

WOLLONGONG SPORTING CAR CLUB VEHICLE TYPE REGULATIONS

version 2.0 effective 1st May 2013

Wollongong Sporting Car Club uses a modified versions of the NSW Supersprint Panel's Vehicle Regulations and the Specification of Automobiles as published in the CAMS Manual.

The 6 types are:

Type 1-2 Road registered or road registerable production cars with limited modifications

Type 3 Competition vehicles based on Group 3J – Improved Production Cars regulations.

Type 4 Competition vehicles based on Group 3D - Sports Sedan rules. In addition, any vehicle that conforms to Type 1, 2, 3 or SV on race tyres.

Type 5 Racing Cars and Sports Racing Cars, Cars which do not conform to other categories.

Type SV Road Registerable clubmans, kit cars, replicas and four wheel drive turbos

Type SVM Modified four wheel drive turbos cars.

MULTIPLICATION FACTORS FOR CAPACITIES

For all Vehicle Types, capacity must be calculated on the following basis:

Rotary Engines Multiply displacement by 1.8

Forced Induction Multiply displacement by 1.7

Forced Induction Rotary Multiply displacement by 3.06

Forced Induction Diesel Multiply displacement by 1.5

ROLLOVER PROTECTION

Closed Type 1-2, 3, 4, SV: While safety cage structures are not required in multi-club level events their use is highly encouraged. When fitted a safety cage should comply with Schedule J (refer "General Requirements for Cars and Drivers" - CAMS website). They must be constructed so that no parts of their structure extends outside the passenger compartment, nor penetrates any body panels except for holes drilled for attaching the cage to the vehicle. It is not permitted to fit additional bracing outside the passenger compartment. It is permitted to attach parts of the safety cage to the interior of the passenger compartment, either by welding or bolting.

Open Type 1-2, 3, 4, SV: In excess of the CAMS Schedule J requirements it is a requirement of all open convertible/cabriolet/clubman etc vehicles to have some form of rollover protection. (Local rule).

Type 5: Rollover protection compliant with Schedule J is required for all 1st Category Racing Cars.

SAFETY HARNESS

See Schedule I (refer "General Requirements for Cars and Drivers" - CAMS website). Minimum lap sash seat belt. Where the vehicle is not registered for road use, it is highly recommended that the original driver's seat belt be replaced by a safety harness, with at least four belts in contact with the driver.

FIRE EXTINGUISHERS

Each vehicle is to be fitted with a minimum 900g fire extinguisher compliant with AS1841 (except AS 1841.2). When purchasing a fire extinguisher, mounting bracket strength should be first priority. Brackets need to be able to withstand an impact of 25G. The extinguisher must be capable of removal by the driver (or crew, where applicable) without the aid of tools.

WINDOW NET

It is highly recommended that each vehicle be fitted with a window net to Schedule I specification (refer "General Requirements for Cars and Drivers" - CAMS website). If not fitted it is further recommended that the driver window be fully closed whilst in competition.

TYPE 1-2 VEHICLE REGULATIONS

1. GENERAL

1.1 The category is generally intended to cater for registered or registerable production cars with limited modifications.

1.2 Four Wheel Drive Turbos, Clubmans, Kit Cars and Replicas are specifically excluded from this Type. 1.3

1.3 Allowable vehicle body types include open sports (with mudguards), sports coupes, sedans, hatchbacks, station wagons, utilities and vans.

1.4 The entire vehicle must be as originally specified by the manufacturer except for the specific freedoms allowed herein.

- 1.5 The vehicle must be a Production Car.
- 1.6 The vehicle must be Road Registered or Road Registerable and, apart from any freedom specifically mentioned in these regulations, no change is permitted to be made to the vehicle during competition that would render it ineligible for such registration.
- 1.7 The vehicle must comply with the "General Requirements of Automobiles" in the CAMS Manual and any modifications necessary to comply with Schedules A & B are permitted.
- 1.8 Where freedom is permitted to fit nominated or recognised parts, such freedom is strictly limited to such components themselves and it shall not be permissible to modify other parts, save by the drilling of holes for supporting purposes.
- 1.9 Any vehicle that is classified as a Type 1-2 vehicle pursuant to these regulations shall, at the option of the Entrant, be permitted to be entered as a Type 1-2, Type 3, Type 4, Type 5 or Type SV vehicle in any Class within those Types provided that engine capacity of the vehicle does not exceed the maximum capacity allowable in the Class entered.
- 1.10 Factory Extras are permitted.

2. COACHWORK

- 2.1 Safety equipment and cosmetic or comfort accessories may be added, provided they do not improve the performance of the vehicle.
- 2.2 Reforming of the wheel-arch beading against the inside of the mudguard is permitted, and any body joint protrusion may be rendered safe.
- 2.3 Additional instruments and switches are permitted and may be fitted to a separate panel.
- 2.4 Additional headlights (eg fog lights and driving lights), in accordance with 1.5, are permitted.
- 2.5 The spare wheel and associated tools may be removed.
- 2.6 The steering wheel may be replaced.
- 2.7 The driver's and passengers seat may be replaced with a non-standard seat that is commercially available and permitted in a Road Registered vehicle. Seat supports may be modified to enable fitment. Any rear seat or seats may be removed.
- 2.8 Carpets and sound deadening material may be removed.
- 2.9 Bracing may be fitted between the front MacPherson strut towers.

3. ENGINE

- 3.1 Carburettors may be replaced, provided the replacement(s) are of the same configuration (i.e. downdraught or side draught) and have the same number of inlet venturis as the originals.
- 3.2 A sandwich-type adaptor plate to enable installation of a replacement carburettor is permitted.
- 3.3 Fuel injectors are free but not their number or position. Fuel injection cannot replace carburettor(s) and vice versa. EMS Modifications are permitted on non-turbo cars.
- 3.4 Pistons and piston rings are free.
- 3.5 Material may be removed from, but not added to, piston crowns and cylinder heads for the purpose of volumetric balancing of the combustion chambers only.
- 3.6 Material may be removed from conrods, crankshafts and flywheels for the purpose of balancing and surface polishing.
- 3.7 Material may be removed from cylinder bores (for reconditioning purposes) to the limit of manufacturer's specifications.
- 3.8 The camshaft is free but not the number of bearings.
- 3.9 Inlet and exhaust manifolds and ports may be internally polished and reshaped.
- 3.10 On rotary engines the original dimensions of the intake and exhaust ports on the inner side of the engine can be changed, however, bridge and peripheral porting is not permitted.
- 3.11 On turbocharged vehicles, no modifications are permitted to the induction system or any components associated with its functioning. Maximum inlet pressure must remain in accordance with the manufacturer's specifications for the vehicle. No EMS Modifications are permitted on turbocharged vehicles.
- 3.12 Baffle plates may be fitted to and modifications may be made to increase the oil capacity of the removable section of the oil pan.
- 3.13 The air cleaner and filter element is free.
- 3.14 Freedom of supply is permitted in respect to condensers, coils, filter elements, spark plugs, leads, fan belts, radiator hoses and gaskets.
- 3.15 The exhaust system is free on naturally aspirated vehicles. On turbocharged vehicles the exhaust is free from the exit of the turbocharger only. No muffler(s) shall be visible outside the perimeter of the vehicle when viewed from above or the side. Note: noise restriction requirements of the vehicle registration authority must be adhered to.
- 3.16 Air conditioning systems are free.

4. TRANSMISSION

- 4.1 Clutch linings are free, as is their method of attachment.
- 4.2 Limited slip differentials are permitted only when available as an option for the model concerned from the original manufacturer, or its authorised supplier. Modifications to the differential cover or the fitting of a high capacity differential cover to increase the oil capacity of the vehicle differential are permitted.
- 4.3 Non-standard gear and differential ratios are permitted only when available as an option for the model concerned from the original manufacturer.

5. BRAKES

- 5.1 Brake linings and rotors are free provided that the diameters of the rotors are not increased.

6. SUSPENSION

- 6.1 The type of shock absorber is free but not their number or mounting points.
- 6.2 The rate and length of springs is free and adjustable spring platforms are permitted.
- 6.3 Sway bars may be added, replaced or deleted.
- 6.4 It is permitted to adjust the wheel alignment in accordance with the manufacturer's recommendations and/or normal wheel alignment principles, except that the original dimensions must be respected as to wheelbase and a maximum increase in track of 25mm (1") is permitted for camber adjustment only.
- 6.5 Camber adjustment kits are permitted.
- 6.6 Plain bushings may be replaced by those of a different material provided that original dimensions are retained.

7. FUEL

- 7.1 Only Commercial Fuel may be used.

8. WHEELS AND TYRES

- 8.1 Wheels can be altered, in both diameter and width, by up to one inch in width and two inches in diameter over manufacturer's original specifications, provided that the tyres do not extend beyond the outer edge of the coachwork (including wheel arch flares) when viewed vertically from above.
- 8.2 Only Road Tyres are permitted to be used. Racing tyres marked "For Racing Only" or "Not for Highway Use", or words to that effect, including slicks or wets, may not be used. Tyre sizes with respect to width and aspect ratio are free.
- 8.3 At no time prior to the commencement of competition may any tread wear indicator as provided by the manufacturer be exposed. In all areas where there is no indicator the original tread pattern must be clearly visible except on the shoulder of the tyre where excessive wear may occur due to steering and cornering.

9. STEERING

Aftermarket power steering cooling units are permitted.

TYPE 3 VEHICLE REGULATIONS

1 DEFINITIONS

- 1.1 Improved Production Car: A competition vehicle derived from a registered production automobile, with limited modifications to improve performance and reliability in race or speed events. To be eligible, the models of vehicles must be or have been mass-produced touring cars
- 1.2 Coachwork: All entirely sprung parts of the car in contact with the external air stream, except the parts definitely associated with the mechanical functions of the engine, transmission and running gear.
- 1.3 Wheel: This means the complete wheel: flange, rim and tyre and any additional fittings.
- 1.4 Automobile make and model: Vehicles manufactured by the same company but under a different brand name are considered to be the same make, eg, Nissan/Datsun, Mazda/Eunos, Toyota/Lexus etc. Any component fitted to a production vehicle will be regarded as belonging to that manufacturer of that vehicle irrespective of the actual source of manufacture. Manufacturers are not considered to be the same solely by virtue of having a common parent or holding company. Model refers to a member of the same family of vehicle as produced by the manufacturer.
- 1.5 Engine capacity: The Swept Volume shall be the volume swept by the movement of the pistons/rotors in one revolution of the crankshaft. The Effective Capacity shall be the product of the Swept Volume and an equivalence factor dependent on the engine configuration. This volume shall be expressed in cubic centimetres.
- 1.6 Traction control: Traction control is defined as any form of program, device, system or mechanism for the purpose or effect of preventing or limiting loss of traction. The direct control of the throttle position or brakes as effected by the driver does not fall within this definition.
- 1.7 Automatic transmission: Automatic transmissions are defined as being transmissions that use a fluid

coupling instead of a friction plate clutch system.

- 1.8 Elastomeric bushings: Suspension components utilising an elastomer (eg, rubber, polyurethane) to permit freedom of movement in three axes at suspension pivot points. Where the bush incorporates an outer metal shell and/or central crush tube, they shall be regarded as part of the bushing. Where the bushing is integral with the arm or other secondary component, only the elastomer material shall be regarded as the bushing for replacement purposes.
- 1.9 Rotary engine: Engines with rotary (rather than reciprocating) motion of the compressing medium (Wankel- type). A rotary engine is defined as the rotor housings, intermediate and end plates.
- 1.10 Peripheral port: A port on a Rotary Engine allowing the passage of gasses through the periphery of the rotor housing. Any bridged induction port in the end or intermediate plates of a rotary engine that is extended radially beyond the original outer edge of the inner water seal is, for the purposes of these regulations, considered to be a peripheral port.
- 1.11 Decorative strips: Any parts following the external contour of the bodywork and less than 100mm high, the function of which is to prevent minor body damage or is decorative. Badges describing the vehicle manufacturer and/or model are considered to be within this definition.
- 1.12 Telemetry: The transmission of data from a moving car. A timing transponder required by regulation shall not be regarded as telemetry.
- 1.13 Minor reshaping: Reshaping of existing material. This excludes the addition, replacement or removal of material and must not result in a loss of integrity of the panel.
- 1.14 Free: A component, deemed to be free under these regulations may, where fitted to the vehicle as standard, be removed or replaced. Where the removed component is replaced, the replacement is not restricted in design or material (unless otherwise specified) providing it performs only the same function. No modification may be made to surrounding components or body-work to which the replacement is fitted, unless otherwise permitted. Where freedom is granted for the fitment of any component, such freedom is restricted to that component and such modifications as are allowed in Article 2.17. For the purpose of this article, a component shall be deemed to include all other components with which it is integral, or to which it is attached by means the manufacturer intended to be permanent. Where a system is deemed as free, all components solely associated with that system are regarded as free, as per above.

2 BODYWORK AND DIMENSIONS

- 2.1 Strengthening: It is permitted to seam weld the bodyshell. Metal to a thickness of up to 5mm may be added to fully sprung components to a distance of 75mm from the edge of each suspension pivot point aperture. Such metal must follow the contour of the original metal at all times. It is not permitted to add or incorporate any other components which contribute to the rigidity of the bodyshell, other than the safety cage structure as described in Article 13.1, and a strut tower brace as described in article 9.7
- 2.2 Transmission tunnel: Minor reshaping of the body is permitted to enable fitment of replacement gearboxes and clutch assemblies.
- 2.3 Gearshift hole: It is permissible to cut or enlarge a hole in the floor, of the minimum necessary dimensions, for the gearshift and associated mechanism. At all times, there must be some form of covering around the gearshift to prevent the ingress of material into the cockpit.
- 2.4 Wheel arch flares: It is permitted to add wheelarch flares, provided that the increase in the total width of the coachwork is less than 100mm, as measured above the corresponding wheel centrelines. No part of the flare is permitted to extend further than 200mm from the original wheelarch opening. The operation of any door must not be affected.
- 2.5 Tyre clearance: For the purpose of wheel and tyre clearance, minor reshaping of bodywork is permitted. Where a wheelarch flare is fitted in accordance with article 2.4, it is permitted to remove up to 75mm of original bodywork measured radially from the edge of the wheel arch outwards. A maximum of 10mm of the cut edge may be reformed into a folded-over beading. Any cavity exposed in a door or rear wheel arch through the removal of metal must be covered by the addition of a metal closing panel. Any body joint protrusions must be rendered safe. The operation of any door must not be affected.
- 2.6 Front spoilers/air dams:
It is permitted to fit an airdam to the front of the car, subject to the following restrictions
 - (i) it is to be completely contained within the vertical projection of the original car, including permitted flares
 - (ii) no part below a horizontal plane passing through the centre of the wheel hubs at their extremities may extend further rearward than the wheelarch opening at the forward point where it intersects this plane
 - (iii) no part above a horizontal plane passing through the centre of the wheel hubs shall extend into the wheelarch opening
 - (iv) any undertray fitted to the airdam and located further than 50mm from the extremity of the airdam shall be flat, and parallel to the vehicle sills and shall be regarded as part of the front airdam

2.7 Rear deck spoilers:

It is permitted to fit a rear deck spoiler which complies with the following:

(i) It was supplied as standard with the particular model of vehicle as sold in Australia OR it must comply with the following:

(ii) no part of it is further than 125mm from the nearest original bodywork, and it does not exceed the standard width of the bodywork excluding any flaring of the mudguards

(iii) must comply with the CAMS definition of a spoiler (see CAMS manual)

(iv) may not extend rearwards of the rearmost extremity of the coachwork including the bumper bar

(v) must not be fitted above the rear window or on the roof

(vi) no part of the spoiler may extend any further forward than the centre line of the rear axle.

2.8 Rear deck wing: Where the particular model of vehicle as sold in Australia was supplied as standard with a rear deck wing/aerofoil (as defined by CAMS Definitions - General), a rear deck spoiler as per article 2.7 may not be fitted.

2.9 Aerodynamic aids: Any specific part of the car influencing its aerodynamic performance fitted as specified in 2.5 to 2.8 above:

(i) may not be used for any additional or alternative functions, eg, for mounting an oil radiator

(ii) must be rigidly secured to the entirely sprung part of the car (rigidly secured means not having any degree of freedom)

(iii) must remain immobile in relation to the sprung part of the car.

2.10 Vehicle embellishments: External decorative strips and mud flaps may be removed. Sump guards/splash guards may be removed or added. If sump/splash guards are added and they are in contact with the external air stream, they must be perforated with 50mm diameter holes with centres of maximum 150mm apart. No part of any additional or replacement sump/splash guard may extend to the rear of the rearmost point of the engine block or rear rotor end plate.

2.11 Registration plates: Registration plates, registration plate mountings and associated lighting components may be removed.

2.12 Sound deadener: Sound deadener (bitumen and fabric types etc) may be removed from the body shell and hung panels.

2.13 Windscreen and mirrors: The windscreen must be of laminated glass, and may incorporate defrosting equipment. External rear view mirrors may be replaced or deleted, provided that Schedule C (refer "General Requirements for Cars and Drivers") is respected at all times.

2.14 Fuel filler aperture: It is permissible to make a hole in the bodywork of minimum necessary dimensions for access to inspection plates or fuel fillers in replacement fuel tanks when fitted subject to article 5.2. Under no circumstance may the access hole exceed 300mm in any dimension.

2.15 Bonnet catches: The original bonnet fasteners and release mechanisms may be removed.

2.16 Window regulators: Where a car is fitted with electric window regulators, it is permitted to replace them with manual window regulators and, where necessary, door trims from the same family of vehicle. Electric door lock actuators must be removed or rendered inoperative.

2.17 General: Holes may be drilled for fasteners, eg, bolts, screws, rivets etc. Holes of the minimum necessary dimension are permitted to be made for the passage of wiring and fuel, brake, oil and intercooler lines/hoses.

2.18 Timing device: It is permitted to remove the minimum amount of metal necessary to facilitate fitment of a timing transponder to the upper surface of the cockpit floor.

2.19 Brackets: Unused brackets/supports attached to the chassis/bodywork can be removed, unless they are supports for mechanical/suspension components that are not permitted to be moved or removed.

2.20 Floorpan: It is permitted to modify the floorpan in the immediate area of the driver's seat, to permit the fitment of a replacement seat. No part of the modified bodywork may extend any lower than the surrounding bodywork.

2.21 Door anti-intrusion bars: The side anti-intrusion bars may be removed from doors subject to the safety cage structure providing lateral protection in the same general area for any occupant. bodywork.

3 ENGINE

3.1 General: Subject to the limitations contained in 3.2 and 3.3(iii) below, the engine and components directly associated with its function are free. The crankshaft centreline as viewed from above must be parallel to that of the original engine.

3.2 Block:

(i) The block must have the same number of cylinders/rotors and the same configuration as was standard or available as a manufacturers option for that particular model (eg, in line, horizontally opposed).

(ii) The block must be from the same manufacturer (eg, Ford, GMH, Nissan) as the original car.

3.3 Rotary engines:

- (i) A reciprocating engine may be interchanged with a twin rotor rotary engine from the same manufacturer in the following cars: Mazda 1200 coupe, Capella, 808, 929 (pre-1978), 121 (RWD).
- (ii) A rotary engine may utilise peripheral porting but only in the following installations

1200 coupe / R100	10A only
Capella / RX-2	12A only
808 / RX-3	10A or 12A
929 (pre-1978) / RX-4	12A or 13B
121 (RWD) / RX-5	13B only
RX-7 (series 1, 2 and 3)	12A only
RX-8	13B only

- (iii) The rotor housings, intermediate and end plates shall be identifiable as mass produced Mazda items. Only engines identified as 10A, 12A or 13B are permitted. Such engines must not be exclusively from sporting evolution/racing models.

3.4 Engine mounts:

- (i) Engine mounts are free.
- (ii) The engine mounting points on the bodyshell may be removed, modified or added to facilitate engine fitment. There must be no other alterations made to the body to fit a replacement engine except for minor reshaping of panels, other than the bonnet, for the fitment of engine mounted ancillaries and exhaust.
- (iii) Engine mounting brackets bolted or welded to the crossmember may be removed, modified or added to facilitate the installation of a replacement engine. No other modifications to the crossmember may be made in order to provide clearance for the replacement engine.
- (iv) It is permissible to reverse the orientation of the engine crossmember provided no alteration to the bodywork or crossmember is necessary.
- (v) Where a replacement engine from another eligible model is fitted, the crossmember from the block's donor vehicle may be used provided that it is a direct bolt in replacement, and no modifications to the bodywork or replacement crossmember are required.

3.5 Supercharging: Supercharging is permitted under the following conditions

- (i) If a supercharger/s is recognised as standard production for the model, and all the following conditions are met, the restricting orifice referred to in 3.5(ii) need not be fitted.

- All components associated with the induction system must remain operable, in situ, and unmodified.
- There are no additional components associated with the induction system fitted.
- Maximum inlet pressure and engine static compression ratio must remain in accordance with the manufacturer's specifications for the vehicle.
- The engines swept volume is not varied from standard by more than 2%.
- A boost monitor, as specified by CAMS, is fitted.

- (ii) Where a supercharging system is not recognised for a vehicle, or where a vehicle recognised with a supercharging system does not comply with 3.5(i), a restricting orifice must be fitted to the inlet tract/s prior to the air entering the supercharging device/s so that all air used in the combustion process of the engine must pass through the orifice/s. For vehicles utilising a turbine type compressor, the restrictor must be fitted as per diagram 254.4 (see "Rally/Road" in the CAMS Manual of Motor Sport), save that the maximum internal diameter of the air intake into the compressor is 36.0mm where a single supercharging device is fitted, or 27.0mm where two devices are fitted. For other types of superchargers, the upstream extremity of the restriction must be situated a maximum of 50mm from the upstream extremity of the moving compressing media and be maintained for a distance of at least 3mm downstream. The maximum diameter of the restricting orifice/s must be complied with at all temperatures.

3.6 Multiple supercharger installations are only permitted when fitted as standard to the model concerned whereupon the original number and type of supercharging device shall be retained.

3.7 Exhaust: The complete exhaust system is free downstream of the exhaust port (save for turbo supercharged vehicles complying with 3.5(i) where the exhaust is free from the exit of the turbocharger). The original exhaust mounting brackets may be removed and additional brackets may be fitted, provided that their sole function is the location of the exhaust.

4 PIPING AND FUEL TANKS

4.1 Fuel tanks:

- (i) The fuel tank may be replaced by one of free but safe design;
- (ii) It must be mounted in the same general location in relation to the floor pan and nearest axle centreline or it may be mounted in the boot area. Where a tank is relocated to the boot area the replacement tank must be an FIA-approved bladder tank.]
- (iii) For vehicles which are manufactured with the fuel tank in the cockpit, or where the tank is mounted in the boot, a flame- and liquid-proof bulkhead must be fitted between the tank and driver.

4.2 Tank fillers:

The position of the tank filler is free, subject to Article 2.14. Dry break fittings are permitted. Tank fillers must not protrude beyond the bodywork and must be effected in such a way that no fuel spilt in the filling process will leak into the interior compartments of the car. If the filler hole is situated inside the car, it must be separated from the cockpit by a liquid tight bulkhead. Where retained, the standard filler orifice may be modified to accept a replacement cap of free design. Tank fillers must be designed to ensure an efficient closing action which reduces the risk of accidental opening following a crash impact.

4.3 Fuel pumps/filters: Fuel pumps, fittings, fuel lines and filters are free. Where the fuel lines pass through the cockpit, there must be no connections within the cockpit save at the front and rear bulkheads.

5 COOLING/ OIL SYSTEM

5.1 Radiator: The radiator is free providing that the only body modification required for fitment is the drilling of holes for mounting purposes.

5.2 Radiator cowl/shroud: Radiator cowls/shrouds on the rear of the radiator for the purpose of sealing a fan may be removed. Radiator cowls in front of the radiator must be retained in their entirety. It is permitted to add additional shrouds or ducting.

5.3 Engine cooling fans: Engine cooling fans are free.

5.4 Oil coolers: Oil coolers are free subject to Regulation 2.9.

5.5 Inlet charge air cooling: Devices for the cooling of the inlet air in Supercharged systems in accordance with Article 3.5(ii) are permitted.

6 STARTING

6.1 Starter: A starter must be fitted and be able to be controlled by the driver when seated normally. The starting system must be capable of starting the engine at all times.

6.2 Starting the engine: A supplementary battery temporarily connected to the car may be used while starting the engine in the pits and on the dummy grid.

7 TRANSMISSION TO THE WHEELS

7.1 Gear selection: For all vehicles with other than automatic transmissions, all gears must be selected by the driver exclusively via a non-sequential mechanical linkage. This permits "H" pattern gear change mechanisms only.

7.2 Gearbox/transaxle: The gearbox or transaxle may be replaced by one of free design incorporating no more than five forward gears, subject to 7.1 above. Vehicles originally fitted with more than five forward gears may replace the gearbox provided the number of gears in the replacement gearbox does not exceed the original. It must incorporate an operable reverse gear and remain in the same general location as the original. The gearbox crossmember and mounting points are free. Any additional lubricant cooling device, including a fan is permitted. The circulating pump, radiator, and air intake may not be located in the cockpit. Drive must be taken only to those wheels as envisaged by the manufacturer.

7.3 Clutch: The clutch must be operated by pedal action with the method of operation otherwise free. The position of any master cylinder for hydraulic operation is free. The complete clutch assembly, flywheel and bellhousing are free.

7.4 Rear axle/differential for RWD vehicles:

- Live axles: The original configuration and type of all suspension pivot points on the assembly must be retained, save for lateral location as per article 9.10. The rear axle assembly is otherwise free. Fully floating hubs are encouraged.
- Independent rear suspension: The final drive assembly may be modified or replaced by one of free design provided the original methods of attachment and location are retained.

7.5 Tailshaft/driveshafts/axles: The tailshaft/driveshafts/axles and associated universal or CV-joints are free.

7.6 Traction control: The use of traction control is forbidden.

8 SUSPENSION AND STEERING

- 8.1 Springs: Springs are free provided that the type and location are unchanged (by type is meant: coil, torsion bar, leaf etc.)
- 8.2 Bump stops: Bump stops, being the components designed to ultimately limit the suspension travel, are free and may be repositioned.
- 8.3 Bushes: Elastomeric bushes used at suspension pivot points (which are not otherwise specified in these regulations) may be replaced by other elastomeric bushings.
- 8.4 Suspension dampers: The make and size of suspension dampers are free. The number of dampers and pivot point locations may not be altered.
- 8.5 Front suspension components: Steering tie rods may be replaced provided they are derived from an eligible vehicle. Stub axles, steering arms, hubs, bearings and tie rod ends are free. MacPherson strut tubes are free. In cases where the steering arms are separate components, it is permitted to fit spacers between the steering arm and stub axle assembly using extended bolts.
- 8.6 MacPherson strut top mounts: MacPherson strut top mounts are free providing that they utilise the standard bodyshell mounting facilities.
- 8.7 Strut tower brace: A brace of free design may be fitted between the front suspension towers providing it only links the towers.
- 8.8 Sway bars: Sway bars, their pivot points and associated linkages are free. On strut type suspensions where the sway bar acts as a control arm it is permitted to change the thickness of the bar only. The inclusion of spacers at the sway bar mounting points is permitted, but only by extending bolts in the original body mounts.
- 8.9 Ride height adjustment: Adjustable spring platforms, rear leaf spring shackles, spacers located directly at either end or between coil springs, lowering blocks of solid/rigid material and torsion bar ride height adjusters are all free.
- 8.10 Rear suspension components: Devices for the lateral location of the rear wheels on vehicles with a live axle, and any associated brackets on the body, are free. Brackets may be welded to the body. All other components which have any function in the location of the rear wheels must be retained unmodified except for bushings, which must comply with 8.3 above. Drive flanges, trunnions, hubs, stub axles and wheel bearings are free. It is permissible to add additional longitudinal rear suspension arms provided that all bushings are elastomeric and that the mounting points on the body only involve the addition of metal, save for a single hole per arm of maximum diameter 25mm.
- 8.11 Wheel track: The track dimension is free save that the upper part of the tyre, down to the flange over the wheel hub centre must be within the perimeter of the vehicle when viewed vertically from above.
- 8.12 Ride height: All fully sprung parts of the car, with the exception of the entire exhaust system, must be at least 100mm above the ground when measured on a flat level surface with the vehicle at Minimum Weight.
- 8.13 Steering: It is permitted to alter the steering ratio by the replacement of internal components within the steering rack assembly or box. A power steering rack assembly or box may be interchanged with a manual steering rack assembly or box respectively provided that the original mounting points on the body or crossmember are used, the replacement rack assembly or box is an unmodified part from an eligible vehicle and no other modifications (eg, steering column etc) are needed. Where a manufacturer offers both systems as options for other variants of the same family of vehicle, either system, and any associated crossmember may be used. All other components of the power steering system are free.
- 8.14 Wheel alignment facilities: The wheel alignment settings are free. It is permitted to relocate the front control arm pivot point radially by up to 45mm within the confines of the existing crossmember or body panels. No metal may be removed save that directly associated with the actual pivot point relocation. For vehicles with a live rear axle, where camber or toe vary by more than $1/2^\circ$ from standard, the toe and camber figures are to be recorded in the vehicle logbook, and such settings shall be used exclusively in all competition. These specifications, once recorded, may only be varied upon approval by CAMS Manager - Technical Services. Rear wheel alignment on independent suspensions may be achieved by relocating suspension pivot points by no more than 20mm within the existing brackets.

9 BRAKES

- 9.1 Brake controls: Brakes must be controlled by a double circuit hydraulic system so arranged that the pedal normally operates on the four road wheels. In the event of fluid leakage at any point in the system, the pedal shall still control two wheels on the same axle, or on diagonally opposite wheels if produced in this format by the vehicle manufacturer. For the purpose of adjusting brake bias, it is permissible to change from a diagonal split system, to a front/rear split system. It is permissible to add a facility to allow for the adjustment of the front/rear brake bias from the cockpit.
- 9.2 Master cylinders: Power boosters, master cylinders and associated pushrods, fluid lines and hoses are free. The position of replacement master cylinders is free and holes of the minimum necessary dimensions may be made in existing panels to facilitate such fitment. Brake proportioning valves are free.

- 9.3 Brake rotors: Brake rotating friction surfaces must be made from a ferrous material but are otherwise free. Disc mounting hats are free subject to their being made from aluminium alloy or ferrous material.
- 9.4 Brake calipers: Brake calipers and pads are free, subject to the main housing being made of a ferrous material or an aluminium alloy. Where freedom is not otherwise granted, suspension components may be modified to permit fitment of replacement calipers.
- 9.5 Handbrake: Handbrakes are free.
- 9.6 Brake cooling: Protection shields/stone guards on unsprung components may be added or removed. It is permitted to fit ducting for the passage of air to the brakes provided that it remains within the perimeter of the coachwork when viewed from above and that no bodywork alterations are required.

10 WHEELS AND TYRES

- 10.1 Wheels: Wheels are free subject to the following restrictions. The maximum rim width is 8" for each Late Model automobile with an effective capacity up to and including 3000cc, and is 7" for each other automobile with an effective capacity up to and including 3000cc. The maximum rim width is 9" for each Late Model automobile with an effective capacity greater than 3000cc, and 8" for each other automobile with an effective capacity greater than 3000cc. Other than for Late Model Automobiles, the maximum wheel diameter for an automobile fitted with a piston engine of 6 or more cylinders is 16"; and the maximum wheel diameter for automobiles fitted with any other type of engine is 15". The spare wheel, jack and any associated brackets may be removed.
- 10.2 Tyres: Each tyre must:
 - (i) have at least a minimum tread depth. The tread wear indicators as provided by the tyre manufacturer will be the definitive method of determining minimum tread depth. At no time prior to practice or racing may any tread wear indicator be exposed or in the case where the indicator is a dimple in the tyre, worn below such indicator. This does not apply to the shoulder of the tyre. In all areas where there is no tread wear indicator, the original tread pattern must be clearly visible.
 - (ii) Tyre sizes with respect to width /and aspect ratio are free.
 - (iii) The use of slick tyres is prohibited

11 ELECTRICAL

- 11.1 Electrical system: The wiring and electrical connectors, switches, fuses and circuit breakers, starting, ignition and generating systems are free. A panel incorporating additional/ replacement switches and/or circuit breakers may be added. The starting, lighting and turn signalling apparatus must be in working order at the start of each competition. All globes must at least meet the original equipment specification.
- 11.2 Battery: The battery and its location are free but it must be safely and securely mounted. It must be adequately covered so as to prevent short circuits and leakage, in any position.
- 11.3 Windscreen wipers: The windscreen wiper mechanism may not be modified with the exception of the tensioning springs and wiper blades. Wind deflectors may be added. Headlight and rear window wipers and washers may be removed. The windscreen washer bottle, pump and hoses and any mounting bracket are free. Windscreen wipers must rest in the same location as on a standard car of that make and model.
- 11.4 Each head light and tail light assembly may be replaced by a non-genuine item provided that the replacement assembly is legal for road use and is from a widely-distributed catalogue.

12 COCKPIT/DRIVER'S COMPARTMENT

- 12.1 Steering wheel: The steering wheel may be replaced by one which is of at least 300mm diameter. It is permitted to add a steering wheel boss, possibly incorporating a quick release mechanism, to enable the fitment of a permissible steering wheel. The steering column may be lowered by the addition of spacers/ longer bolts at the rear mounting points provided no other modifications are required.
- 12.2 Controls: All driving controls must retain the role laid down for them by the manufacturer. Footrests and heat protection panels may be added to the driver's footwell cavity. Pedals and pedal boxes are free, but the radial location of the pedal axes must remain within 75mm of the original.
- 12.3 Instruments: Instruments are free, but the original dash must remain. Any holes in the dash resulting from the removal of instruments must be neatly closed by the addition of a closing panel. Where possible, all replacement instruments must be mounted in the dash where the original instruments were situated.
- 12.4 Carpet and interior trim: Floor carpet and associated "underfelt", roof lining and interior trim down to the lower edge of the windows, and consoles on the transmission tunnel may be removed. All other padding, quilting and interior trim must be retained as original. It is permitted to reupholster components of interior trim.
- 12.5 Seats: The driver's seat may be replaced with one in compliance with Schedule C (refer "General Requirements for Cars and Drivers"). Original seat mountings not part of the bodyshell may be replaced and/ or other mountings added provided that they extend no further than 50mm from the plan

view of the seat. All other seats, and associated seat belts are free.

- 12.6 Removable rear window shelf: The removable rear window shelf in two volume cars may be removed together with its supports, or held down by additional fasteners.
- 12.7 Heater: All components solely associated with the heating, air-conditioning and ventilation system are free. Any openings created by the removal of ducting, vents and controls from the dash must be closed by the addition of panels, which may be used to mount additional instruments or controls.
- 12.8 Accessories: The radio, aerial, speakers and speaker mounts may be removed. Fog/driving lights which are separate from the main lighting system may be removed as may internal cockpit lights. Accessories which do not increase performance (eg, additional lamps, mirrors, etc) may be added.

13 FUEL

- 13.1 Fuel: Only fuel as defined by CAMS in Schedule G (refer "General Requirements for Cars and Drivers"), may be used.
- 13.2 Air: Only air may be mixed with the fuel as an oxidant.

14 CAPACITY CLASSES

- 14.1 Capacity classes: 0 – 1600cc, 1601 – 2000cc, 2001 – 3000cc, over 3000cc
- 14.2 Capacity tolerance: Vehicle classification is based on the nominal capacity stated by the entrant on the entry form. A vehicle will remain eligible for the nominated class provided the actual capacity does not exceed the class capacity limit by more than 2%.

TYPE 4 VEHICLE REGULATIONS

1 GENERAL

- 1.1 This group envisages a considerable degree of modification to automobiles so as to render them more suitable for competition without modification to the external body shape except as specifically allowed for in the Regulations. This group caters for dedicated circuit racing cars of essentially free construction which utilise coachwork being recognisable as that of a production vehicle.
- 1.2 Any vehicle that otherwise conforms to Type 1, 2, 3 or SV requirements, excepting Clubmans, Kit Cars and Replicas, shall be permitted to employ or use Race Slicks but if it does so it shall be classified as a Type 4 vehicle. All such vehicles will be classified in the appropriate Type 4 class determined by engine capacity with the exception of Four Wheel Drive Turbos.
- 1.3 Cars must conform with General Requirements (as applicable) defined at Schedules A, B of the CAMS Manual.
- 1.4 Provided that the vehicle otherwise complies with the requirements for Type 4, allowable vehicle body types include open sports cars (with mudguards), sports coupes, sedans, hatchbacks, station wagons, utilities and vans. Clubmans, Kit Cars and Replicas are specifically excluded from this Type.
- 1.5 To be eligible for this group cars must be series production closed cars, manufactured primarily from steel and must be or have been:
 - (i) on sale in Australia through a recognised manufacturer franchised dealer network, or
 - (ii) of a type of which a minimum of 5,000 examples have been manufactured worldwide

2 COACHWORK

- 2.1 The body shell (deemed to be the roof, A, B and C pillars, sill panels, scuttle/plenum panel and the front door frames) shall be unchanged in external shape except as hereinafter provided.
- 2.2 Shell:
 - (i) The bumper bars and grilles must retain their original shape and position save that the material and method of attachment are free. The shape of wrap-around bumper bars/fascias may be modified only to accommodate the fitment of mudguard flares and air dams.
 - (ii) The rear bumper, fascia, or beaver panel may be modified to facilitate the passage of exhaust pipe/s and the fitment of a rear diffuser.
- 2.3 External body trim decoration greater than 150mm in width must remain in place.
- 2.4 Mudguards:
 - (i) When viewed from above, the coachwork must cover the complete wheels to the horizontal centreline of the hubs.
 - (ii) The rear extremities of the front and rear mudguards and/or extensions must continue below a horizontal line drawn through the wheel hubs and must cover the full width of the tyres down to hub height when viewed from the rear.
 - (iii) No holes are permitted in mudguards other than those originally provided by the manufacturer.
 - (iv) Mudguards may be flared and/or extended in order to cover the tyres up to a maximum of 100mm per side in excess of the original width of the body at the measured point. Flares may be made of alternative material.
- 2.5 Aerodynamic aids:

- (i) The use of undertrays, fairings, or other aids to aerodynamic form (including aerofoils) is not permitted unless specifically provided for in these Regulations.
- (ii) It is permitted to fit a spoiler or air dam on the front of the car such that no part of it is more than 100mm ahead of the original coachwork at any point. The bumper must retain its original appearance and location in relation to the unmodified area of the coachwork. However, it may be integral with the air dam and surrounding coachwork. The bumper or fascia returns may be spread horizontally to merge with the front mudguard flares. No part of the bumper or air dam shall be wider than the widest point of the modified front mudguards. Air dam undertrays may be installed and used as an aerodynamic aid. No part of the undertray may extend further rearward than the leading edge of the front tyres and must be within the vertical projection of the vehicle, including modified coachwork.
- (iii) It is permitted to fit a rear deck lid spoiler of maximum height 200mm above the coachwork where mounted, and of width not exceeding the width of the coachwork excluding any flaring of the mudguards. It may not extend rearwards of the rearmost extremity of the coachwork, and must be fitted rearwards of the rear window. It must be fixed in position and not moveable whilst the car is being driven. In the case of a car which has a hatchback, the spoiler may be fitted rearwards of the centreline of the rear axle.
- (iv) Alternatively to (iii) above, it is permitted to fit a rear wing assembly subject to:
 - (a) It extending no further rearward than 100mm beyond the original coachwork.
 - (b) It extending no further forward than 500mm beyond the rear most point of original coachwork.
 - (c) The wing element/s have an overall front-to-rear measurement of no greater than 400mm.
 - (d) Maximum two elements per wing assembly.
 - (e) The overall width of the wing assembly to be no wider than the coachwork or 1600mm whichever is the lesser.
 - (f) No part of the wing assembly to be higher than a horizontal line drawn from the highest point of the roof.
- (v) Aerodynamic aids may not be used for any additional alternative function, eg, for the mounting of an oil radiator.
- (vi) It is permitted to fit rear diffuser/undertray assemblies provided they do not extend any wider than the original coachwork, or further rearward than 100mm beyond the original coachwork. Any modification to the rear bumper, fascia and or beaver panel to fit a rear diffuser shall be in compliance with Article 2.2(ii).
- (vii) Alternative to (iv) a single-element wing may be used to a maximum of the following measurements: Cord length 275mm, wing width including mounting assembly or end plates to be 1830mm. This single element wing can be no wider than the width of the car that it is fitted to at its widest point on the rear 50% of the coachwork.

2.6 Body Panels:

- (i) Body panels, other than those referred to in article 2.6(ii), may be replaced by panels in identical external shape to the original (see 2.11).
- (ii) Bonnet and boot lid may be replaced by panels identical in external shape to the original. They may be incorporated into one-piece panels but must be distinguished by a 3mm outline. Resulting panels must be detachable within 30 seconds by two persons for fire response and mechanical inspection. Fasteners necessary for removal must be clearly marked. Any tools required for removal shall be carried on board the car in an easily-accessible location.
- (iii) Changes to the shape of the engine cover are permitted where the position of the engine or its actual induction components (excluding brackets, linkages etc) prevents the full closing of a panel of the original shape and size, save that the maximum increase in height must not exceed 100mm, that the lateral clearance of the alterations around the offending components does not exceed 75mm, and that the maximum width does not exceed 450mm. A panel of modified shape must completely cover the part or parts which cause the change to be effected and must have no external openings, except for the purpose of air intake into a sealed airbox, and must not hinder the safe operation of any part of the vehicle, and must not impair the driver's vision.
- (iv) Front doors: Front doors may be functional and must retain the original external shape. All window regulator mechanisms may be removed. Original front door catches and hinges may be replaced with suitable alternative fittings. Internal anti-theft locks must be rendered inoperative. Where the front doors are made an integral part of the coachwork, the cockpit must be so configured that the driver must be able to exit the car within "9" seconds by the driver's side, and "11" seconds by the passenger side, starting with the driver's harness fitted and tightened and with the steering wheel, if removable, in place.
- (v) Rear doors: On four-door cars, the door skins of the rear doors may be made integral with the surrounding bodywork. On cars where the door skins do not extend around the window frame the original appearance and shape of window frame trims must be retained. The rear mudguard flares may extend over part of the surface of the door skin. The area of coachwork under the flare, which may include part of the "C" pillar, may be removed. If the original external door handles on rear

doors are removed the resulting aperture must be filled.

- (vi) Scuttle/Plenum or Bonnet to Windscreen Opening: Where any area of the windscreen and associated lower panel or trim is below the profile of the bonnet as viewed from the front, the windscreen and associated lower panel or trim are free in such area. Where any part of the engine block extends forward of the windscreen, a flame- and liquid-proof panel must be installed to prevent engine fluids or fire from escaping between the windscreen and bonnet.
- (vii) Side Skirts: It is permissible to fit side skirts to the area between the trailing edge of the front mudguard flare and the leading edge of the rear mudguard flare. The side skirts are a cosmetic addition only and are not to be used for any aerodynamic aid. Such side skirts may not extend below the horizontal plane created by the floor pan of the vehicle.
- (viii) Bonnet and mudguard air extraction: Where the original vehicle has no bonnet or front mudguard air outlets for extraction of air from under the bonnet and or front mudguard area, or if the original outlet/s is less than 500 square centimetres, then louvred venting may be added to the bonnet or mudguard/s subject to the following criteria:
 - The maximum area the louvred area/s may occupy is 968 square centimetres;
 - A maximum of two (2) vented areas may be added;
 - The maximum height of any part of any vent is to be 25mm higher than the area of the immediately surrounding bonnet or mudguard;
 - The maximum total width of the vent openings/raised sections is 220mm;
 - The maximum total length of the vent openings/raised sections is 440mm.

2.7 Interior:

- (i) All interior fittings and/or trim are free.
- (ii) When front door trim is removed, it must be replaced with a flush-fitting rigid material, save that local modifications are permitted to facilitate fitment of roll over bar and anti-intrusion bars.
- (iii) All windows may be replaced by a suitable rigid transparent material of adequate strength (eg, polycarbonate), which must be of not less than 3mm thickness for side and rear windows, and not less than 6mm thickness for the windscreen, save that the fitment of front side windows is optional.
- (iv) All passenger seats in the vehicle may be removed.

2.8 For vehicles where the engine has been relocated from the original manufacturer's position, or an alternative engine other than that optioned by the manufacturer, must be fitted with a scatter shield incorporated into the driver's side of the transmission tunnel that extends from the floor level through 120°, and be at least 300mm in horizontal section. Such protection shield may be manufactured from either:

- 6mm-thick mild steel sheet,
- 6mm-thick 5083 aluminium alloy,
- transmission blanket to SFI 4.1 fitted over the clutch housing assembly.

2.9 The front and rear firewall/bulkheads are free, subject to their being flame- and fluid-proof and manufactured from material specified at Article 2.11.

2.10 Floor pan:

- (i) The floor pan may either:
 - (a) comply with a definition of a "floorpan vehicle" outlined in article 1.1, or
 - (b) be replaced by a component whose lower surface is flat and is mounted parallel to the bottom edge of the sill.

2.11 Material: Replacement, modified and additional body panels where permitted must be manufactured from one of the following:

- (i) material of the same gauge and composition as the original part; or
- (ii) aluminium, or aluminium alloy, of gauge not thinner than 1.25mm; or
- (iii) glass fibre, or glass-reinforced plastic, carbon fibre/Kevlar composite materials of gauge not thinner than 1.5mm.

3 MECHANICAL COMPONENTS

3.1 Brakes:

All cars must be fitted with a double circuit braking system so arranged that the pedal normally operates on the four road wheels and, in the event of leakage at any point in the system, the pedal shall still control two wheels on the same axle.

3.2 Suspension and chassis:

The chassis of the vehicle shall be constructed of either steel tubes (spaceframe construction) or metal pressing (floorpan construction, refer Article 1.1) to which is attached the suspension, coachwork, aerodynamic devices and running gear.

3.3 Transmission: The design of the transmission is free.

3.4 Engines: The engine and ancillary equipment is free.

4 FUEL

- 4.1 Only fuel as defined by CAMS may be used (see Schedule G – “General Requirements for Cars and Drivers”).

5 WHEELS AND TYRES

- 5.1 Wheels and tyres are free

6 ELECTRICAL SYSTEM

- 6.1 The original external shape and location of all lighting and signalling equipment must be retained. If original headlamps and turn indicators are not used, their replacements may be blended with the surrounding coachwork. Where the original headlamps and signalling equipment is removed, suitable decals of original size and location must be used in their place. Front lighting and signalling equipment need not be functional. For vehicles with retractable headlights, the external shape shall be determined to be that attained whilst the headlights were in the parked position. Tail lamps and brake lamps must remain operable, with a minimum power of three Watts for tail lights, and minimum 20 Watts for brake lights.

Type 5 Vehicle Regulations

1 General

- 1.1 Vehicles competing in this category include open wheel race cars and cars not conforming to other types.
- 1.2 An open wheel car must conform to the published specifications for Formula 4000, Formula Libre, Formula 2, Formula 3, Formula Ford or Formula Vee.
- 1.3 All vehicles in this Type are permitted to use Race Tyres.

Type SV

1 General

- 1.1 The Category is intended for all Road Registered or Registerable vehicles including Clubmans, Kit Cars, Replicas, and Four Wheel Drive Turbos.
- 1.2 Only Road Tyres are permitted to be used.
- 1.3 At no time prior to the commencement of competition may any tread wear indicator as provided by the manufacturer be exposed. In all areas where there is no indicator the original tread pattern must be clearly visible except on the shoulder of the tyre where excessive wear may occur due to steering and cornering.
- 1.4 Production vehicles must be as originally specified by the manufacturer except for the specific freedoms allowed herein.
- 1.5 The vehicle must be Road Registered or Road Registerable and, apart from any freedom specifically mentioned in these regulations, no change is permitted to be made to the vehicle during competition that would render it ineligible for such registration.
- 1.6 The vehicle must comply with the “General Requirements of Automobiles” in the CAMS Manual and any modifications necessary to comply with Schedules A & B are permitted.
- 1.7 Where freedom is permitted to fit nominated or recognised parts, such freedom is strictly limited to such components themselves and it shall not be permissible to modify other parts, save by the drilling of holes for supporting purposes.
- 1.8 Factory Extras are permitted.

2 Coachwork

- 2.1 Safety equipment and cosmetic or comfort accessories may be added, provided they do not improve the performance of the vehicle.
- 2.2 Reforming of the wheel-arch beading against the inside of the mudguard is permitted, and any body joint protrusion may be rendered safe.
- 2.3 Additional instruments and switches are permitted and may be fitted to a separate panel.
- 2.4 Additional headlights (eg fog lights and driving lights), in accordance with 1.5, are permitted.
- 2.5 The spare wheel and associated tools may be removed.
- 2.6 The steering wheel may be replaced.
- 2.7 The driver's and passengers seat may be replaced with a non-standard seat that is commercially available and permitted in a Road Registered vehicle. Seat supports may be modified to enable fitment. Any rear seat or seats may be removed.
- 2.8 Carpets and sound deadening material may be removed.
- 2.9 Bracing may be fitted between the front MacPherson strut towers.

3 Engine

- 3.1 Carburettors may be replaced, provided the replacement(s) are of the same configuration (i.e. downdraught or side draught) and have the same number of inlet venturis as the originals.

- 3.2 A sandwich-type adaptor plate to enable installation of a replacement carburettor is permitted.
- 3.3 Fuel injectors are free but not their number or position. Fuel injection cannot replace carburettor(s) and vice versa. EMS Modifications are permitted on non-turbo cars.
- 3.4 Pistons and piston rings are free.
- 3.5 Material may be removed from, but not added to, piston crowns and cylinder heads for the purpose of volumetric balancing of the combustion chambers only.
- 3.6 Material may be removed from conrods, crankshafts and flywheels for the purpose of balancing and surface polishing.
- 3.7 Material may be removed from cylinder bores (for reconditioning purposes) to the limit of manufacturer's specifications.
- 3.8 The camshaft is free but not the number of bearings.
- 3.9 Inlet and exhaust manifolds and ports may be internally polished and reshaped.
- 3.10 On rotary engines the original dimensions of the intake and exhaust ports on the inner side of the engine can be changed, however, bridge and peripheral porting is not permitted.
- 3.11 On turbocharged vehicles, no modifications are permitted to the induction system or any components associated with its functioning. Maximum inlet pressure must remain in accordance with the manufacturer's specifications for the vehicle. No EMS Modifications are permitted on turbocharged vehicles.
- 3.12 Baffle plates may be fitted to and modifications may be made to increase the oil capacity of the removable section of the oil pan.
- 3.13 The air cleaner and filter element is free.
- 3.14 Freedom of supply is permitted in respect to condensers, coils, filter elements, spark plugs, leads, fan belts, radiator hoses and gaskets.
- 3.15 The exhaust system is free on naturally aspirated vehicles. On turbocharged vehicles the exhaust is free from the exit of the turbocharger only. No muffler(s) shall be visible outside the perimeter of the vehicle when viewed from above or the side. Note: noise restriction requirements of the vehicle registration authority must be adhered to.
- 3.16 Air conditioning systems are free.

4 Transmission

- 4.1 Clutch linings are free, as is their method of attachment.
- 4.2 Limited slip differentials are permitted only when available as an option for the model concerned from the original manufacturer, or its authorised supplier. Modifications to the differential cover or the fitting of a high capacity differential cover to increase the oil capacity of the vehicle differential are permitted.
- 4.3 Non-standard gear and differential ratios are permitted only when available as an option for the model concerned from the original manufacturer.

5 Brakes

- 5.1 Brake linings and rotors are free provided that the diameters of the rotors are not increased.

6 Suspension

- 6.1 The type of shock absorber is free but not their number or mounting points.
- 6.2 The rate and length of springs is free and adjustable spring platforms are permitted.
- 6.3 Sway bars may be added, replaced or deleted.
- 6.4 It is permitted to adjust the wheel alignment in accordance with the manufacturer's recommendations and/or normal wheel alignment principles, except that the original dimensions must be respected as to wheelbase and a maximum increase in track of 25mm (1") is permitted for camber adjustment only.
- 6.5 Camber adjustment kits are permitted.
- 6.6 Plain bushings may be replaced by those of a different material provided that original dimensions are retained.

7 Fuel

- 7.1 Only Commercial Fuel may be used.

8 Wheels and Tyres

- 8.1 Wheels can be altered, in both diameter and width, by up to one inch in width and two inches in diameter over manufacturer's original specifications, provided that the tyres do not extend beyond the outer edge of the coachwork (including wheel arch flares) when viewed vertically from above.
- 8.2 Only Road Tyres are permitted to be used. Racing tyres marked "For Racing Only" or "Not for Highway Use", or words to that effect, including slicks or wets, may not be used. Tyre sizes with respect to width and aspect ratio are free.
- 8.3 At no time prior to the commencement of competition may any tread wear indicator as provided by the manufacturer be exposed. In all areas where there is no indicator the original tread pattern must be

clearly visible except on the shoulder of the tyre where excessive wear may occur due to steering and cornering.

9 Steering

9.1 Aftermarket power steering cooling units are permitted.

Type SVM (Modified Special Vehicles)

1 General

- 1.1 The Category is intended for Clubmans, Kit Cars, Replicas, and Four Wheel Drive Turbos which do not comply with restrictions in Type SVA.
- 1.2 Allowable modifications are those as set out in the freedoms as given under Type 3.
- 1.3 Racing tyres are permitted.