# 2023 MOTORSPORT AUSTRALIA MANUAL

**SPECIFICATIONS OF AUTOMOBILES** 



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5th Category – Historic Cars

## **Group S – Vehicle Eligibility**

Modified Article	Date of Application	Date of Publication
(o) Safety Equipment	1/1/23	1/1/23
(s) Minimum Weight	1/1/23	1/1/23

## 3. HISTORIC PRODUCTION SPORTS CARS

## 3.1 GENERAL REQUIREMENTS

Groups Sa, Sb and Sc are designed to provide a forum for competitors to race production sports cars from the '50s and '60s (sometimes known as "Classic Sports Cars"), in a form similar to period club racing. Limited modifications as detailed in the following regulations and defined in the Specification Sheet are allowed to these vehicles. Where performance-improving modifications are made, these should be of a period nature and not out of character with the vehicle or group period.

To this extent, the modifications permitted are not intended to radically alter the individual vehicle's character or appearance and will be of an improved performance road car nature, as opposed to making the vehicle totally dedicated to outright competition. An important consideration in forming these Regulations was the need to provide eligibility rules which will require the minimum of administration, particularly at circuit race events. People wishing to race vehicles of a more highly modified nature should consider competing in the Marque Sports Car category (Group 2B) (refer to Circuit Race Appendix in the *Manual*). This section details the requirements common to all historic production sports cars that do not have a competition history. Additional specific requirements for individual groups are detailed in the individual group sections and the general requirements of article 3.1.

Modifications are strictly prohibited unless specifically authorized within these regulations or otherwise approved by the Motorsport Australia. All vehicles must comply with the Motorsport Australia Specification Sheet for the model in question. Cars must also comply with the period specifications supplied by the manufacturer and identified by the body numbers and other vehicle identifying features created by that manufacturer for the model variant (variations to this may be considered by application to the HPBEC). Motorsport Australia reserve the right to alter specification sheets at any time, if new or different information becomes available.

Owners of Group S cars with a competition history, who wish to have that history and specification recorded, but because that specification is outside the Group S rules, want to continue competition as a Group S car, can apply for an Approval in Principle which will record the competition history and specification. The Approval in Principle will not become active for competition until the car is restored to its historic specification and inspected for compliance. The car will then be classified as Group T.

It is the competitor's responsibility to have available to the officials, the specification sheet & identification documents for that specific vehicle.

Each vehicle must be identified by the body numbers and other vehicle identifying features created by the manufacturer for the model variant.

Each vehicle must comply with the period specifications supplied by the manufacturer for the model and variant. Any further variations to these specifications may be considered by the HPBEC, on application and, if approved, must be noted in the specification sheet.

(a) **Chassis**: Chassis unit must remain unmodified and as originally supplied by the vehicle manufacturer.

## (b) Bodywork:

- (i) Bodywork must be original as supplied by the vehicle manufacturer.
- (ii) The bumper bars & windscreen/s of a Group Sa or Sb vehicle may be removed in accordance with item 3.1 of the General Requirements. This may also be permitted for Group Sc providing the car complies with that item.

- (iii) Where the windscreen has been removed the side windows and associated winding mechanism and window guides may also be removed.
- (iv) Side and rear windows in coupé vehicles may be replaced by polycarbonate (eg, Lexan) material of the same dimensions as the original glass. Acrylic material is not permitted.
- (v) Single-seater type and/or wrap-around windscreens are not permitted, but other replacement screens are.
- (vi) Where the windscreen is removed the side windows and associated winding mechanism and window guides may also be removed.
- (vii) Side and rear windows in coupe vehicles may be replaced by polycarbonate (eg, Lexan) material of the same thickness/dimensions as the original glass. Acrylic material is not permitted.

#### (c) Cockpit and Interior:

- The cockpit must remain as original save that floor and transmission tunnel coverings may be removed.
- (ii) The steering wheel may be replaced by another of period style.
- (iii) The original driver's seat and/or passenger seat may be replaced by a seat which meets the requirements of Schedule C.
- (iv) Instruments must be as originally supplied by the manufacturer and remain in their original locations. Internal mechanisms may be replaced by an alternative mechanism provided such mechanism provides no additional function.
- (v) Additional instruments of a period type may be fitted.

#### (d) Engine:

- (i) Cylinder block and head must be original, or a Motorsport Australia-approved alternative.
- (ii) Internal components of the engine are free save that the crankshaft stroke must remain original.
- (iii) Cylinder bore may be increased by a maximum of 1.5mm beyond original dimensions.
- (iv) Cylinder head/s may be modified provided such modification is effected only by the removal of metal.
- (v) Toothed belt drives are not permitted.
- (vi) Dry sump lubrication is permitted only if included in the original vehicle specification.
  - (A) The original lubrication system supplied by the manufacturer must be employed, save that oil pumps may be replaced or modified to enable higher pressure and/or volume, and additional external oil lines to original or approved components may also be employed. Any replacement oil pump must work on the manufacturer's original principle. Sumps as supplied as original equipment for the model in question may be modified to incorporate baffles and/or increased capacity.
  - (B) Oil coolers and remote oil filters are permitted, but the bodywork must not be altered for the purpose of fitment, nor may they be fitted outside the confines of the standard bodywork.
  - (C) Dry sump lubrication systems are not permitted, unless fitted as original equipment.
  - (D) Remote pressurised oil accumulators are permitted, conditional on them being used in conjunction with a normal wet-sump oil system and serving no other purpose.
  - (E) The capacity of the accumulator must not exceed three litres.
  - (F) Should the accumulator be mounted in the cockpit then the system must comply with the *Manual* Technical Appendix Schedule A (I)

## (e) Cooling System:

- (i) The cooling system must remain standard except that the radiator core is free as to length, height and core thickness.
- (ii) The radiator must be fitted in the original location without any modification of the surrounding bodywork or radiator support panel other than that necessary for the sole purpose of mounting the radiator.
- (iii) The radiator cooling fan may be removed.
- (iv) Electric cooling fans may be fitted provided they are within the confines of the bodywork.
- (v) Aluminium radiators are permitted but must retain the appearance of the period (ie; painted black).
- (vi) Electric water pumps are not permitted unless originally fitted to the vehicle at production.
- (f) **Exhaust:** The exhaust system is free but should be of design and materials as evident of the period.

## (g) Induction:

- (i) Carburettors or fuel injection systems must be of the same make, type and number originally fitted to the vehicle.
- (ii) Carburettor and air intake bore size is free as to size only.
- (iii) Carburettor manifold may be replaced with a type as evident in the period.
- (iv) Fuel Injection manifold: Must use only the intake manifold and throttle body as fitted to that model by the manufacturer.
- (v) Modification to the manifold is permitted only by the by the removal of metal.
- (vi) Anti-Pollution devices may be removed & any holes left vacant thereby may be closed.

(vii) Supercharging/Turbocharging/Forced Induction is permitted only where it was part of the manufacturer's original vehicle specification.

#### (h) Gearbox:

- (i) Gearbox casing, gear selector mechanism and the number of forward ratios must be original.
- (ii) Respecting Article 3.1 (h) (i) internal components are free.

## (i) Final Drive:

- (i) External components of the final drive assembly must be unmodified from the original specification.
- (ii) The final drive ratio is free.
- (iii) The differential may be of a torque bias or limited slip or spool drive type.

## (j) Brakes:

- (i) Brake drums and/or backing plates may be ventilated and/or fitted with cooling fins.
- (ii) Dust shields on disc brake systems may be modified or removed.
- (iii) A dual or tandem master cylinder system may be fitted.

## (k) Suspension:

- (i) The major integral parts of the suspension geometry, including suspension pickup points must be unmodified from original specification.
- (ii) Spring rates, ride height, damper settings may be altered.
- (iii) Fore and aft axle location may be improved but no change to transverse location is permitted.
- (iv) Alternative front and rear sway bars are permitted provided they are not adjustable from the driving position. Such sway bars must be of a conventional type i.e; made of solid steel bar

bent to shape. The diameter of the bar is free. The bars may be adjustable by movement of the attaching link along the bar.

- (v) Alternative bushings of period design or urethane may be used.
- (vi) Spherical ball or "rose" type joints are not permitted.
- (vii) Lever type shock absorbers/dampers may be replaced by telescopic units provided the lever does not form an integral part of the suspension geometry, and the original damping mechanism is rendered redundant.
- (viii) Adjustable shock absorbers are permitted provided there is no control of adjustment from the driving position.
- (ix) Only shock absorbers of unitary construction shall be used, ie; separate or remote canisters or reservoirs are not permitted.
- (x) The replacement shock absorber must be of steel construction.
- (xi) A maximum of 3° static negative camber is permitted for wheels on the front axle.

For live rear axles, the provisions of the *Manual* Technical Appendix - Definitions Technical "Wheel Angles – Live Rear Axles" will apply

#### (I) Wheels and tyres:

- (i) Tyres permitted for this group shall be subject to approval by Motorsport Australia which will maintain and publish an approved tyre list (refer N and S Tyre List article 3.6.3).
- (ii) The minimum aspect ratio of each tyre is 60% as determined by the Tyre and Rim Association.
- (iii) The minimum tyre section permitted on each eligible model will be determined and will be noted in the relevant Vehicle Specification Sheets.
- (iv) When viewed vertically from above there will be no tread of the tyre visible beyond the vehicle bodywork to a horizontal line drawn through the centre of the wheel.

#### (m) Electrical equipment:

- (i) All electrical equipment must be as originally supplied by the manufacturer and remain in the original location. It must be fully operative & unmodified from the original specification.
- (ii) Battery location is free. If located in cockpit, battery must be sealed refer the *Manual* Technical Appendix Schedule B, (q).
- (ii) It is permitted to replace the starter motor with a unit that performs the identical function.
- (iii) An electronic engine revolution limiter may be fitted.
- (iv) The distributor must be the same type, but not necessarily brand as supplied by the manufacturer for the make and model concerned.
- (v) Individual Group Sa, Sb and Sc regulations apply to ignition components.

**Note:** Electronic Ignition: An ignition system relying on electronic triggering of the spark timing, which does not use mechanical contact points as the spark trigger.

Transistorised Ignition: An ignition system using conventional contact breaker points but which has a transistorised spark discharge enhancement, eg, capacitor discharge ignition.

## (n) **Optional equipment:**

Optional equipment is permitted in this group only if it is included in the relevant Vehicle Specification Sheet.

## (o) Safety equipment:

- (i) Safety harnesses in compliance with The *Manua*l Technical Appendix Schedule I are compulsory.
- (ii) Rain Light is mandatory Refer the Manual Technical Appendix Schedule C
- (iii) The fitment of a foam filled fuel tank, or a fuel tank of a safety type approved by the FIA to FT3 specifications, is highly recommended (refer The *Manua*l Technical Appendix Schedule N – Where such a fuel tank is fitted, it should be installed either:

In the same location as the original tank.

(A) As near as practicable to the retained original fuel tank. In this instance the original fuel tank must be fully drained of any liquid, cleaned and rendered totally fuel vapour free, any drain plug must be removed, and the tank must be adequately vented. The filler neck must be isolated to prevent accidental re-filling.

#### (p) Roll Over Protection Structure (ROPS):

- (i) The fitment of a safety cage structure is compulsory.
- (ii) The ROPS must comply with The *Manua*l Technical Appendix Schedule J in all aspects except that a Type 2 (half cage) may be used in a closed vehicle. However it is strongly recommended that a Type 3 (full cage) be installed in closed vehicles.
- (ii) With the exception of the lower mounting plates and rear braces in open cars, the ROPS must be contained entirely within the cockpit (ie, the structural inner volume to accommodate the driver and the passengers) and no component may pass through any part of the body work nor be installed in any other compartment except that the front legs of the ROPS may pass through the dashboard adjacent to the each A-pillar. The minimum amount of material may be removed from the dashboard to enable fitment.
- (iii) The front section of the ROPS shall not to be attached to the dashboard except where prior approval has been granted by Motorsport Australia and recorded in the identification documents.
- (iv) Upon application, rear braces on an open car may pass through rear bodywork, but only so far to the rear as to enable the required minimum angle to the main hoop.
- (v) In the case of a "hatchback" type of body no component of the ROPS may be located rearward of the upper pick-up point of the rear dampers.
- (vi) In addition to mounting points depicted in Schedule J, it is permitted to attach the ROPS to other points of the body subject to those additional attachment points being to either the front hoop or the main hoop. Such additional attachments may be by bolting or welding.
- (vii) The ROPS may include side anti-intrusion bars and other additional braces as specified in Schedule J provided that none of these additional components passes through the bodywork nor is used as an additional point of attachment of the ROPS to the body.

#### (q) Fuel:

Only Pump Fuel, or Ethanol Blended Fuel (E85) as defined by the *Manual* Technical Appendix Schedule G are permitted.

## (r) Safety requirements:

**Important note:** Certain equipment dispensations have been granted to historic vehicles. However where a Group S vehicle takes part in a competition in company with any non-historic category those dispensations no longer apply.

#### (s) Minimum Weight:

- (i) The minimum weight for a car is that specified in the Group S Specification Sheets.
- (ii) Weight **may** be checked by the officials of the meeting after each official qualifying session and after each race on the scales provided by the circuit.
- (iii) Following a competition where a car has been selected for weighing the driver will not be included in the weight.

- (iv) These scales will be Scales of Fact
- (v) Any Ballast weight required must comply with Motorsport Manual Technical Appendix Schedule A (n) & be located in the passenger floor area of the cockpit.
- (vi) No liquid, solid or gaseous substance may be added.
- (vii) Each Automobile that records a weight less than the stipulated minimums may be referred to the stewards:

#### 3.2 SPECIFIC REQUIREMENTS

## **Group Sa**

## **PRODUCTION SPORTS CARS (1941-1960)**



Production sports cars, as recognised by Motorsport Australia, manufactured after 1 January 1941 but prior to 31 December 1960 with the inclusion of certain model run-ons (eg, Mk 1 Austin Healey Sprite). Cars classified in this group need not necessarily have a racing history. Factory built, competition variants of standard production cars are not eligible for this group.

#### Specific requirements additional to the General Requirements:

#### (a) Eligible vehicles:

A list of eligible vehicles is available on the Motorsport Australia website:

https://www.Motorsport.org.au/regulations/logbooks/historic

That list is not exhaustive. Other makes/models may be considered for inclusion upon application to Motorsport Australia.

- (b) **Bodywork:** Rigid removable tonneau covers are permitted.
- (c) **Brakes:** Drum brakes may be modified or replaced with others of period type.
- (d) Wheels:
  - (i) Each wheel must be either as supplied by the manufacturer or of a type approved by Motorsport Australia and which is representative of wheels used prior to 31 December, 1958.
  - Each wheel must respect the original diameter, save that a car originally fitted with 14" diameter wheels may use replacement 15" diameter wheels.
  - (iii) Rim width must not exceed 5" for vehicles of up to 1300cc effective capacity and 5.5" for vehicles over 1300cc, unless otherwise specified by the manufacturer, in which case the rim width must be as originally specified.
  - (iv) Aluminium alloy wheels may be fitted, but only of a design and style available prior to 31 December, 1958.
  - (v) Hubs with 4" Pitch Circle Diameter (PCD) may be modified or replaced to mount 100mm PCD wheels.
  - (vi) Any replacement hubs must be of ferrous material.

## (e) Ignition:

- (i) A distributor of a different make but similar design is permitted, in which case it must respect the original location of all components and must operate as originally designed by the manufacturer.
- (ii) No form of electronic ignition system is permitted.

# **Group Sb**

## **PRODUCTION SPORTS CARS (1961-1969)**



Production sports cars as recognised by Motorsport Australia, manufactured after 1 January 1961 but prior to 31 December 1969 with the inclusion of certain model run-ons (eg, Triumph Spitfire Mk 3). Cars classified in this group will not necessarily have a racing history. Factory built, competition variants of standard production cars are not eligible for this group.

#### Specific requirements additional to the General Requirements:

#### (a) Eligible vehicles:

A list of eligible vehicles is available on the Motorsport Australia website:

https://www.Motorsport.org.au/regulations/logbooks/historic

That list is not exhaustive. Other makes/models may be considered for inclusion upon application to Motorsport Australia.

#### (b) Wheels and tyres:

- (i) Replacement of standard wheels by period style alloy wheels will be considered upon individual application.
- (ii) Each wheel must respect the original diameter.
- (iii) Rim width must not exceed 5" for vehicles of up to 1300cc effective capacity and 6" for vehicles over 1300cc, unless otherwise specified by the manufacturer, in which case the rim width must be as originally specified.

## (c) Ignition:

- (i) Contact breaker points and condenser may be removed and their standard operations performed by electronic components providing the following conditions are adhered to:
  - (A) each replacement component, save for the coil, must be an internal part of the distributor;
  - (B) a maximum of two wires shall connect the low tension side of the distributor to the coil. These wires shall be visibly continuous and not contain any supplementary connection to any other component;
  - (C) a conductor may be fitted between the distributor body and the cylinder block; and

- (D) ignition advance shall be restricted to mechanical actuation within the distributor.
- (E) A distributor of a different make but similar design is permitted, in which case it must respect the original location of all components and must operate as originally designed by the manufacturer.

# **Group Sc**

## PRODUCTION SPORTS CARS (1970-1977)



Naturally aspirated production sports cars, as recognised by Motorsport Australia, manufactured after 1 January 1970 but prior to 31 December 1977 with the inclusion of certain model run-ons (eg, Datsun 260Z). Cars classified in this group need not necessarily have a racing history. Factory-built, competition variants of standard production cars are not eligible for this group.

#### Specific requirements additional to the General Requirements:

#### (a) **Eligible vehicles**:

A list of eligible vehicles is available on the Motorsport Australia website:

https://www.Motorsport.org.au/regulations/logbooks/historic

That list is not exhaustive. Other makes/models may be considered for inclusion upon application to Motorsport Australia.

## (b) Wheels and tyres:

- (i) Replacement of standard wheels by period style alloy wheels will be considered upon individual application.
- (ii) Each wheel must respect the original diameter.
- (iii) Rim width must not exceed 5" for vehicles of up to 1300cc capacity and 6" for vehicles of over 1300cc, unless otherwise specified by the manufacturer, which case the rim width must be as originally specified.
- (c) Ignition:
  - (i) Contact breaker points and condenser may be removed and their standard operations performed by electronic components providing the following conditions are adhered to:
    - (A) each replacement component, save for the coil, must be an internal part of the distributor;
    - (B) a maximum of two wires shall connect the low tension side of the distributor to the coil. These wires shall be visibly continuous and not contain any supplementary connection to any other component;
    - (C) a conductor may be fitted between the distributor body and the cylinder block; and
    - (D) ignition advance shall be restricted to mechanical actuation within the distributor.
    - (E) A distributor of a different make but similar design is permitted, in which case it must respect the original location of all components and must operate as originally designed by the manufacturer.

## (d) Suspension:

- (i) Where a lever-type damper is original equipment and that damper has no other function, it is permitted to replace each lever-type damper by a telescopic damper, provided that only the rebound damping can be adjusted externally.
- (ii) Where a lever-type damper is original equipment and that damper performs an essential function in the articulation of the suspension it is permitted to add one telescopic damper for that wheel provided that:
- (iii) all damping action of the lever-type damper is neutralized; and
- (iv) only the rebound damping of the telescopic damper can be adjusted externally.