been retreaded, recapped, repaired or in any way reconditioned; if tubeless racing tyres, shall have been Itted only to suitable rims; if tubeless touring tyres, may be fitted only to rims classified as optimum sizes for the covers concerned (fitting of such tyres to so-called "permissible" or oversize rims is specifically prohibited); in all cases, shall be required to carry a manufacturer's speed rating appropriate to the type of automobile and competition concerned (see Part 5);

be fitted with bodywork which generally enloses (when viewed from above and each side) the hassis frame and basic mechanical elements, from the front of the automobile rearwards to the vertical plane immediately to the rear of the driver's seat. Provided that, in the case of a vehicle driven by a movisional licence holder, such further panel/s must in fitted as may be necessary to comply with the

equirements of Part 11, Article 2; be fitted with at least two (2) rear vision mirrors, which each must have a reflecting surface of at and 50 cm<sup>2</sup>, and provide an unobstructed view to me rear of the car, save that, in automobiles with losed body-work (whether of sports or touring mos), one such mirror shall be fitted internally and me externally:

- 3.5 be fitted with a fuel tank as specified in Part 14 of this Appendix as is appropriate;
- 3.6 be fitted with readily accessible towing eyes, having an internal diameter of at least 40 mm; one each forward of the front axle and rearwards of the rear axle:
- 3.7 be fitted with fuel lines only of metal, braided Neoprene, or other CAMS approved material;
- 3.8 in closed cars first registered with CAMS after 1st January 1980, and in which the relevant regulations permit the replacement of the driver's seat, be fitted only with such replacement seat which:

incorporates a head restraint

has no provision for mechanical adjustment of

the rake of the squab

if the original seat mountings are not used, is mounted in four places using 100 mm x 45 mm plates, of thickness 6.4 mm aluminium or 4.6 mm steel, each attached by at least 2 bolts of 10 mm diameter or the approved equivalent thereof.

3.9 seat fitment to Production based bodyshells: Where a seat is a separate entity to the structure of a vehicle and it is not supported by the structure, and where the standard seat mountings are not retained or the vehicle does not comply with the Australian Design Rules for seat mountings, the seat shall be mounted by not less than four 8 mm (5/16") bolts. Where they are affixed to the unreinforced section of the floorpan, these attachment points shall be reinforced by the use of plates of not less than 75 mm x 50 mm x 3 mm (1/8" thick).

Races, Speed Events & Off Road Events

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Our stock range covers junior sizes to XXL adult in a variety of colours and designs. Made-to-measure and special design racewear always available.

Other Cams Approved racewear Includes:

- Nomex/Leather Race Boots
- Nomex Gloves & Gauntlets
- Nomex Underwear & Socks
- Balaclava's & Neck Collars

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1. HEADGEAR It is compulsory, in all races and other speed events, and in other events where helmets are required, that drivers wear helmets of a standard design, construction and fitting approved by CAMS.

The helmets acceptable by CAMS shall be

required to comply with AS 1698-1974.

Helmets not marked as complying with the above standard may be approved by CAMS under certain conditions.

All helmets must bear a CAMS approved label affixed by an authorised official.

"Balaclavas" are recommended (though not mandatory) for drivers, especially those with long hair and/or beards, as are face-masks. Save for Kan races, in which case it is compulsory for drivers to wear face masks or guards of Proban, Nomex, leather, 2 layers of woollen material, or of other approved material; or alternatively, a full face helmel Painting or use of solvents on helmets could be

hazardous.

Helmets bearing any of the following marks and approved for use in racing, speed events, special stage rallies and other events where helmets are required, viz:

AS1698 — Australian standard. Not valid for inler

Snell 1980 and 1985 — American standard. Valid In

SIS 88.24.11(2) (Sweden)
DS 2124.1 (Denmark)
SFS 3653 (Finland)
ONS/OMK (West Germany) — black on white, or black on blue labels only

BSI BS2495 1977 plus amendments (Britain) BS6658-85 Type A (Britain)

E22 European Economic Commission with 02 Salle amendments.

Goggles or visors must be worn by drivers of open cars. Those with glass lenses of any kind are acceptable. Lenses shall be of a plastic material high impact resistance, satisfactory optical qualification and complying with Australian Standard Spinish cation AS 1609-1974, and bearing either the mark or the CAMS-approval label.

Races

In all circuit races and practice therefor, all drive shall be required to wear approved clothing

(a) One piece overalls of an approved flunderesistant material, extending from wrists to not ankles; together with

Heat-resistant underwear, extending line wrists to neck to ankles, and of a woollen or see other material as may be specifically approved CAMS, and

Socks of undved wool or other flame retardant material, worn under flame resistant boots or shoes which completely enclose the feet. (Driving without such footwear is forbidden.)

Gloves of recognised flame retardant material. No apparel of flammable material (e.g. nylon or similar synthetics) may be worn in any race. Neither 2 piece overalls nor Proban treated material are

In all Kart races and practice therefore, drivers

(a) jackets and trousers of leather, cordura or cordulon, which are securely fastened at the waist, wrist and ankles. Full racing suits are recommended. footwear securely fastened which covers and protects the ankles.

Kart drivers may wear appropriate wet weather clothing, in addition to that specified, subject to the approval of the stewards. It is recommended that acoustic ear plugs be worn.

PIT CREW

All persons working on cars must wear shoes and locks, neck to ankle covering, and at least a short-loeved shirt. On race day, pit crew must be neatly attired. Promoters are authorised to refuse entry to the pit area of people unsuitably dressed.

Rallies

No person may compete in any rally of Aus-Iralian Championship, International or special stage dutus unless wearing, in other than transport stages, properly fastened helmet, complying with AS 1698 otherwise approved by CAMS.

No person may compete in any open rally or my rally timed to intervals of less than 1 minute unless wearing shoes and socks, a shirt and with at must short sleeves, and clothing from neck to ankle.

It is strongly recommended that no apparel of mmable material (e.g. nylon or similar synthetics)

All Events

No driver shall participate in any competition wearing suitable and appropriate footwear.

whibited are, for example, thongs, Roman sandals high-heeled shoes.

overs shall continue to comply with the requirement Rule 141 until such time as they leave their Momobiles.

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# **FASTMAN**

# Race Approved Apparel

## **Driver Suits**

- PFZ treated wool (d/s layer) tested ISO 6940
- Nomex (d/s layer) tested ISO 6940

## **Go Kart Suits**

In Cordura (the very latest in design - d/s layer)

## Accessories:

- Nomex Grand Prix Underwear tested ISO 6940
- Nomex Grand Prix Balaclava tested ISO 6940
- Nomex Gloves and Gauntlets (Grand Prix standards)

## Also Available:

Pure, soft wool underwear Pure, soft wool socks For all your Racewear needs, CONTACT US.

Wholesale and retail enquiries: FASTMAN P/L Tel. (03) 699 8518 Address: 249 Coventry Street, South Melbourne, VIC. 3205.



## Wheels and Tyres

The following requirements and parameters apply to all competitions.

**RIM WIDTH** 

1st Category — Racing Cars 2nd Category — Sports Cars and cars complying with Clubman Sports 1300 Formula.

Where a steel centre is employed, the width of any rim attached thereto shall not exceed the following: Cars up to 2000 cc capacity — and Clubman — 81/2" Cars over 2000 cc capacity - 10" Otherwise unrestricted

2nd Category Sports Sedans **3rd Category Touring Cars** 

Where a steel wheel centre supplied by a vehicle manufacturer as original vehicle equipment is employed, any rim attached to such centre shall not be more than 2" wider than the rim originally fitted to such centre.

Wheels and steel centres other than those supplied by a vehicle manufacturer as original vehicle equipment may not be widened.

The absolute maximum rim width, regardless of wheel construction, shall be 10" for Sports Sedans, and as determined by vehicle mass for Touring cars.

- Tyres fitted to all rims shall be in accordance with the Tyre and Rim Association recommendations.
- 2.2 Tyres not listed in the Tyre and Rim Association Manual are to be subject to certification by the manufacturer as being suitable for the rim width concerned.
- 2.3 The tread wear indicators, as provided by the relevant tyre manufacturer will be the definitive method of determining minimum tread depth. At no time prior to any official practice or racing may the tread wear indicators be exposed or, in those cases where the tread wear indicator is a dimple in the tyre, worn below such indicator. This does not apply to the shoulder of the tyre where excessive wear may occur due to steering and cornering.

Tyres may be checked by an official in the marshalling area prior to the start of any practice session or race. Any vehicles found not to comply with these regulations may not be permitted on to the

circuit.

#### WET WEATHER TYRES

Clerks of Course may, after consultation with the Stewards and at an appropriate time announce that "untreaded tyres are not to be used until further notice".

As most untreaded racing tyres are not suited for other than dry tracks, scrutineers must ensure that (for circuit races and tarmac rally stages):

On wet days only suitable tyres are used; thin will exclude specialised dry tyres, unless they have been suitably modified.

Tyres used are suitable for the weather and track conditions relative to the car's potential.

That all tyres used or likely to be used are scrutinised (competitors too, must ensure that this in

By checking, in the marshalling area, that late changes have not been made which render the care

Championship and long distance races will be subject to special decisions. If a specific order is to be made, it will be that the race will commence on treaded tyres. Competitors would thereafter be from to change. This order will be made in respect of those races if:

It is raining at the start, and the track is wet, or It is not raining at the start, but the track in "running" with water over the greater part of its

length.

3.4 In Formulae where a specific dry weather tyni and/or wet weather tyre are specified, the woll weather tyre may be used only under conditions (a) and (b) in paragraph 3.3 above.

CONTROL TYRES

Where specific tyres, otherwise known as conful tyres, form part of a formula, those tyres are as much a part of the formula as is everything else which describes the car.

Specified control tyres may not be modified, other

than by reduction of tread depth.

In all competition in which the car is entered under a specific formula, those control tyres must be until If the car is not competing in a particular formula but only as a "racing car", then the race must be

assumed to be for cars of Formula Libre, and confine tyres are then not required.

# MAXIMUM PERMISSIBLE RIM WIDTHS

Category	Vehicle	Maximum Widening Permitted		Max. Rim Width for	Maximum Rim Width other
		Prod. Steel Wheels	Non-Prod. Steel Wheels	Steel Wheels	than Steel Wheels
1	Racing	Unrestricted	None	8½" up to 2 000; 10" over 2 000	Unrestricted
9	Sport Cars	Unrestricted	None	u u	tt.
2	Sports Sedans	50 mm (2 in.)	11	33	10"
9	Touring Cars	50 mm (2 in.)	11	as determined by vehicle mass	
Slubman	-	Unrestricted	None	81/2"	Unrestricted

## **Aerofoils and Coachwork**

The following are the CAMS (and F.I.A.) parameters regarding the fitting of aerofoils and other aerodynamic devices to cars.

1. For all vehicles (1st, 2nd, 3rd, 4th and 5th Categories) coachwork shall be deemed to include all external parts of the car which extend above the highest point of either the front or rear complete wheels (with tyres) with the exception of units definitely associated with the functioning of the engine or transmission and the roll bar.

Any specific part of the car which has an aerodynamic influence on the stability of the vehicle must be mounted on the entirely sprung part of the car and shall be firmly fixed whilst the car is in motion.

Neither the roll bar nor any of the units associated with the functioning of the engine or transmission shall have an aerodynamic effect by creating vertical Ihrust.

All external projections swinging in a horizontal plane shall have a minimum radius of 15 mm. The leading edge of any aerofoil fixed to the front of the car shall not be sharp.

Switches for battery isolation & fire fighting equipment may project beyond the coachwork without Infringing regulations.

2nd Category vehicles shall comply with the following requirements (except for cars which comply with Sports Sedan Reg. 3.12), viz.: the highest point of any forward-facing gap in the roachwork shall not be situated above a horizontal plane 800 mm above the lowest point of the entirely prung structure of the car. The maximum width of the coachwork shall not exceed by more than 200 mm the maximum width between the two vertical planes tangent to the outer faces of the front/rear

1st Category vehicles shall comply with the following requirements:

11 No element of coachwork may exceed in height a horizontal plane situated at 900 mm above the ground. Neither the roll bar nor any of the units insociated with the functioning of the engine shall be included. Measurements are to be taken with the liliver on board.

3.2 Cars of a type registered at 1 January 1975, but constructed after 1 July 1975; and cars of a type not registered at 1 January 1975, but constructed after 1 January 1976; and cars registered at 1 January 1975, but which have subsequently been substantially varied; must all comply with the following requirements, viz.:

	F/Holden		FF
Maximum width ahead of front	1500 mm 1	500 mm	950 mm
wheels Maximum width	1100 mm 1	100 mm	950 mm
ahead of front wheels, above height of wheel rims	6		
Maximum width between front and	1300 mm 1	+	950 mm
rear wheels +		200 mm	
deformable Maximum width behind rear wheels	1100 mm 1	100 mm	1100 mm

Front overhang, max. 1000 mm Rear overhang, 800 mm 1000 mm max

(from centre of wheel/axle)

3.4 Wheels shall be external to the coachwork.

3.5 The coachwork opening giving access to the cockpit must have the following minimum dimensions:

Length: 600 mm

Width: 450 mm, maintained over 300 mm from the rearward point of the seat backrest towards the front.

It must be able to be entered or left without it being necessary to open a door or remove a panel. Sitting at his steering wheel the driver must be facing forwards. Moreover, the cockpit must be so conceived that the maximum time necessary for the driver to get out does not exceed 5 seconds.

## **Commercial Fuel**

Unless specifically permitted otherwise, the only fuel to be used in competition is that described herein.

"Commercial fuel" is defined by CAMS as:

FOR ALL SPARK-IGNITION ENGINES (RECIPROCATING AND ROTARY)

A "motor" fuel produced by an oil company and surrently distributed at roadside refuelling stations normal "unleaded," "premium" "super" and modor fuels as well as gasoline complying the recognised specification for 100/130 AVGAS, produced by an oil company and currently Intributed for commercial use throughout the writory of the CAMS.

In all events in which the use of commercial fuel mandatory such fuel must contain a maximum of oxygen and 1% nitrogen by weight; the remainder of the fuel consisting exclusively of hydrocarbons and not containing any alcohols, nitro compounds or other power boosting additives. Only air may be mixed with the fuel as an oxidant.

(b) Should a commercial fuel of higher octane rating than is marketed at the date of the publication of these Rules be produced, the oil company producing such fuel shall give notice to the CAMS by registered letter; such fuel, or its equivalent, may thereafter be used from a date 30 days after the mailing of such registered letter.

Suppliers of fuel to entrants in any competition shall be required to send to the CAMS samples of such fuel at such times and in such quantities as the CAMS may decide, together with a declaration that such fuel complies with these Rules.

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(d) Nothing in the foregoing shall be deemed to prohibit the addition of water or a lubricant which does not increase the octane rating or specific heat content of the fuel

N.B. Any other gasoline or petrol (e.g. Avgas 115/145) of higher rating than that specified is NOT permitted when "commercial fuel" is specified.

Liquified Petroleum Gas (LPG) is not acceptable as Commercial Fuel. Nitrous Oxide is not permitted to be used under any circumstances.

#### FOR COMPRESSION-IGNITION ENGINES (RECIPROCATING OR ROTARY)

A hydrocarbon product derived from petroleum, and

conforming with British Standard 2869:1970 Class A1, with the exception of cloud point. The only permissible additive treatments shall be for oxidation or corrosion control or lubricity. Additives to improve the ignition quality of the fuel are not permitted.

#### 3. FOR TURBINE ENGINES

Kerosine used by commercial aviation companies for turbo-propellor or jet engines.

NOTE: For Touring Cars only Pump Super fuel in permitted; for Series Production Cars, only unleaded fuel is permitted. The specification for each in available from CAMS.

## **Safety Harness**

(not applicable to Karts)

1. Safety harness shall comply at least with the requirements of AS 2596 (AS E35) and must be fitted and worn as required by vehicle and event

- regulations. 2. In all vehicles in which a roll bar/cage is required to be fitted, there shall be fitted a full harness, consisting of at least a lap strap and twostrap shoulder harness, fitted with a single buckle, and of which each component complies at least with the requirements of AS 2596 (AS E35). The harness must be securely mounted at at least three points; the shoulder straps mounted behind the driver must be above a line drawn downward from the shoulder at an angle of 40° to the horizontal. It the two shoulder straps join prior to a common mounting point then that junction shall be at least 150 mm behind the driver's neck.
- 3. In closed cars which are not required to be fitted with a roll bar or cage, a seat belt of the full harness

type (as described in 2.), or a lap-sash type, must be fitted and worn by the driver. Each component must comply at least with AS 2596 (ASE35).

4. In all cases of mounting the following must be observed:

(a) Floor mounting points must be reinforced with it plate of at least 75 mm x 50 mm on the underside of the body

Full harness rear mounting points must be to a substantial part of the vehicle's structure, reinforced as may be appropriate.

On production cars, the original mounting points may be satisfactory.

5. In races all cars of 1st category and sports care (Group 2A) must be fitted with a 6 strap harnone which incorporates a crutch restraint. It is recommended that all cars derived from series production Touring cars be fitted with such 6 strap harness.

## **Fire Extinguishers**

(not applicable to Karts)

1. All racing cars of Formula Holden and Formula 2 when competing in circuit races only, shall be required to be fitted with a fire-extinguishing system of at least 5 kg extinguishant capacity, at least half of which must be placed forward of the engine, but aft of (i.e. to the rear of) the foremost pick-up points of the front suspension.

The system must include a manual triggering device, operable by the driver on board or by a helper outside the vehicle, and the location of which must be indicated by a letter E in a red circle. The direction of the outlet/s of the extinguishant is free.

The operating system must be designed so that even if the battery of the car is inoperative, the extinguisher will still function.

In other than circuit races, all cars mentioned in 1. (above) and in all competitions, all other Category 1 vehicles, must be equipped with at least a l

All vehicles of the 2nd, 3rd, 4th and fill Categories in all speed events must be equipped with a fire extinguisher which complies with the following conditions and is properly fitted at a suitable location:

(a) it must comply with either of the Australian Standards 1846 or 1848;

(b) it must be of at least 900 g capacity.
The fitment of a CAMS-approved "on-bound extinguishing system shall be acceptable an a alternative to the fitment of a separate extinguished

### **Roll Over Protection**

#### **ROLL OVER PROTECTION IS REQUIRED** AS FOLLOWS:

1.1 Race Meetings — all cars, except competition exclusively for 5th Category (Historic) cars other than Group N.

1.2 Open Speed Events - all cars, except Touring Cars, those of 5th category, or those which are

road-registered.

1.3 Closed Speed Events — not required.

Off Road Events — see Vehicle Regulations.
Rallies — all cars in International, Australian

Championship & Special Stage events.

1.6 Other Events — as stipulated in the relevant supplementary Regulations.

1.7 Races other than International and National open — not required on bodily unmodified fixed roof closed cars.

1.8 Karts - not required.

#### CONFIGURATION

The general design and form of the protection shall be as shown in Section 3 hereof.

12 The hoop shall be placed behind and above the driver's head from one side of the car to the other. and with the driver seated in the normal position, the

(a) be of a height not less than 50 mm above the driver's helmet;

(b) in conjunction with the vehicle's structure not leave unprotected any part of the driver's profile, including shoulders when viewed from the front or

(c) not overhang, but be within 150 mm of the driver's helmet:

(d) in closed cars, be placed as near as possible to the roof in order to limit its crushing in the event of a somersault.

(e) in 1st Category (Racing) Cars, be constructed so that the driver's helmet is prevented from passing between the hoop bars to the extent that the helmet is visible at the rear of the hoop when viewed from the

2.3

(a) Braces shall be straight, save that in closed cars where the diameter of the brace material is 45 mm (134") or more, they may be bent to conform to a coachwork profile, e.g. roof line.

(b) A transverse diagonal brace, where fitted, shall be attached to the hoop from the bottom of one side

to the top of the other side.

(c) Longitudinal brace/s shall be attached to the upper portion of the hoop on each side of the car where applicable and extend towards the rear of the car as far as practicable.



# **CAMS APPROVED**

**ALLOY ROLL BARS** STEEL ROLL CAGES TO FIA SPEC. **BATHURST STYLE DROP TANK** SEAT BELTS. ALLOY WELDING **TUBE BENDING CHEAP FREIGHT** 

# BUGGY **FRAMES** 648 3947

**UNIT 5/247 RAWSON STREET. AUBURN 2144** 

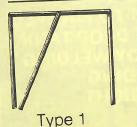
2.4 Front seat access must not suffer interference by the fitting of roll over protection and no encroach-

ment upon the volume reserved for the driver and front seat passenger is permitted.

2.5 Rear passenger space may be encroached upon by the elements of roll over protection and elements may pass through rear seat upholstery.

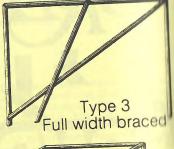
NOTE: Forward Facing Struts — Alternatives On 1st Category cars, it may be more appropriate for the longitudinal braces to be forward rather than rearward. In such cases, these may be approved subject to accessibility to the driver not being impaired. Similarly, in open Sports Cars, the same may apply. In the case of Sports Cars, prior approval of CAMS is necessary.

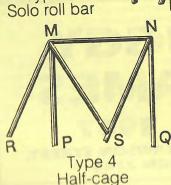
3.	3. FORMS OF ROLL OVER PROTECTION ACCEPTABLE				
	Type 1	Description Solo Roll Bar	Vehicle Application 1st Category Cars.  Open sports cars only for other than speed events.	Remarks Two 25 mm dia. x 1.5 mm gauge longitudinal braces or one brace of identical size to the hoop.	
_		- 0 10	Light weight (700 kg) closed	Acceptable only for other	
	Type 2	Full width Roll Bar	cars and open sports cars.	than speed events and races.	
	Type 3	Full width Braced Roll Bar	Minimum acceptable speed events for closed cars under 1150 kg and open sports cars.		
-	Type 4	Half Cage	Recommended for closed cars under 1150 kg. Minimum requirement for closed cars over 1150 kg. Recommended for open sports cars. Minimum acceptable for all open cars in Off Road events.	Strut MS may be MQ, NR or NP.	
-	Type 5	Full Cage	Recommended for closed cars over 1150 kg.	Strut NP may be MQ.	

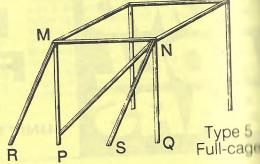




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#### MATERIAL

For hoops and braces all steel tube shall be round in section of minimum sizes as set out below, electrical-resistance welded to Australian Standard 1450-1974 ("Circular and Non-Circular Steel Tubes for mechanical and general engineering purposes"). 4.2 Alternative materials may be used only in protection manufactured by authorised firms or persons, and such protection must bear the manu-

lacturer's name and licence number. 4.3 Alternative Sections corresponding to steel lube sections

be sections. Mild Steel	Aluminium Alloy Alternative (i) B6351 T5 (ii) B6061 T6
mm 25 x 1.5 30 x 1.5	mm 30 x 2.0 38 x 2.5
38 x 2.5 45 x 2.5 50 x 2.5	45 x 3.0 50 x 3.0

44 Bolts shall be either Grade 5 (55 ton) High Tensile hexagon headed bolts or 90 ton cap screws

15 Pins for removable connections shall be either 155 ton High Tensile steel or 90 ton Cap Screws.

#### **FABRICATION**

One continuous length of tubing should be used for the main structure with smooth continuous bends and no evidence of crimping, wall failure or lignificant section weakening.

All welding should be of the highest quality possible with full penetration preferably arc welding

and in particular heliarc.

Any holes drilled in the main hoop shall conform with Fig. 3 below. The wall thickness of the inserted lube shall be equal to or greater than that of the

filled tube. Holes drilled in a brace shall conform with Fig. 3 below unless the wall thickness of this brace is equal or greater than 3 mm (10 gauge). The wall mickness of the inserted tube shall be equal to or meater than the drilled tube.

#### REMOVABLE CONNECTIONS

m cases where removable connections are used in over protection construction they must be one of following approved types.

A twin lug connection with axis working under buble shearing conditions (see Fig. 4)

Tapered connection (see Fig. 5) A muff connection (see Fig. 7)

A tee clamp connection (see Fig. 6)

#### MOUNTINGS

Plates of the following dimensions affixed to a directural portion of the car are required, when the mountings are not part of the car's structure.

Aluminium Thickness: 4.7 mm (3/15") Steel

Area: Lower: 100 mm x 45 mm Upper: Where the car's weight is

100 mm x 65 mm less than 700 kg between 700-1150 kg 100 mm x 75 mm greater than 1150 kg 100 mm x 100 mm

7.2 Bolts: At least 2 of 10 mm diameter or 3 of 8 mm diameter, or the approved equivalent thereof, in each plate.

7.3 Chassis Reinforcement. Where the roll bar rests on a boxed section the latter must be locally reinforced. A recommended method is shown in Fig. 3

7.4 Road Registered Production Closed Vehicles. The hoop may be mounted utilising a minimum of 4 safety belt mounting points provided by the vehicle manufacturer, provided that:

(i) the mounting points are within 75 mm of the centre line of the hoop tube, and

the intermediate mounting plates are as specified in 7.1 above for upper plates.

The braces may use the rear safety belt mounting points provided by the vehicle manufacturer.

#### DIMENSIONS

8.1 For the main hoop the minimum sectional dimensions are as follows:

**Tube Section (Steel) Hoop Size** Less than 610 mm x 30 mm x 1.5 mm 380 mm

Off Road Vehicles of 38 mm x 2.5 mm up to 700 kg mass

45 mm x 2.5 mm All others

8.2 Bracing Material shall be not less than—

Types 1 and 2 25 mm x 1.5 mm (a)

Types 3, 4 and 5 30 mm x 1.5 mm cars less than 1150 kg: 45 mm x 1.5 mm cars over 1150 kg:

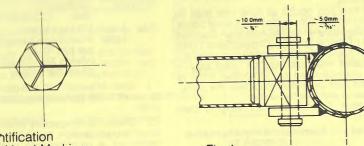
## IMPLEMENTATION

The foregoing revised requirements came into effect on 1st January 1980 for all cars first registered with CAMS after that date.

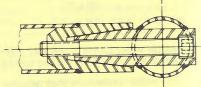
Pre-existing cars must comply with the requirements effective until 31st December 1979.

10. The above requirements serve to specify a minimum standard only. Alternative configurations will be considered by CAMS on individual application.

11. Roll bars which do not comply with these regulations or are not otherwise specifically approved (see Reg.10) are prohibited.

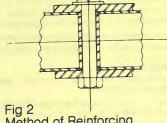


Fia 1 Bolt Identification Grade 5 Head Marking U.T.S. 536 TON/in.2 Threads to A.S. B18.2



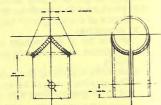
Twin Lug Connection

**Tapered Connection** 

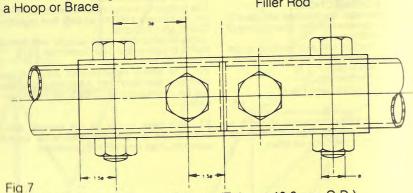


Method of Reinforcing a Box Section

Method of Sleeving



Mat'l & Wall Thickness. Mild Steel: 3.0 mm min. CAMS Approved Alloys only Alloy Welding: 5% Magnesium Filler Rod



Muff Connection

12.0 mm (Tube < 40.0 mm O.D.) 14.0 mm (Tube ≤ 40.0 mm < 50.0 mm O.D.)

16.0 mm (Tube ≤ 50.0 mm O.D.)

## **Markings on Automobiles**

#### NUMBERS

1.1 Competition numbers carried on automobiles in accordance with Rule 147 in speed competition shall comply with the following requirements:

the number shall be carried in such manner that in the opinion of the Chief Timekeeper it is clearly visible from both sides and the front of the automobile:

(b) in cars of 2nd & 3rd category, the number must be displayed on the front doors. In 1st Category cars, the number must be displayed alongside the cockpit or if physically possible, on the end plates of the rear

the number shall be either white on a black background or black on a white backgroud. The background for the number must be either a disc or metangle in a colour constrasting with the colour of the coachwork.

12 Numbers must be of the style known as Tempo heavy condensed", viz.:

on 1st Category & Sports cars, the minimum height of the figure shall be 230 mm and the minimum width of the line in each figure at least 40 mm. The makground shall be at least 450 mm wide by 110 mm high;

on all other cars, each figure must be at least mm in height, and the width of the line in each gure must be at least 50 mm.

No part of any numeral shall be closer than mm to any part of the adjoining numeral, or to any of the edge of the background; and no part of the impetition number shall be closer than 160 mm to part of other signs permitted hereunder.

Above or below the background, a surface aving the same width as the background (in any and at least 450 mm wide on 1st Category & Sports and 500 mm on other cars), and of a height of at 120 mm, shall be left free of advertising to be and at the discretion of CAMS, which may use if for Murtising purposes, or which may delegate to the minisers authority to use that space. On cars on with such an area is not available due to coachlimitations the competitors shall keep free of advertising an equivalent surface in the modiate vicinity of the background.

Competition number "1" is reserved exclusively The current Australian champion driver in each milicable category. The champion driver may elect who use number one, and in such eventuality it be withheld for the appropriate period.

"Zero" alone is not permitted to be used as a

#### PROVISIONAL LICENCE HOLDERS

my race (other than those for Karts) automobiles by the holders of Provisional Licences for shall carry, mounted so that they are clearly from the rear of the automobile at a distance of m in daylight, a plate carrying the capital P, in white background, basically similar in size design to those approved by Australian for civil probationary or provisional

#### 3. OTHER SIGNS

3.1 Signs or advertisements displayed upon automobiles in accordance with Rule 155 shall comply with the following requirements:

(a) No sign or advertisement shall be permitted on any windscreen, side or rear window, or, other than the competition number, above a line joining the upper level of each of these. Notwithstanding the provisions of this sub-paragraph, it shall be permitted on series production based cars the windscreens of which are of original dimensions, to place a sign, on the windscreen, indicating the make of the vehicle, or the driver's name, or the name of an affiliated or associated car club, or in the case of Rally Cars, the driver's and navigator's names; provided that such sign does not extend downwards for more than 25% of the depth of the windscreen from the upper edge thereof, save that no part of the sign may be more than 100 mm below the top level of the windscreen. (b) No sign or advertisement shall be permitted within 100 mm of the background area of a

competition number, or within 160 mm of the number 3.2 No slogan or any sign containing a verb or verbal phrase shall be permitted.

Verbal phrase shall be permitted to contain any Arabic numerals, unless such sign comprises the name of a Club affiliated with CAMS; or forms part of a registered trade mark; or being a telephone number is displayed on a rearward facing coachwork panel. In addition, the case of cars competing in road In addition, the case of cars competing in road events, Arabic numerals may be displayed subject to them being not greater than 100 mm in height, not located on either front door of the car, and otherwise complying with the requirements of this part of Appendix C.

3.4 No sign or advertisement shall be permitted to be indecent or in breach of good taste; the Clerk of Course at any meeting shall be authorised to refer to the Stewards any sign which he deems to be contrary to the requirements of this paragraph and the Stewards' decision thereon shall be final in respect of that meeting.

3.5 Registration labels and official number-plates shall not be deemed to be advertising with regard to this Appendix.

3.6 In International competitions, there shall be displayed on both front mudguards a facsimile of the national flag of the driver/s, as well as the names of the driver/s. The minimum height of both flags and names shall be 40 mm.

#### 4. LETTERINGS

The lettering of all numerals and letters in all signs referred to in this Appendix and these Rules shall be carried out in a neat, regular and professional manner; scrutineers may order the relettering of any sign or part of a sign, etc., which in their opinion fails to comply with the requirements of this paragraph.

#### TRADE MARKS

5.1 Arabic numerals where they form part of a registered trade mark may be used subject to the foregoing, and the following additional requirements: (a) on the sides of the car no part of the numeral shall come within 120 mm of a competition number. (b) shall be no larger than and of a colour contrasting with the competition number:

5.2 The above notwithstanding, the chief timekeeper may direct the removal of such numbers from the side of the car presented to the timing box, if in his opinion the presence of the numerals could prejudice the operation of the timing and lap scoring.

#### 6. SPONSOR REQUIREMENTS

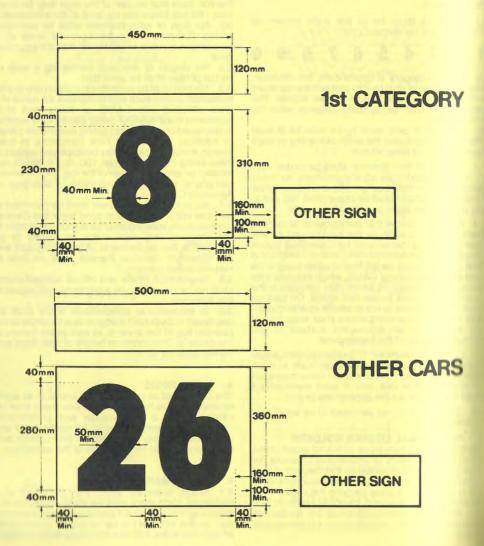
6.1 In all races, sponsors and/or promoters may make no requirements or prohibitions (regarding signs) binding on entrants.

6.2 In National Championship rallies, an area 450 mm wide x 600 mm high must be reserved on

each front door for the organisers' signs. Organisers may make no other requirements as to signs on the sides of cars.

#### 7. VARIATION

Notwithstanding the requirements of this part of Appendix C, the Chief Executive Officer of CAMI shall have discretion in approving any sign not in conformity therewith, provided it is deemed to be public service and/or beneficial to the sport; and in respect of numbers, on condition that artwork of the proposal is submitted, and if permitted, that a fee of \$500 be paid.



Normally the time lapse between switching on the red light and replacing it by the green will be between 4 and 7 seconds. The yellow lights at the start must not be used at any other time during an event.

#### 4.2 Location:

All lights used for signalling at the start of a race must be prominently positioned ensuring that they can be clearly seen by all the drivers seated in their cars on the grid in the normal driving position.

The red lights must be mounted directly above the green lights; the yellow flashing lights may be mounted above or beside the red/green units.

4.3 Specification:

The lights must be as large and bright as it is possible and practical and at least as large and intense as the permanent traffic lights used to control public roads. All the lights must be duplicated, in case of bulb failure. The switch circuit must enable any of the following combinations:

- all lights off

- red lights on alone

red lights replaced by green light (one switch peration)

- yellow flashing lights on alone

 red light and yellow flashing lights on together (separate switches).

#### BOARD SIGNALS

(a) Before the start of a circuit race, board signals

may be displayed to the drivers by an official under the orders of the Starter, which boards shall carry respectively the figures 3, 2 and 1, and which may be displayed approximately 3, 2 and 1 minutes respectively before the start to indicate the number of whole minutes remaining before the start.

(b) The figures shall be large, clearly legible to a driver at a distance of 50 metres in daylight, and shall not be accompanied by any advertising matter on

either side of the board.

(c) The holding aloft of the 1-minute board shall in any case be mandatory, and shall denote that the field is therefore under the Starter's Orders. (Rule 109). No car may thereafter join the field.

(d) A "Delay Start" board shall be provided for use by the Starter, or at his direction, as provided for in

3.1.1.(a) of this Appendix.

(e) The number to be used in conjunction with the black, black and white triangle flags (see 3.1.1.(d)), and the "1 minute penalty" sign, shall be: white in colour

300 mm high and 50 mm stroke width

displayed on a solid black board

impervious to rain and firmly attached to the board.

(f) The holding aloft of a black board with the words "TAIL LAMPS ON" shall require competing drivers to switch on the car's tail lamp/s.

(g) A board carrying the words "1 minute penalty shall be shown to all drivers in the race, in conjunction with the relevant car number, so as londicate that the penalty has been applied.

#### SCHEDULE C

- 3. ALL AUTOMOBILES IN CIRCUIT RACES SHALL, OF NECESSITY, IN ADDITION TO THE PROVISIONS OF PRECEDING SCHEDULES A & B:
- 3.1 be fitted only with laminated glass in any glass windscreen:
- 3.2 be fitted with tyres which have not been retreaded, recapped, repaired or in any way reconditioned; if tubeless racing tyres, shall have been fitted only to suitable rims; if tubeless touring tyres, may be fitted only to rims classified as optimum sizes for the covers concerned (fitting of such tyres to so-called "permissible" or oversize rims is specifically prohibited); in all cases, shall be required to carry a manufacturer's speed rating appropriate to the type of automobile and competition concerned (see Part 5):

3.3 be fitted with bodywork which generally encloses (when viewed from above and each side) the chassis frame and basic mechanical elements, from the front of the automobile rearwards to the vertical plane immediately to the rear of the driver's seat. Provided that, in the case of a vehicle driven by a provisional licence holder, such further panel/s must be fitted as may be necessary to comply with the

requirements of Part 11, Article 2;

3.4 be fitted with at least two (2) rear vision mirrors, of which each must have a reflecting surface of at least 50 cm², and provide an unobstructed view to the rear of the car, save that, in automobiles with closed body-work (whether of sports or touring types), one such mirror shall be fitted internally and one externally.

- 3.5 be fitted with a fuel tank as specified in Part II of this Appendix as is appropriate;
- 3.6 be fitted with readily accessible towing eyell having an internal diameter of at least 40 mm; one each forward of the front axle and rearwards of the rear axle;
- 3.7 be fitted with fuel lines only of metal, braided Neoprene, or other CAMS approved material;
- 3.8 in closed cars first registered with CAMS allowed the standard standard

incorporates a head restraint

has no provision for mechanical adjustmental

the rake of the squab

- mounted in four places using 100 mm x 45 mplates, of thickness 6.4 mm aluminium or 4.6 msteel, each attached by at least 2 bolts of 10 mdiameter or the approved equivalent thereof.
- 3.9 seat fitment to Production based bodyshill Where a seat is a separate entity to the structure we hicle and it is not supported by the structure where the standard seat mountings are not returned or the vehicle does not comply with the Australian Design Rules for seat mountings, the seat shall mounted by not less than four 8 mm (5/16") his Where they are affixed to the unreinforced section the floorpan, these attachment points shall reinforced by the use of plates of not less than 75 mm x 50 mm x 3 mm (1/8" thick).

## 5th Category — Historic Cars

- Vintage Cars - pre 1930

- post Vintage Thoroughbred Cars (1931-1940) Group K Historic Racing & Sports Cars (1940-1960) Group L

Group M Post Historic Racing and Sports Racing (1961-1965)

Group N - Saloon Cars (pre 1965)

Group O - Historic Racing & Sports Racing Cars (1966-1969)

Group P

 Formula 5000 Racing Cars (pre 1978)
 Historic Racing and Sports Racing Cars (1970-1975) Group Q

Group S — Production Sports Cars (1941-1960)

#### PREAMBLE

1.1 The following definitions and general requirements governing Historic cars are recorded to facilitate the organisation of competitions and meetings in which such cars are involved.

Events for vehicles within the 5th category

may be programmed to cater for

(i) Group racing - specific individual groups

within the category; or

(ii) Combined group racing — a combination of

several specific individual groups; or

(iii) Divisional racing — a combination of vehicles from any of the individual groups with eligible vehicles selected on the basis of their perceived compatibility in performance potential. Any number of events of this type may be programmed at any one meeting to divide the overall entry into compatible performance divisions.

Engine capacity classes may be incorporated in any of these types of events or an overall engine capacity limitation placed on any event. It would generally be preferred that engine capacity limilations selected be considered with those commonly

in use during the relevant period.

No specific limitations are imposed on vehicle combinations which will be permitted in combined group or divisional events but fields should consist of vehicles which are generally compatible in performance potential. CAMS will hold the absolute discretion to disallow any proposed vehicle combinations which it considers might create safety hazards arising from speed differentials or visibility problems. It would for example not generally be appropriate to combine events for Groups P and Q with those for earlier vehicles because of the speed differential involved or to combine events for Group N with other groups because of potential visibility problems.

Within any group or combined group events, it will be permissible to include by invitation individual vehicles from other groups where such action is considered desirable to achieve the most performance-compatible field. Where such action is taken notation in the programme should be made to record the subject vehicles' correct group classification and the event should be described in the programme as including vehicles from other groups by invitation.

When programming combined group or divisional racing events consultation with the State member of the CAMS Historic Car Eligibility Committee is encouraged to assist determination of the most

compatible mix of vehicles.

1.3 The express purpose of these regulations is to see that cars in the various groups compete in a condition, mechanically and visually, compatible with the period of racing being portrayed. "Updating", in whatever form, is not condoned. CAMS reserves the right to reject any vehicle which it considers not within the spirit of these regulations. Cars must conform with the appropriate Group date specification in concept and in detail. Where any doubt exists between Historic regulations and the original period specification, the latter will take precedence. CAMS, in its absolute discretion, reserves the

right to accept or reject any car for Historic classification. The issue of all Log Books must be firstly authorised by CAMS Head Office. A central register of Historic cars in all groups is maintained.

Before commencing construction work, or before acquiring a car, owners must consult the Historic Eligibility Officer regarding eligibility of the said

vehicle.

1.5 CAMS reserves the right to classify or reclassify a car to a group which in its absolute discretion CAMS believes it conceptually belongs.

CAMS may approve re-creation of significant cars which have been destroyed under the following

conditions:

There may be only one re-creation.

(iii) Approval of CAMS in principle must be sought prior to commencement of the project. It should be noted that this does not in itself guarantee the registration of the vehicle which shall always be the subject of inspection and approval when completed.

There must be justification for the project, i.e.,

it must be a significant car.

(iv) Only a faithful re-creation will be considered. Three-wheeled cars participating in events exclusively for Historic cars are exempted from NCR 12.

The original style of paintwork and livery is encouraged. No advertising matter is permitted unless evident in the applicable Group period (see

also section 6 of Group N).

Additional information and advice is provided in the Historic Racing Guide which is available from CAMS Offices.

**GENERAL** 2. 2.1 Safety

Cars in all groups - while competing in events specifically limited to such cars - are exempted from CAMS requirements in respect of fire extinguishing systems (but not fire extinguishers), scattershields, roll-bars (except Group N), safety-harness, minimum coachwork, towing eyes, and fire-walls (although the fitment of these devices is in some cases desirable), and safety fuel tanks. These exemptions will not be applicable to any vehicle which was originally equipped with any of the above mentioned equipment or design features.

Concerning roll bars, Historic cars (except Group N) are subject to the following possibilities, viz...

No roll bar (unless the car was originally equipped with one).

A roll bar to the Group period specifications. A roll bar complying with Part 10.

A roll bar specifically approved by CAMS.

The specific requirements for each group will be found in the relevant Regulations. It is recommended that cars using alcohol fuels (where permitted) also carry a symbol in the form of the letter "A" in white on a red circle of aproximately 115 mm diameter (with a white border). This symbol should be placed adjacent to the racing number on each side of the car, and at the fuel filler cap.

2.3 Terminology:

The term "style", where used in relation to wheels, refers to Sankey, wire, cast, steel centre, etc.

By "original" is meant a component which is in all respects identically similar to that originally fitted, is produced by the manufacturer who produced the original component(s), and is indistinguishable from it in all respects.

By "period" is meant the applicable Group period of the vehicle in question.

2.4 Supercharging:

Cars in this category fitted with superchargers are not subject to the 1.7 factor as to displacement.

2.5 Competition Numbers: Groups J, K, L(b) & L(c) are exempted from the requirements as to background specified in Part 11. Applications for exemption may be made in individual cases for other cars where the specified car ran in

such visual form during the group period.

# Group J Vintage Cars — Pre 1930

#### **ELIGIBILITY**

The classification of vehicles within the group will be

It the absolute discretion of CAMS.

The group is intended to depict early racing car lesign and development to include the important period of significant excellence in design and vorkmanship defined as the "vintage" period. /ehicles eligible will be racing and sports cars with a competition history established prior to 31 December.

Consideration may also be given to the classifi-

ation within this group of:

one off "special" type vehicles constructed at any time using major components (i.e. engine, transmission, chassis, axles and suspension) manufactured prior to 31 December, 1930. Such cars may or may not have established a competition history but must be similar in detailed specification and appearance to cars which actually appeared in competition prior to 31 December,

sports cars without an established competition history manufactured prior to 31 December, 1930. Such vehicles will generally be limited to those of a type which actually appeared in competition prior to 31 December, 1930.

Only cars in this group shall be eligible for any prize or trophy to be awarded to a Vintage car.

#### SPECIFIC REQUIREMENTS

#### Coachwork:

Coachwork must be manufactured from materials and utilise construction methods evident in the period. Glass fibre and other similar materials are not

2.2 Cockpit:

The cockpit configuration and materials must be compatible with the group period, particularly instruments, steering wheel and seats. The use of electronic instruments is not permitted.

2.3 **Engine:** 

Internal components of the engine are free, but cylinder block, crankcase and cylinder head/s must be original.

Cylinder head/s, crankcase and cylinder block must be as used together in the period. Interchange between makes or models is not permitted unless it can be demonstrated as common practice within the group period.

Dry sump lubrication is not permitted unless fitted as original equipment by the manufacturer.

Toothed belt drives are not permitted.

Any increase in swept volume shall be in keeping with the practice of the period on that particular type of car and engine. The crankshaft stroke must be to the original specification.

The exhaust system is free but must be of a

style evident in the group period.

The induction system must be of a type compatible with the car within the group period.

Post 1930 carburettors are not permitted except in the case of SU instruments, in which case later units up to and including "H" type are accepted.

Multi-choke carburettors and/or superchargers are not permitted unless they were used on that type of engine in the period, and they are of a period type Fuel injection and/or turbo charging is not permitted 2.4 Gearbox:

Gearbox casings must be original and contain the original number of forward ratios. Internal components are otherwise free.

Austin 7 specials may use a "Works Type" four speed conversion within a Group J period 3 speed case.

2.5 Final Drive:

All external components of the final drive assembly must be of the period, with the exception of the "nose piece" which is free. All internal components are free.

2.6 Brakes:

The braking system must be of a type fitted to the car within the period save that:

Mechanical actuation may be converted to hydraulic operation.

Dual/tandem master cylinders may be fitted (Disc brakes and/or non period brake boosters are not permitted.)

2.7 Suspension:

The suspension system must remain unchanged from a specification evident during the group period and applicable to the subject car.

Fore and aft axle location may be varied, but transverse location may not.

Hydraulic shock aborbers are not permitted unless fitted as original equipment or used on the subject car within the group period.

Spherical or "Rose" type joints are not permitted. 2.8 Wheels:

Wheels of the original style, diameter and rim width must be used.

In the case of new specials, the minimum rim diameter is 18" and the maximum rim width is 31/2".

2.9 Tyres:

Tyres must have a minimum aspect ratio of 70% as determined by the Tyre and Rim Association and, within the limitations of availability and practicality, must be consistent in general appearance and tread pattern with those fitted to the vehicle or similar vehicles during the group period.

The use of motorcycle type tyres will be restricted to light weight vehicles and must be specifically authorised by the Historic Car Eligibility Committee and verified by appropriate endorsement in the vehicle log book.

2.10 Fuel:

Commercial fuel as defined by CAMS must normally be used. However, provided it can be demonstrated that the subject car used other than commercial fuel during the group period, alternative fuels may be permitted subject to prior approval of the Historic Car Eligibility Committee. Such approval must be verified by appropriate endorsement in the vehicle log book. 2.11 Electrical Equipment:

Alternators, electric fans, and any form of electronic ignition devices are not permitted. Electric starter motors may be fitted. Sports cars must be fitted with operable lighting and generating equipment com-

patible with the period.

## Group K — Post Vintage Thoroughbred Cars (1931/1940)

#### ELIGIBILITY

The classification of vehicles within this group will be at the absolute discretion of CAMS.

The group is intended to cater for cars from the pre-war period and the early post World War 2 period including classically engineered factory constructed cars, local specials constructed on a "one-off" basis using production car components from pre-war period and some factory constructed cars which were modified during the group period and fitted with engines from pre-war production cars.

Vehicles eligible will be racing and sports cars with a competition history established in the period between January 1931 and 31 December, 1949 but constructed using major components (i.e. engine, transmission, chassis, axles and suspension) manufactured prior to 31 December, 1945. Consideration may also be given to the classification within this group of:

one-off "special" type vehicles constructed at any time using major components (i.e. engine, transmission, chassis, axles and suspension) manufactured prior to 31 December, 1945. Such cars may or may not have established a competition history but must be similar in detailed specification and appearance to cars which actually appeared in competition between 1 January, 1931 and 31 December, 1949.

sports cars without an established competition history manufactured between 1 January, 1931 and 31 December, 1940. Such vehicles will generally be limited to those of a type which actually appeared in competition prior to 31 December, 1940.

Cars in this group only shall be eligible for any prize or trophy to be awarded to a PVT car.

#### SPECIFIC REQUIREMENTS

#### Coachwork:

Coachwork must be manufactured from materials and utilise construction methods evident in the period. Glass fibre and other similar materials are not permitted.

2.2 Cockpit:

The cockpit configuration and materials must be compatible with the group period, particularly instruments, steering wheel and seats. The use of electronic instruments is not permitted.

Internal components of the engine are free, but cylinder block, crankcase and cylinder head/s must

Cylinder head/s, crankcase and cylinder block must be as used together in the period. Interchange between makes or models is not permitted unless it can be demonstrated as common practice within the group period.

Dry sump lubrication is not permitted unless fitted as original equipment by the manufacturer.

Toothed belt drives are not permitted.

Any increase in swept volume shall be in keeping with the practice of the period on that particular type of car and engine. The crankshaft stroke must be original.

The exhaust system is free but must be of a

style evident in the group period.

The induction system must be of a type compatible with the car within the group period.

Post-1940 carburettors are not permitted except in the case of SU instruments, in which case later units up to and including "H" type are acceptable.

Multi-choke carburettors and/or superchargers are not permitted unless they were used on that type of engine in the period and they are of a period type.

Fuel injection and/or turbo charging is not permitted.

#### 2.4 Gearbox:

Gearbox casings must be original and contain the original number of forward ratios. Internal components are otherwise free.

#### 2.5 Final Drive:

All external components of the final drive assembly must be of the period, with the exception of the "none piece" which is free. All internal components are

#### 2.6 Brakes:

The braking system must be of a type litted to the car within the group period save that

Mechanical actuation may be converted to hydraulic operation.

Dual/tandem master cylinders may be fitted. Disc brakes and/or non period brake boosters. are permitted.

2.7 Suspension:

The suspension system must remain unchanged from a specification evident during the group period and applicable to the subject car.

Fore and aft axle location may be varied, but

transverse location may not.

Hydraulic shock absorbers are not permitted unless fitted as original equipment or used on the subject car within the group period.

Spherical or "Rose" type joints are not permitted.

2.8 Wheels:

Wheels of the original style, diameter and rim width must be used.

In the case of new specials, the minimum rim diameter is 16" and the maximum rim width is 4".

2.9 Tyres:

Tyres must have a minimum aspect ratio of 70% as determined by the Tyre and Rim Association and, within the limitations of availability and practicality, must be consistent in general appearance and tread pattern with those fitted to vehicles or similar vehicles during the group period.

The use of motorcycle type tyres will be restricted to lightweight vehicles and must be specifically authorised by the Historic Car Eligibility Committee and verified by appropriate endorsement in the

vehicle log book.

2.10 Fuel: Commercial fuel as defined by CAMS must normally be used. However, provided it can be demonstrated that the subject car used other than commercial fuel during the group period, alternative fuels may be permitted subject to the prior approval of the Historic Car Eligibility Committee. Such approval must be verified by appropriate endorsement in the vehicle log book. 2.11 Electrical Equipment:

Alternators, electric fans, and any form of electronic ignition devices are not permitted. Electric starter motors may be fitted. Sports cars must be fitted with operable lighting and generating equipment compatible with the period.

## Group L — Historic Racing & **Sports Cars (1941/1960)**

PREAMBLE

The sub classifications LB and LC refer to the eligibility of cars and not necessarily to the composition of race fields. It would be expected to be normal practice for LB and LC cars to race together in events titled Group L.

## Sub-Group L(b)

**ELIGIBILITY** 

The classification of vehicles within this group will be at the absolute discretion of CAMS.

Vehicles classified in this group will reflect post World War 2 period of technology changes extending from the first of the post war designs through an evolution culminating with the first of the rear engined cars from the late 1950s.

Eligibility will be open to racing and sports cars with a competition history established in the period

between 1 January, 1946 and 31 December, 1960, but excluding vehicles constructed from pre-1946 components which are eligible for classification in Group J. The group will include all vehicles constructed specifically to the post war 500 cc Formula 3 even if such vehicles are constructed from pre-1946 components.

Consideration may also be given to the classification within this group of vehicles constructed between 1 January, 1941 and 31 December, 1960, but with a competition history established subsequent to 31 December, 1960 or in some circumstances without a racing history provided the specification of the vehicle is consistent with the general standard of technology evident in vehicles raced during the group period and the car is compatible in appearance with such vehicles.

#### SPECIFIC REQUIREMENTS

2.1 Coachwork:

Coachwork must be unmodified from that fitted to the

particular car within the group period.

Cars are to run with all coachwork intact unless it was customary for the particular car to do otherwise within the group period (e.g. some rear engined cars customarily ran without engine cover).

2.2 Cockpit:

The cockpit configuration, particularly seat/s, steering wheel and instruments must be as fitted to the particular car within the group period. Electronic instruments are not permitted.

2.3 Engine:

The internal components of the engine are free save that cylinder block, cylinder head/s and crankshaft stroke must remain unaltered from the period specification on the subject car.

The bore may be increased to a maximum of 1.5 mm beyond the dimension evident on the subject

car in the group period.

Toothed belt drives and dry sump lubrication systems may only be used if fitted to the subject car

within the group period.

The exhaust system is free, but is to be a period type. Any car which was fitted with a distinctive or characteristic exhaust system in the group period

is encouraged to retain it.

The inlet manifold is free, but carburettors must be of the make, model and number fitted to the car in the group period. The choke size may be altered Superchargers, fuel injection and multi-choke carburettors are permitted only if fitted to the subject car within the group period, and must be to unaltered specification.

Motor cycle engined cars originally fitted with Amal carburettors may use Amal Concentric Mk 1

carburettors.

2.4 Gearbox:

Gearbox casings, transaxles, the number of forward ratios and gear change mechanisms must be unaltered from period specifications on the subject car Components are otherwise free.

2.5 Final Drive:

External components of the final drive assembly must be unaltered from period specifications. Internal components are free.

2.6 Brakes:

The braking system must be of the same type fitted to the car within the group period. Drum brake systems may not be replaced by disc brake systems.

Brake discs and calipers must be of the make, style and size fitted within the group period.

Drum brakes may be replaced by others of period type. Cooling fins, scoops and ventilating holes may

Dual/tandem master cylinders may be fitted.

Mechanical actuation may be converted to hydraulic operation.

2.7 Suspension:

The suspension must be unaltered from the period specification on the subject car, save that:

Spring rates, ride height and damper settings are

Fore and aft axle location on beam axle cars may be varied. Transverse location may not be altered from period specifications on the subject car.

Externally adjustable shock absorbers and spherical or "Rose" type joints are permitted only if fitted to the subject car in the group period.

2.8 Wheels:

Wheels must be unaltered from period specification

on the subject car in diameter and style.

Rim width may not exceed 5" unless rims in excess of this dimension were fitted to the subject car within the group period.

2.9 Tyres:

Tyres must have a minimum aspect ratio of 70% as determined by the Tyre and Rim Association and within the limitations of availability and practicality, must be consistent in general appearance and tread pattern with those fitted to the vehicle or similar vehicles during the group period.

The use of motorcycle type tyres will be restricted to lightweight vehicles and must be specifically authorised by the Historic Car Eligibility Committee and verified by appropriate endorsement in the vehicle log book.

2.10 Fuel:

Commercial fuel as defined by CAMS must normally be used. However, provided it can be demonstrated that the subject car used other than commercial fuel during the group period, alternative fuels may be permitted subject to the prior approval of the Historic Car Eligibility Committee. Such approval must be verified by appropriate endorsement in the vehicle log book.

2.11 Electrical Equipment:

All electrical equipment must be unaltered from period specifications on the subject car and remain fully operative. Alternators, electric fans and any form of electronic ignition devices are not permitted. An electric starter motor may be fitted.

## Sub-Group L(c)

ELIGIBILITY

Production sports cars recognised by CAMS, manufactured after 1 January, 1941, but prior to 31 December, 1960.

Cars which are of such construction as to readily permit the removal of mudguards and windscreen - where these do not form an integral part of the body - may qualify for Group L(c). Where it can be demonstrated that a car of the subject type

competed in this form in the group period, these cars may compete in stripped form as racing cars or, with said equipment refitted, they may also compete as sports cars.

Cars may vary from original specifications only in a manner which is consistent with retaining the nature of a road registered and road used vehicle. In particular, no change to track, wheelbase, engine position or suspension medium may be made.

Engine and transmission must be of the type

normally fitted to the model in question.

Cars in this group are not required to have a racing

#### SPECIFIC REQUIREMENTS

2.1 Coachwork:

All elements of the coachwork - including external fuel tank if original equipment on the subject vehicle - must be original, save that cycle type mudguards

may be used.

Cycle type mudguards, if fitted, must provide coverage of at least one third of the circumference of the tyres, over at least the full width of the wheel and tyre, as it is viewed both vertically and horizontally. A steel bonnet may be replaced by a bonnet of alloy construction. Louvres may be added to or omitted from the bonnet. In the case of cars with multiple piece folding bonnets, the sides may be removed. Original body bulkheads and fire walls must be intact and all doors must be operable.

When competing as a racing car the removal of mudguards, lights, spare wheel, running boards and

mounting brackets is permitted.

2.2 Cockpit:

The configuration and materials of the cockpit, in particular the steering wheel, instruments and seats, must be compatible with the group period. Electronic instruments are not permitted.

The cockpit must be of a stripped rather than a

specially constructed nature.

The passenger seat may be removed when the car is competing as a racing car.

Engine:

The internal components of the engine are free save that the cylinder head and crankshaft stroke must all be original.

The cylinder head/s may be modified provided such modification is effected only by the removal of

The cylinder bore may be increased by a maximum of 1.5 mm beyond original manufacturer's dimensions.

Toothed belt drives are not permitted.

Dry sump lubrication is not permitted unless original equipment.

The exhaust system is free but should be of a

type compatible with the period.

Inlet manifolds are free but carburettors must be of the original make, model and number on the car. The choke size is free. Superchargers, multichoke carburettors or fuel injection are permitted only if part of the original specification for that make and model, and remain unchanged from that original specification.

2.4 Gearbox:

Gearbox casings, gearbox selection mechanisms and the number of forward ratios must be to the

original manufacturer's design specifications. Internal components are otherwise free.

2.5 Final Drive:

The external components of the final drive assembly must be unaltered from period specifications. Internal components are free.

2.6 Brakes:

In the case of disc brake systems, the brake disc and calipers must be original. Drum brakes may be modified or replaced with others of a period type. Drums and/or backing plates may be ventilated and or fitted with cooling fins.

Dual/tandem master cylinders may be fitted. Mechanical actuation may be converted to hydraulic operation.

Drum brakes may not be replaced by disc brakes.

2.7 Suspension:

The suspension must be unaltered from the original specifications save that spring rates, ride height and damper settings may be altered.

Adjustable shock absorbers are not permitted. Fore and aft axle location may be varied but transverse location may not be altered.

Spherical or "Rose" type joints are not permitted. 2.8 Wheels:

Wheels must be unaltered from the original specifications and style.

Wheel sizes are to be as commonly used on cars of this type in the period, e.g. MG TC:16" diameter by 4" rim width.

In no circumstances may wheel diameter be less than 15" nor rim width greater than 5".

2.9 Electrical Equipment:

All electrical equipment must be unaltered from the original specifications and be fully operative.

Dynamo/generator may not be replaced by an alternator.

Electric fans and any form of electronic ignition devices are not permitted. The generator and/or lighting equipment may be

removed whilst cars are participating as racing cars. 2.10 Optional Equipment:

Optional equipment is permitted in this group only if detailed in either:

Original manufacturer's workshop manual; or

Spare parts catalogue

and is specifically accepted by CAMS.

# Group M — Post Historic Racing **Sports Racing (1961-1965)**

ELIGIBILITY

The classification of vehicles within this group will be at the absolute discretion of CAMS.

The group is intended to cater for racing, sports racing and clubman sports cars with a competition history established in the period between 1 January, 1961 and 31 December, 1965. Such vehicles will reflect the development of more advanced design features such as complex space frame and monocoque structures, sophisticated adjustable suspension systems and the commencement of wide racing tyre development.

Consideration may also be given to the classification within this group of vehicles constructed

between 1 January, 1961 and 31 December, 1965, but with a competition history established subsequent to 31 December, 1965 or in some circumstances without a racing history, provided the specification of the vehicle is consistent with the general standard of technology evident in vehicles raced during the group period and the car is compatible in appearance with such vehicles.

Formula Vee cars are specifically excluded from this group.

#### SPECIFIC REQUIREMENTS

2.1 Coachwork:

Coachwork must be unmodified from that fitted to the particular car within the group period.

Cars should run with all bodywork intact unless it was customary for the particular car to do otherwise (e.g. some rear engined cars customarily ran without engine cover).

2.2 Cockpit:

The cockpit configuration, including seat/s, steering wheel and instruments must be as fitted to the particular car within the group period.

**Engine:** 

Internal components of the engine are free save that cylinder block, cylinder head/s and crankshaft stroke must remain unaltered from the period specification on the subject car.

The bore may be increased to a maximum of 1.5 mm beyond the dimension evident on the subject

car in the group period.

Toothed belt drives and dry sump lubrication systems may be used only if fitted to the subject car within the group period.

The exhaust system is free, but should be of a period type. Any car which was fitted with a distinctive or characteristic exhaust system in the group period is encouraged to retain it.

Inlet manifolds are free. Carburettors must be of the period make, model and number fitted to the car in the group period and must be to unaltered specification.

Turbo charging is not permitted.

2.4 Gearbox:

Gearbox casings, transaxles, the number of forward ratios and gear change mechanisms must be unaltered from period specifications on the subject car. Internal components are otherwise free. Cars which were fitted with V.W. based transmissions in the group period may not use Holinger or Hewland quick change units or features unless so equipped originally.

2.5 Final Drive:

External components of the final drive assembly must be unaltered from period specifications on the subject car. Internal components are free.

2.6 Brakes:

The braking system must be of the same type fitted to the subject car within the group period.

Drum brake systems may not be replaced by disc

brake systems.

Brake discs and calipers must be of the make, style and size fitted to the subject car within the group

Drum brakes may be replaced by others of period type. Cooling fines, scoops and ventilating holes may be added.

Dual/tandem master cylinders may be fitted. Mechanical actuation may be converted to hydraulic operation.

2.7 Suspension:

The suspension must be unaltered from the period specifications on the subject car.

Spring rates, ride height and damper settings are

Fore and aft axle location on beam axle cars may be varied. Transverse location may not be altered from historical group period specification.

Externally adjustable shock absorbers and "Rose" type joints are permitted only if fitted to the subject car

in the group period.

#### 2.8 Wheels:

Wheels must be unaltered from period specifications of the subject car in diameter, width and style. Cast alloy wheels may be replaced with wheels cast in a different material but provided the replacement remains identical as to dimensions and appearance.

Tyres must have a minimum aspect ratio of 60% as determined by the Tyre and Rim Association and. within the limitations of availability and practicality. must be consistent in general appearance and tread pattern with those fitted to the vehicle or similar vehicles during the group period.

The use of motorcycle tyres or slick treaded tyres

is prohibited.

2.10 Fuel:

Commercial fuel as defined by CAMS must normally be used. However, provided it can be demonstrated that the subject car used other than commercial fuel during the group period, alternative fuels may be permitted subject to the prior approval of the Historic Car Eligibility Committee. Such approval must be verified by appropriate endorsement in the vehicle log book.

2.11 Electrical Equipment:

The electrical equipment must be unaltered from period specification on the subject car and remain fully operative. Alternators, electric fans and any form of electronic ignition devices are not permitted. An electric starter motor may be fitted.

## Group N — Saloon Cars (Pre 1965)

**ELIGIBILITY** 

The automobile must be a series production type saloon, manufactured prior to 31 December, 1964 of which 100 of the particular model must have been produced.

1.2 Cars shall compete in the following engine

capacity classes:

Class A1 - Over 4500 cc. Class A2 - 3001 to 4500 cc. Class B - 2601 to 3000 cc. Class C. - 2001 to 2600 cc.

Class D — 1601 to 2000 cc. Class E — 1301 to 1600 cc. Class F — 1001 to 1300 cc. Class G — Up to 1000 cc. (Classes may be amalgamated.)

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#### 2. BODY

2.1 The body must be of a saloon (i.e.: "hard-top") form, and must provide adequate normal seating accommodation for four adult persons or more.

2.2 Cars in the above-mentioned Classes A, B, C, D, and E must have four doors unless they have been homologated by the F.I.A. (or are otherwise specifically approved by CAMS) in a two-door version: cars in Classes F and G must have at least two doors.

2.3 The bodywork, body fittings and interior trim in its entirety must be as supplied by the manufacturer, except only that wheel naveplates may be removed. additional instruments fitted and the steering wheel replaced; provided that the replacement wheel is not less than 330 mm in diameter, unless the original wheel was of a lesser diameter, in which case a replacement of at least equal diameter to the original is acceptable.

2.4 The use of undertrays, farings, etc., designed to improve the aerodynamic form of the automobile shall not be permissible unless supplied as standard

equipment.

2.5 Original seats may not be replaced with other seats. Seats must retain their original shape and frame, which may be reinforced. The driver's seat may be padded to provide additional support. Other than that, the general appearance and size of the seat must be original and the external shape not altered.

2.6 Restoration of original trim is permitted, but should be as near as practicable to original specifications. Floor coverings may be removed.

Insulating material may be added.

#### **PERMITTED MODIFICATIONS**

Mechanical modifications may be made, provided that the following restrictions are observed:

3.1 The original type of cylinder block and crank case must be employed. The bore may be varied and/or the stroke reduced, provided that the swept volume of the engine remains within the same cubic capacity class as that within which the engine came as supplied by the manufacturer (e.g. EH Holden under 3000cc, Cooper 'S' under 1300cc).

3.2 The original type of cylinder-head casting must be employed. The cylinder-head may be modified provided that such modification is effected

only by the removal of metal.

be established).

Forced induction or fuel injection is not permitted, unless such induction method was employed as standard on the make and model of car by the manufacturer concerned.

Later models of carburettors which were available in the period are acceptable, even with different throat sizes, provided that the outward appearance is the same.

Carburettors of a make not available in the period are unacceptable.

3.4 The original type of gearbox and final drive assemblies including housings as supplied by the manufacturer for make and model concerned shall be employed. The final drive assembly is otherwise free, save that the original housing must be retained (although it may be subject to any machining operations provided always that its origin is able to

The number of ratios may not be changed.

3.5 The original form and type of suspension only shall be employed (e.g.: a semi-elliptic leaf-spring suspended live rear-axle may not be replaced by a coil-spring suspended De Dion type, and so on).

3.6 The original form and type of braking system shall be employed (e.g.: drum-brakes may not be replaced by disc-brakes). The major brake dimensions (i.e.: internal drum diameter and width) shall be identical with the dimensions of these components as supplied as original equipment by the manufacturer concerned; provided that overall variation in the diameter of such drums of no more than 3 mm shall be permissible. Modifications to disc brakes are limited to the freedom to fit alternative calipers of a type available pre 1965. Dual circuit braking systems are permitted, as is installation of power brake assistance. Brake lining material and hoses are free. 3.7 The wheels shall be either as supplied by the

manufacturer or of a type approved by CAMS and which is in harmony with wheels used prior to 31 December, 1964. At all times the original wheel diameter shall be maintained, and the width of the rim may be increased by no more than 1" over the original, subject to an absolute maximum width of 6". Aluminium alloy type wheels may be fitted, but only of a design and style available prior to 31 December 1964. Mudguard flares or extensions are not permitted unless they were fitted as original equipment by the manufacturer.

Tyres may not protrude outside the coach work,

but otherwise track is free.

3.8 At all times, the original form of steering and suspension joints will be employed, and in particular, may not be replaced by "Spherical" or "Rose" type joints

3.9 Dry sumping is not permitted, unless original equipment on the make and model concerned.

3.10 Tyres must be an approved type of radial or cross ply construction with a minimum aspect ratio of 70% save that cars which are required to use wheels of 15" diameter may be fitted with tyres of 60% aspect ratio. Racing tyres are not permitted.

3.11 The radiator cooling fan may be removed; electrically powered fans are not permitted.

#### SAFETY REQUIREMENTS

Vehicles shall comply with all relevant requirements of Part 2 of Appendix C to the NCR.

4.2 A laminated windscreen is required in all vehicles. However, in the event that a laminated screen is unavailable, approval may be given on individual application to CAMS for the fitment of a Lexan or Perspex windscreen.

4.3 A roll bar or cage compliant with Part 10 of Appendix C to the NCR (Type 4 or 5) is required to be fitted in all cars. Side intrusion bars are permitted to

be fitted.

Foam filling of fuel tanks is permitted. The fuel tank may not be moved from its original location.

#### GENERAL

The automobile shall be required to comply with such requirements of Schedules A, B and C as are applicable and not in conflict with this Group.

Electrical equipment in conformity with the requirements of Group 2A is required to be fitted.

5.3 A high standard of presentation will be insisted upon at all times. Any vehicle considered to be of inappropriate standard will be summarily rejected.

5.4 At all times, the onus of proof of eligibility of the automobile and/or components, whether options or not, will be the responsibility of the owner, by way of homologation papers, parts manuals, workshop manuals, etc.

Additionally, in marginal cases, proof may be required to be produced to the effect that a vehicle of the same model was raced prior to December 1964.

#### **ADVERTISEMENTS ON AUTOMOBILES**

No advertisement or sign will be distributed from or carried on any automobile in this category; provided that this Rule shall not apply to the manufacturer's usual name plate, transfer or other device normally attached to, engraved or stamped on cars sold by them to the public. CAMS reserves the right to permit also the display, in neat, unobtrusive lettering, of the name of the entrant and/or the driver and/or the State of his residence on the scuttle or side of the car. No such sign shall in its entirety exceed 75 mm in height and 600 mm in length.

#### **SPIRIT OF REGULATIONS**

It is emphasised that the purpose of this category of racing is to emulate, as far as is practicable, racing of saloon cars under Appendix "J" regulations which were current until 31 December, 1964. Over-restoration of vehicles, the use of technology, parts or equipment not available within the period in question is not within the spirit of these regulations; these regulations and any eligibility matters relating thereto shall be interpreted and applied in accordance with

## Group O — Historic Racing & **Sports Racing (1966-1969)**

#### 1. ELIGIBILITY

The classification of vehicles within this group will be at the absolute discretion of CAMS.

The group is intended to cater for racing, sports racing and clubman sports cars with a competition history established in the period between 1 January, 1966 and 31 December, 1969, excluding cars fitted with aerodynamic devices as defined under "specific requirements" below. Formula Vee, Formula Ford and Formula 5000 cars are also specifically excluded from this group which is intended to reflect the development of wide treaded racing tyre technology and its effect on suspension and chassis design but stopping short of the period when external aerodynamic devices became a major design feature with a significant impact on cornering performance.

Consideration may also be given to the classification within this group of vehicles constructed between 1 January 1966 and 31 December, 1969, but with a competition history established subsequent to 31 December, 1969, provided that the specification of the vehicle is consistent with the general standard of technology evident in vehicles raced during the group period and the car is compatible in appearance with such vehicles.

#### SPECIFIC REQUIREMENTS

#### Coachwork:

Coachwork must be unmodified from that fitted to the particular car within the group period.

Cars should run with all bodywork intact unless it was customary for the particular car to do otherwise (e.g.: some rear engined cars customarily ran without engine cover).

#### 2.2 Cockpit:

Cockpit configuration, particularly seat/s, steering wheel and instruments must be as fitted to the particular car within the group period.

Engine:

Internal components of the engine are free save the cylinder block, cylinder head/s and crankshaft stroke must remain unaltered from the period specification on the subject car.

The bore may be increased to a maximum of 1.5 mm beyond the dimension evident on the subject

car within the group period.

Toothed belt drives and dry sump lubrication systems may only be used if fitted to the subject car within the group period.

2.4 Exhaust Systems:

The exhaust system is free, but should be of a period type. Any car which historically had a distinctive or characteristic exhaust system is encouraged to retain it.

2.5 Induction Systems:

Manifolds are free, but carburettors must be of the period make, type and number fitted to the car. The size may be altered. Superchargers, fuel injection and multichoke carburettors are only permitted if fitted to the subject car within the group period and must remain unchanged.

Turbo charging is not permitted.

#### 2.6 Fuel:

Commercial fuel as defined by CAMS must normally be used. However, provided it can be demonstrated that the subject vehicle used other than commercial fuel during the group period, alternative fuels may be permitted subject to the prior approval of the Historic Car Eligibility Committee. Such approval must be verified by appropriate endorsement in the vehicle log book.

2.7 Gearbox:

Gearbox housings, transaxles, the number of forward ratios and gear change mechanisms must be unaltered from period specifications on the subject car.

Internal components are otherwise free.

#### 2.8 Final Drive:

The external components of the final drive assembly must be unaltered from period specifications. Internal components are free.

#### 2.9 Brakes:

The braking system must be of same type fitted to the car within the group period. Drum brake systems may not be replaced by disc brake systems.

Brake discs and calipers must be of the make,

style and size fitted within the group period.

Drum brakes may be replaced by others of period type. Cooling fins, scoops and ventilating holes may be added.

Dual/tandem master cylinders may be fitted. Mechanical actuation may be converted to hydraulic operation.

2.10 Suspension:

The suspension must be unaltered from the period specifications on the subject car.

Spring rates, ride height and damper settings are free.

Fore and aft axle location on beam axle cars may be varied. Transverse location may not be altered from historical group period specification.

Externally adjustable shock absorbers and "Rose" type joints are permitted only if fitted to the subject car

in the group period.

2.11 Wheels:

Wheels must be unaltered from period specifications on the subject car in diameter, width and style. Cast alloy wheels may be replaced with wheels cast in a different material provided that the replacement remains identical in dimensions and appearance.

2.12 Tyres:

Tyres must have a minimum aspect ratio of 60% as determined by the Tyre and Rim Association unless it can be demonstrated that the vehicle was fitted with tyres of less than 60% in the group period. Within the limitations of availability and practicality the tyres fitted must be of the same tread width and diameter and be consistent in general appearance and tread pattern with those fitted to the vehicle or similar vehicles during the group period.

The use of motorcycle type tyres or "slick" treaded tyres will normally be prohibited but the use of grooved slicks may be permitted on individual cars subject to the prior approval of the Historic Car Eligibility Committee. The tread pattern of each grooved slick must be to period specifications and approval for the use of such tyres must be verified by appropriate endorsement in the vehicle log book.

2.13 Electrical Equipment:

Electrical equipment must be unaltered from period specifications and fully operable.

Electronic ignition devices are permitted if used on the car in the group period but must be to historic specifications.

An electric starter motor may be fitted.

2.14 Aerodynamic Aids:

Aerodynamic aids in the form of "flaps", "tabs" or "spoilers" integral with the vehicle coachwork are permitted provided they are identical to those fitted to the car during the group period. The use of aerodynamic aids in the form of "wings" not comprising an integrated component of the coachwork will, from 1 January, 1990, not be permitted even if such devices were fixed to the car during the group period. Aerodynamic devices of a type which were banned during the group period will not be permitted.

2.15 Safety Equipment: Roll over protection and harness must be at least to the specifications evident during the group period.

## Group P — Formula 5000 Racing Cars (pre 1978)

ELIGIBILITY

Factory built F5000 racing cars, specifically designed to F5000 regulations and constructed before 31 December 1977; or

Australian built specials, constructed specifically for F5000 and raced in F5000 events before 31 December 1977.

A clear line of history is required for any subject car. Cars cannot be constructed from spares or damaged/cast-off components. (A tub or chassis does not necessarily constitute "a car".)

Owners must present cars in their "most sig-

nificant" historical format.

Only modifications compatible with the group period and to that particular car will be accepted.

Cars in this group only shall be eligible for any prize or trophy awarded to a F5000 car.

#### REQUIREMENTS

#### 2.1 Coachwork:

Coachwork must be unmodified in design and materials from that fitted to the particular car within the group period. Cars shall run with all bodywork intact (particularly induction air boxes and engine covers) unless it was customary for the particular car to do otherwise within the group period.

2.2 Cockpit:

Cockpit configuration particularly seat, steering wheel and instruments must be as fitted to the particular car within the group period.

Engine:

Engine must be of the same make and type as fitted to the particular car within group period.

Blocks and cylinders must be of pre-1978 manufacture (CAMS may consider a model run-on in certain circumstances).

The bore and stroke must be as used on the

subject car in the group period.

Other limitations on engine components in force for F5000 at 31 December 1977 apply. Otherwise internal engine components are free.

The exhaust system must be as fitted to the

subject car within the Group period.

Induction systems must be as fitted to the subject car within the group period.

Carburettors may not be replaced by fuel injection. Turbocharging or supercharging is not permitted.

#### 1977 F5000 regulations are reproduced hereunder:

Unsupercharged engines of V8 overhead valve pushrod configuration, the cylinder block of which derives from a CAMS-recognised touring car, of up to 5000cc capacity. The following restrictions apply:

(i) displacement may be obtained by alteration of the bore and/or stroke;

the location and/or number of camshafts may not be changed;

(iii) the number of main bearings may not be changed;

#### 2.4 Gear Box/Final Drive:

Gear box/final drive housing or transaxles, the number of forward ratios and gear change mechanisms must be unaltered from period specifications on the particular car.

Internal components are free.

#### 2.5 Brakes:

The braking system mut be of the same type fitted to the particular car within the group period.

Brake discs and calipers must be of the make. style, size and material fitted to the particular car within the group period.

Dual circuit systems are mandatory.

2.6 Suspension:

The suspension must be unaltered from the period specifications on the particular car.

Spring rates, ride heights, damper settings and normally adjustable geometry settings (camber, caster, toe-in) are free.

#### 2.7 Wheels:

Wheels must be unaltered from period specifications in size (both diameter and width) and style on the particular car.

2.8 Tyres:

Aspect ratios and tread widths must be in accordance with tyres used on F5000 cars within the group

2.9 Electrical Equipment:

Electrical equipment must be unaltered from period specification.

Ignition systems must be as used on the particular car within the group period.

Engine management systems are not permitted

2.10 Aerodynamic Aids:

Aerodynamic aids are permitted only if fitted to the particular car within the group period.

Such devices must be unaltered from period specifications in design materials and mountings.

Modern wing sections and aerodynamic technology are not permitted (including ground effects).

2.11 Safety Equipment:

Roll over/crash protection and harness must be at least to the specifications evident at the close of the group period (see specific and general requirements for 1977).

"On board" fire extinguisher and life support

systems are recommended.

A tail light as required in the group period must be operative.

2.12 Weight:

The minimum weight of the car including coolant and lubricants, but not including fuel and driver, shall be 1350lb (612kg).

2.13 Advertising:

Advertising is not permitted, save that a particular vehicle may compete in the same livery as was evident on that car, at one point of time within the group period.

## **GROUP Q — HISTORIC RACING** & SPORTS RACING CARS (1970 - 1975)

**ELIGIBILITY** 

The classification of vehicles within this group will be at the absolute discretion of CAMS.

The group is intended to cater for racing, sports racing and clubman sports cars with a competition history established in the period between 1 January. 1970 and 31 December, 1975 and for vehicles excluded from classification within other groups of the 5th category because of the nature of aerodynamic devices with which they are fitted. Formula Vee. Formula Ford and Formula 5000 cars are specifically excluded from this group which is intended to reflect the development of aerodynamic technology as an aid to cornering performance but without extending to the period when such technology extended to the use of the vehicle underbody as an aerodynamic aid, i.e. the wing car era.

Consideration may also be given to the classification within this group of vehicles constructed between 1 January, 1970 and 31 December, 1975, but with a competition history established subsequent to 31 December, 1975, provided the specification of the vehicle is consistent with the general standard of technology evident in vehicles racing during the group period and the car is compatible in appearance with such vehicles.

#### SPECIFIC REQUIREMENTS

Coachwork:

Coachwork must be unmodified from that fitted to the particular car within the group period.

Cars should run with all bodywork intact unless it was customary for the particular car to do otherwise (e.g.: some rear engined cars customarily ran without engine cover).

2.2 Cockpit:

Cockpit configuration, particularly seat/s, steering wheel and instruments must be as fitted to the particular car within the group period.

2.3 Engine:

Internal components of the engine are free save the cylinder block, cylinder head/s and crankshaft stroke must remain unaltered from the period specification on the subject car.

The bore may be increased to a maximum of 1.5 mm beyond the dimension evident on the subject

car within the group period.

Toothed belt drives and dry sump lubrication systems may only be used if fitted to the subject car within the group period.

2.4 Exhaust Systems:

The exhaust system is free, but should be of a period type. Any car which historically had a distinctive or characteristic exhaust system is encouraged to retain it.

2.5 Induction Systems:

Manifolds are free, but carburettors must be of the period make, type and number fitted to the car. The size may be altered. Superchargers, fuel injection and multichoke carburettors are only permitted if fitted to the subject car within the group period and must remain unchanged.

Turbo charging is not permitted.

2.6 Fuel:

Commercial fuel as defined by CAMS must normally be used. However, provided it can be demonstrated that the subject vehicle used other than commercial fuel during the group period, alternative fuels may be permitted subject to the prior approval of the Historic Car Eligibility Committee. Such approval must be verified by appropriate endorsement in the vehicle log book.

2.7 Gearbox:

Gearbox housings, transaxles, the number of forward ratios and gear change mechanisms must be unaltered from period specifications on the subject

Internal components are otherwise free.

2.8 Final Drive:

The external components of the final drive assembly must be unaltered from period specifications. Internal components are free.

2.9 Brakes:

The braking system must be of same type fitted to the car within the group period. Drum brake systems may not be replaced by disc brake systems.

Brake discs and calipers must be of the make, style and size fitted within the group period.

Drum brakes may be replaced by others of period type. Cooling fins, scoops and ventilating holes may be added.

Dual/tandem master cylinders may be fitted. Mechanical actuation may be converted to hydraulic operation.

2.10 Suspension:

The suspension must be unaltered from the period specifications on the subject car.

Spring rates, ride height and damper settings are

Fore and aft axle location on beam axle cars may be varied. Transverse location may not be altered from historical group period specification.

Externally adjustable shock absorbers and "Rose" type joints are permitted only if fitted to the subject car

in the group period.

2.11 Wheels:

Wheels must be unaltered from period specifications on the subject car in diameter, width and style. Cast alloy wheels may be replaced with wheels cast in a different material provided that the replacement remains identical in dimensions and appearance.

2.12 Tyres:

Within the limitations of availability and traditionality the tyres fitted must be of the same tread width and diameter and be consistent in general appearance and tread pattern with those fitted to the vehicle or similar vehicles during the group period.

The use of slick tyres will be permitted on cars which originally used such tyres during the group

period.

2.13 Electrical Equipment:

Electrical equipment must be unaltered from period specifications and fully operable.

Electronic ignition devices are permitted if used on the car in the group period but must be to historic specifications.

An electric starter motor may be fitted.

2.14 Aerodynamic Aids:

Aerodynamic aids are permitted only if fitted to the subject car during the period. Such devices must be unaltered from period specifications in both design and mounting. Modern wing sections and aerodynamic technology are not permitted.

2.15 Safety Equipment:

Roll over protection and harness must be at least to the specifications evident during the group period.

## Group S

#### 2. ELIGIBILITY

Production sports cars, as recognised by CAMS, manufactured after 1 January 1941 but prior to 31 December 1960 with the inclusion of certain model run ons (e.g. Mk 1 Austin Healey Sprite). Cars classified in this group are not required to have a racing history.

#### 3. SPECIFIC REQUIREMENTS

#### 3.1 Coachwork:

Coachwork must be original save that bumper bars and/or windscreens may be removed. "Wrap around" windscreens are not permitted to be fitted.

3.2 Cockpit:

The cockpit must be original save that floor coverings may be removed. The seats and the steering wheel may be replaced by others of a period style. All original instruments must be intact. Additional instruments of a period type may be fitted. Electronic instruments are not permitted.

3.3 Engine:

(a) Internal components of the engine are free save that the cylinder head/s and crankshaft stroke must be original.

(b) Cylinder head/s may be modified provided such modification is effected only by the removal of

metal.

(f)

- (c) The cylinder bore may be increased by a maximum of 1.5 mm beyond original dimensions.
- (d) Toothed belt drives are not permitted.(e) Dry sump lubrication is not permitted.

The exhaust system is free but should be of a

type compatible with the period.

(g) Inlet manifolds are free but carburettors must be of the original make, model and number on the car. The choke size may be altered. Superchargers, multi-choke carburettors or fuel injection are permitted only if part of the original specification for that make and model, and remain unmodified from the original specifications.

3.4 Gearbox:

Gearbox casings, gear selection mechanisms and the number of forward ratios must be original. Internal components are otherwise free.

#### 3.5 Final Drive:

External components of the final drive assembly must be unmodified from original specification. Internal components are free.

3.6 Brakes:

In the case of disc brake systems, the brake discs and calipers must be original. Drum brakes may be modified or replaced with others of period type. Drum and/or backing plates may be ventilated and/or fitted with cooling fins.

Dual/tandem master cylinders may be fitted.

Mechanical actuation may be converted to

hydraulic operation.

Drum brakes may not be replaced by disc brakes.

3.7 Suspension:

The suspension must be unmodified from original specifications, save that spring rates, the ride height and damper settings may be altered.

Externally adjustable shock absorbers are not

permitted.

Fore and aft axle location may be improved but transverse location may not be altered.

Spherical or Rose type joints are not permitted.

3.8 Wheels:

Wheels are required to be original in diameter and style.

Rim width may not exceed 5".

3.9 Tyres:

Tyres must have an aspect ratio of at least 70%, as determined by the Tyre and Rim Association and, within the limits of availability and practicality must be consistent in general appearance and tread pattern with those fitted to the car or similar cars during the group period.

3.10 Electrical Equipment:

All electrical equipment must be unmodified from the original specifications, and fully operative.

The dynamo/generator may not be replaced by an

alternator.

Electric fans and any form of electronic ignition devices are not permitted.

3.11 Optional Equipment:

Optional equipment is permitted in this group, only if detailed in either:

(a) Original manufacturer's workshop manual

(b) Spare parts catalogue

and is specifically accepted by CAMS.