GENERAL REQUIREMENTS FOR CARS AND DRIVERS

Schedule G - Fuel

1. GENERAL

All fuel used in competition must comply with the prescriptions of this Schedule. All fuel must be used without additives other than those permitted herein. Other than for pump fuel, the mixing of fuels from different oil companies, or of different grades and/or types of fuel from the same oil company is forbidden.

An oil company shall be deemed to be either:

- a company with oil refining capacity either in Australia or Internationally; or
- a company with roadside retail fuel bowser outlets within Australia; or
- a marketing company with national distribution capability, and specifically recognised by CAMS.

2. COMMERCIAL FUEL

Commercial Fuel: Petrol, automotive diesel, ~~or~~ liquefied petroleum gas (LPG) **or ethanol blended fuel eg. "E85" (as defined below)** produced by an oil company and available for commercial sale in all States and mainland Territories of Australia. **With the exception of ethanol blended fuels, all** ~~Such~~ fuel shall comply with the Fuel Standards Determinations made under Section 21 of the Fuel Quality Standards Act (2000).

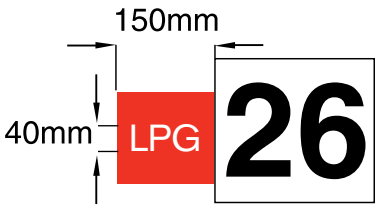
Ethanol blended fuel is defined as only containing the following constituents:

- **Anhydrous fuel grade ethanol (85% ± 1%) v/v**
- **Unleaded petrol (15% ± 1%) v/v**
- **Corrosion inhibitor (optional)**
- **Colouring dye (optional)**
- **Other constituents (0.2% max) v/v**

Fuel which is the subject of Approvals made under Section 13 of the Fuel Quality Standards Act (2000) shall not be regarded as Commercial Fuel.

2.1 **Pump Fuel:** A commercial **fuel (as defined above)** ~~petrol~~ available for sale on demand from a roadside retail bowser outlet at each of at least five separate service stations in each of at least three Australian States. A mixture of Pump Fuels **with the same hydrocarbon profile** is permitted **(eg. brands of ULP may be mixed; ethanol-blended fuels, ULP or diesel may not be mixed)**.

2.2 **Liquefied Petroleum Gas:** A commercial LPG being either butane, propane or a mixture of both, and of a type which is dispensed from a roadside retail bowser. Where an automobile utilises LPG, a sign in the form of the white letters LPG on a red reflective background, as per drawing G-1, must be placed immediately to the left and centralised vertically to all competition numbers.



Drawing G-1

Unless specifically approved otherwise by CAMS, LPG must not be used in circuit races involving re-fuelling.

2.3 **Diesel:** Diesel fuel must be gas oil corresponding to the following specifications:

- hydrocarbon level, 99.0 % by weight minimum
- specific gravity, 860 kg/m^3 maximum
- cetane number 55 maximum (ASTM D 613)
- calculated cetane number 55 maximum (ASTM D 976-80).

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3. RACING FUEL

3.1 Leaded Racing Fuel: Leaded racing fuel is defined as a leaded petrol which is supplied by an oil company and having a composition the same as that supplied for piston engine general aviation use, ie, AvGas 100/130 or AvGas 100LL only.

3.2 Unleaded Racing Fuel: Unleaded racing fuel is defined as an unleaded petrol in compliance with FIA Article 252.9.1 of Appendix J to the current FIA Year Book.

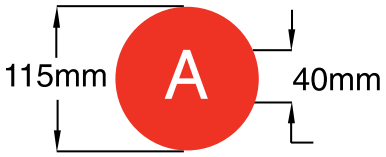
4. ALCOHOL

Alcohol fuels may only be used where specified for 5th Category automobiles or where a specific Group regulation permits its use.

4.1 For other than 5th Category automobiles, such fuels must contain a minimum 95% V/V of methanol and/or ethanol and a maximum 5% ketone content. Nitromethane is expressly prohibited.

4.2 For individual automobiles of the 5th Category, specific alcohol based fuels with a constitution other than as described in 4.1 above may be approved; the constitution of such fuels shall be listed on the Certificate of Description of the particular automobile in question and must be used unadulterated in that automobile.

4.3 In each such case, it is mandatory that an automobile using alcohol fuel shall carry a symbol in the form of the letter "A" in white on a red circle of approximately 115mm diameter as shown in drawing G-2 below. This symbol ~~should~~ **must** be placed adjacent to the competition number on each side of the automobile, and the filling cap of the fuel tank.



Drawing G-2

5. BIO FUELS

A petrol, diesel or alcohol fuel produced exclusively from sustainable resources. Where such a fuel does not meet the requirements of Articles 2, 3 or 4 above, its use must be specifically authorised by the Fuels Regulation Committee.

6. OXIDANTS

Only air may be mixed with the fuel as an oxidant. The use of Nitrous Oxide is strictly prohibited.

7. ADDITIVES

Any substance, other than air, incorporated into the fuel subsequent to its final blending by the producing oil company is deemed to be an additive. Nothing in the foregoing shall be deemed to prohibit the addition of water, an approved lead replacement additive* or a lubricant provided that such additive does not increase the octane or cetane rating, oxygen content or specific heat content of the fuel.

*** List of Approved Lead Replacement Additives:**

Valvemaster®, Redline Lead Substitute®, Penrite Valve Shield®, PM 800 Fuel System Conditioner®, Elf Millesim®.

8. FUELS REGULATION COMMITTEE

8.1 Appointment: The Fuels Regulation Committee has been established by the Board of CAMS for the purpose of considering the application of restrictions to fuel usage. The Chairman and Committee members shall be appointed annually by the Board. Recommendations from the Committee shall be passed to the Board for consideration.

8.2 Application for Restrictions: Requests for restrictions to fuel usage may only be addressed to the Committee by:

- **8.2.1** Sporting Commissions of CAMS;
- **8.2.2** The holders of valid Activity, Series or Championship Management contracts;
- **8.2.3** Persons or organisations recognised by CAMS as representing particular Groups of vehicles;
- **8.2.4** Event organisers.

8.3 Criteria for consideration of Restrictions to Fuel: The Committee will consider the following criteria in making their recommendation:

- **8.3.1 The nature and level of the competition:** Is the competition at amateur or professional level, and will the type of fuel play a major role in the outcome of the competition?
- **8.3.2 Applicability of Government regulations:** Are there statutory restrictions that would affect the fuel used in competition?
- **8.3.3 Availability of fuel:** Is there a particular supply issue affecting the competition?
- **8.3.4 Technical appropriateness of fuel:** Does the nature of the fuel restriction sought match the technical specifications of the automobiles?

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8.3.5 Cost containment: Is the request for a restriction for fuel, based on cost containment, consistent with other cost containment philosophies of the competition?

8.3.6 Health and safety: What effect will any restriction have on OH&S issues?

8.3.7 Performance criteria: What effect will a restriction have on performance relativities within the competition?

8.3.8 Commercial considerations: What commercial arrangements may form part of any restriction to fuel (eg, sponsorship, rebates, promotion etc)?

Further information on these criteria is available from the Executive Officer, Fuels Regulation Committee, at the CAMS National Office.

8.4 Restrictions: The Committee will consider requests for restrictions to:

8.4.1 Nominated Suppliers: In general, a "Control Fuel", being a restriction to a particular brand and/or type of fuel, will not be authorised. Notwithstanding the above, a contract between the competition organisers and a particular fuel supplier may be recognised provided that such a contract is the outcome of an open tender process. Where such a fuel is supplied to the competitors it is prohibited to alter the composition of the fuel in any manner, including by the use of additives otherwise permitted under article 7.

8.4.2 Fuel supplied by the Organisers: A restriction may be sought to limit fuel used by **each** competing **vehicle** at an event to "Fuel supplied by the Event Organisers". Such a restriction will not be granted unless the organisers can demonstrate that they have taken reasonable steps to ensure that appropriate grades of fuel are available to suit all competing groups of automobiles.

8.4.3 Commercial Fuel: As defined above.

8.4.4 Pump Fuel: Restrictions to pump fuel will be obtainable to a limited number of competitions that can strictly satisfy all the criteria of article 8.3 above. A restriction to pump fuel will not be authorised in conjunction with any other type of fuel (eg, a restriction to pump fuel and leaded racing fuel).

8.4.5 Racing Fuel: Where a restriction to racing fuel is sought, an additional restriction to unleaded racing fuel may also be approved. In general, restrictions to leaded racing fuel only will not be authorised for other than competition solely for 5th Category automobiles.

9. FUEL TESTING

Fuel samples may be drawn for testing from a competing automobile at any time during the period of time from the commencement of the event until the vehicle is released from *parc fermé* at the conclusion of the event, should one be organised.

It is the competitor's responsibility to provide the means by which fuel samples may be taken from the automobile; the method being subject to the approval of the Chief Scrutineer. Sampling requiring the disconnection of hoses containing fuel under pressure is not acceptable under any circumstances.

Whilst the fuel samples for testing are being taken, the competitor, or his nominated representative must be in immediate attendance to observe the process. Where the competitor or his nominated representative cannot be present within a reasonable time, the Chief Scrutineer must notify the Stewards of the Meeting, who shall appoint a proxy observer, being an official of the meeting, who shall act as the nominated representative of the competitor.

For all National championships and series, and other events as specified in event regulations, the competitor must declare to the scrutineers, at the time of sampling, the brand and type of fuel that is in the automobile's fuel tank. Any additive, including lubricants, must also be disclosed to the scrutineers. Where a permitted mixture of fuels is present, all component fuels must be disclosed.

Samples shall be tested according to procedures A or B below.

Test Procedure A: Testing at the Event

The Chief Scrutineer may choose to test fuel samples at the event. To this effect, one sample of fuel may be taken for testing under the conditions outlined above from each or any competing automobile. The competitor may, at his discretion, request a second sample be drawn at the same time. After being duly identified and sealed, this second sample may be retained by the competitor**.

Testing at the event shall be limited to:

- physical observation of the sample (colour, opacity)
- testing using whatever specialist equipment is available at the event (eg, electrical conductivity, density, gas chromatography etc)

Where a charge is raised as a result of such testing, the Chief Scrutineer or his representative shall give evidence at the subsequent Stewards Hearing or Inquiry, although they shall not be accorded the status of "Judge of Fact". Notwithstanding this, the Stewards of the Meeting shall be obliged to take into consideration any evidence thus presented.

** **The competitor may use the retained sample in his defence provided that the seal of the sample retained by the competitor is broken in the presence of the Stewards of the Meeting. Where the scrutineers deem that no action is necessary, the container holding the competitors sample shall be returned by the competitor to the scrutineers upon request.**

Test Procedure B: Testing by a CAMS-approved Laboratory

CAMS shall maintain a list of approved laboratories for the testing of fuel.

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For tests by an approved laboratory, two fuel samples shall be drawn and sealed into identified containers. The seal on each container shall be affixed in such a way as to ensure the rupture of the seal upon the opening of the container. Each seal shall bear identification of the event, the name and signature of the scrutineer taking the sample and the name and signature of the competitor. The samples (Samples A and B) shall then be sent to CAMS, which shall send Sample A to a CAMS-approved laboratory. The determination of fuel type and composition shall be by comparison against a reference library of results for known fuel types determined by the method ASTM D-3710-95 (or equivalent).

Where the approved laboratory notifies CAMS that sample A has been found to be not in conformity with the prescriptions contained herein, CAMS shall lodge sealed fuel sample B with the same approved laboratory. Where the results of the second test sample B corroborate the initial determination of Sample A, the fuel shall be deemed to be not in conformity with the prescriptions of the present Schedule. This finding shall be binding on any Stewards' Hearing, Appeal Tribunal or any subsequent AMSAC Hearing. Where a discrepancy exists between the results of samples A and B, no action shall be taken against the competitor.

Note: There are special conditions associated with the transport and handling of flammable liquids. Contact CAMS to ascertain an appropriate method of transporting the fuel.

10. HEALTH WARNING

All participants in motor sport are reminded that fuels, oils, lubricants and coolants are highly specialised substances. Apart from the ever-present risk of fire, participants must be aware that these agents may contain substances that are extremely dangerous to one's health if misused, inhaled or allowed into contact with human skin. Some of the components of these fuels, oils and lubricants are suspected of having the potential to cause cancer in rare instances. The use of petrol as a general cleaning and washing agent is a common misuse of a potentially dangerous substance.

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