

REGULATION CHANGES FOR CONSULTATION

Committee:	Technical Committee
Date of Meeting:	September 2024
Closing date for consultation:	16 th December 2024
Feedback form for comments:	Consultation Feedback Form (https://bit.ly/40aympK)
Supporting Information:	motorsportuk.org Sustainable Fuels

Section B – Common Regulations: Nomenclature and Definitions

Pump Fuel

- a) Petrol: Commercially available Motor Gasoline (see Appendix 1: Tables):
 - BS EN 228 (unleaded and super-unleaded).
 - ~~Petrol is a product refined from crude oil that contains a large number of identifiable compounds that can typically be 250 in number. These compounds can be identified and compared to the available petrol from major oil companies and suppliers.~~
 - Unless otherwise stated or the distinction is made between leaded and unleaded petrol, the motor gasoline fuel shall meet the following: Acceptance levels for Octane Numbers will be accepted or rejected according to the Standard ASTM D.3244. Only additives to this Motor Gasoline Fuel solely for the purpose of lead replacement are allowed.
 - LRG (unleaded), Lead replacement gasoline (LRG also known as LRP): Only additives to unleaded motor gasoline, solely for the purpose of lead replacement, from Sodium, Phosphorous or Manganese are allowed, subject to application according to manufacturer's instructions and to the treated fuel complying with Appendix 1. Lead in excess of EU Directive 98/70 EC requirements is illegal. This also applies to 'Free Fuel'.
 - The addition of a lubricant on current sale is permitted in fuels for use in 2-stroke engines.
 - For rotary engines, a 2-stroke oil with a minimum viscosity of 5 cSt at 100°C, may be added at a maximum concentration of 0.30% (mixing ratio of 300:1).
- b) Petrol or Diesel in compliance with FIA Appendix J Art 252, Article 9.3 (Advanced Sustainable Fuels) and registered by the Manufacturer (or nominated agent) with the ASN. ~~Or, for Karting, Petrol in accordance with CIK Technical Regulations Article 2.21.~~
- c) LPG (Liquefied Petroleum Gas) which is of 99% wt. min. hydrocarbon composition and that is entirely gaseous at atmospheric temperature and pressure. Complying with BS EN589.
- d) Diesel Automotive Gas Oil (DERV), commercially available, complying with BS EN 590 and EU Directive 98/70 EC (see Appendix 1).
- e) ~~Bio Ethanol~~ High Ethanol Content Fuel in compliance with FIA Appendix J Art 252, Article 9.3 – Only permitted to be used with the specific approval of the ASN. ~~Motorsport UK. Specifications available from the Motorsport UK Technical Department.~~
- f) Bio Diesel – Commercially available and complying with BS EN15940.
- g) Hydrogen in compliance with FIA Appendix J Art 252, Article 9. Only permitted to be used with the specific approval of the ASN.

Appendix 1: Tables
PUMP FUEL – MOTOR GASOLINE

	BS EN 228 (Unleaded)	Test
MON (max)	89.0	EN ISO 5163
RON (max)	100.00	EN ISO 5164
Oxygen % (max)	3.7% w/w	Elemental
	LRG (Unleaded)	Test
MON (max)	89.0	EN ISO 5163
RON (max)	100.0	EN ISO 5164
Lead (max) g/l	0.005	ASTM D3341/IP362/EN 237
Oxygen % (max)	2.7% w/w	Elemental

Certain of the above values are additional to those specified in the standards referred to.

PUMP FUEL – DIESEL

	BS EN 590	Test
Density 15°C kg/m ³ (max)	845	EN ISO 3675/EN ISO 12185
Cetane Number (max)	60	EN ISO 5165/EN 15195
Calculated Cetane Index (max)	60	EN ISO 4264
Sulphur Content mg/kg (max)	10	EN ISO 20846/EN ISO 20884

At the discretion of Motorsport UK the maximum Cetane and calculated Cetane numbers may be increased to 70.0 for national competitions/Championships

Section C – Common Regulations: Judicial

Fuel and Tyre Checking

4.2.2. Sustainable Fuels:

- a) Suppliers of Sustainable Fuel (as defined by Section B – Pump Fuel b)) must register products available for selection through the Competition Official Documents with the ASN and provide samples (by batch) to serve as control samples.
- b) Where fuel for the Competition is mandated by the organisers for all competitors in the class(es) to be specified through the Competition Official Documents in accordance with D.34.3.
- c) Where Competition Official Documents permit the use of FIA fuel, competitors, must declare the product in use from the ASN Technical List in accordance with (D)34.3.
- d) Fuel Testing will be implemented in accordance with D.34.3.

Section D – Common Regulations: Organisers

34.3. Comparison Testing

34.3.3. Comparison testing will only be implemented where fuel for the Event is mandated by the organisers for all competitors in the class(es) to be drawn from a single controlled source. It is the sole method used when use of control fuel is mandatory.:

- a) Where fuel for the Event is mandated by the organisers for all competitors in the class(es) to be drawn from a single controlled source. It is the sole method used when use of control fuel is mandatory.
- b) For any fuel in use in accordance with Section B – Pump Fuel b).

Date of Implementation: 01 January 2026

Reason: See supporting information here: <https://www.motorsportuk.org/about-us/environmental-sustainability/sustainable-fuels/>

In accordance with the Motorsport UK Sustainability Strategy, these regulatory amendments enable a roadmap for the adoption of Sustainable Fuels.

These proposals maintain the option to use commercially available motor gasoline (high street fuel), whilst it remains the lowest cost option for competitors.

FIA Appendix J (Specialist Racing Fuels) can continue to be used, but from 2026, only fuels compliant with FIA App J Art 252, Article 9.3 may be used.

FIA App J Art 252, Article 9.3 currently requires 50% Sustainable Content, the ASN target for Advanced Sustainable Fuels to contain 100% Sustainable Content is 2030.

The Judicial framework to ensure the compliance with eligible fuels requires suppliers to register fuels with the ASN and submit the necessary samples (by batch). Competitors / Championships declare the fuel and batch to be used. Compliance is analysed as required using comparison testing.

This regulation proposal is published in both the current Motorsport UK Yearbook Format and the National Competition Rule format in support of the transition to the National Competition Rule format in 2025.

NATIONAL COMPETITION RULES – CHAPTER 8 PERMITTED FUELS AND TYRES AND TESTING

APPENDIX 1 – PERMITTED FUELS

1.7 The definition of '**Permitted Fuels**' is as follows:

NOTE: The **ASN** reserves the right to amend these details to reflect any change occurring in the quality of fuel on general sale to the public in the UK.

Also refer to Specifications Table below.

Petrol: Commercially available Gasoline

a) **BS EN 228 (unleaded and super-unleaded).**

~~Petrol is a product refined from crude oil that contains a large number of identifiable compounds that can typically be 250 in number. These compounds can be identified and compared to the available petrol from major oil companies and suppliers.~~

Unless otherwise stated or the distinction is made between leaded and unleaded petrol, the motor gasoline fuel shall meet the following:

- i. Acceptance levels for **Octane Numbers** will be accepted or rejected according to the Standard ASTM D.3244.
- ii. Only additives to this **Motor Gasoline Fuel** solely for the purpose of lead replacement are allowed.

LRG (unleaded), Lead replacement gasoline (LRG also known as LRP): Only additives to unleaded motor gasoline, solely for the purpose of lead replacement, from Sodium, Phosphorous or Manganese are allowed, subject to application according to manufacturer's instructions and to the treated fuel complying with the **Specification Table at Article 8 of this Chapter**. **Lead in excess of EU Directive 98/70 EC requirements is illegal**. This also applies to 'Free Fuel'.

The addition of a lubricant on current sale is permitted in fuels for use in 2-stroke engines.

For rotary engines, a 2-stroke oil with a minimum viscosity of 5 cSt at 100°C, may be added at a maximum concentration of 0.30% (mixing ratio of 300:1).

- b) **Petrol or Diesel** in compliance with FIA Appendix J Art 252, Article ~~9~~ **9.3 (Advanced Sustainable Fuels) and registered by the Manufacturer (or nominated agent) with the ASN**. ~~Or, for Karting, Petrol in accordance with CIK Technical Regulations Article 2.21.~~
- c) **LPG (Liquefied Petroleum Gas)** which is of 99% wt. min. hydrocarbon composition and that is entirely gaseous at atmospheric temperature and pressure. Complying with BS EN589.
- d) **Diesel Automotive Gas Oil (DERV)**, commercially available, complying with BS EN 590 and EU Directive 98/70 EC (see Appendix 1).
- e) ~~Bio-Ethanol~~ **High Ethanol Content Fuel** – in compliance with FIA Appendix J Art 252, Article 9.3 – Only permitted to be used with the specific approval of the **ASN**. ~~Specifications available from the ASN Technical Department.~~
- f) **Bio Diesel** - commercially available and complying with BS EN15940.

- g) **Methanol.** Methyl Alcohol CH₃OH. This is a clear colourless liquid, miscible with water acetone and other ketones, the esters, aromatic and highly unsaturates hydrocarbons, and castor oil. It is not miscible in all proportions with straight-run petroleum spirit or mineral oil. B.P. 64.7°C, Specific Gravity 0.796, Flash Point 32°F. For Speed Events, British Standard 506 with an allowance of up to 10% Acetone, is permitted. It must include an ASN approved additive which provides a distinguishable colour and smell when burning. The maximum permitted volume of additive within the fuel is 0.2%.
- h) **Hydrogen** in compliance with FIA Appendix J Art 252, Article 9. Only permitted to be used with the specific approval of the ASN.

SPECIFICATIONS TABLE

PERMITTED FUEL – MOTOR GASOLINE

	BS EN 228 (Unleaded)	Test
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APPENDIX 2

Comparison Testing

- 4.3 Comparison testing will only be implemented where fuel for the Event is mandated by the Organisers for all Competitors in the Class(es) to be drawn from a single controlled source. It is the sole method used when use of control fuel is mandatory.
- a. Where fuel for the Competition is mandated by the organisers for all competitors in the class(es) to be drawn from a single controlled source. It is the sole method used when use of control fuel is mandatory.
 - b. For any fuel in use in accordance with Chapter 8 – Appendix 1 – Article 1.7 – Part b).

9. Sustainable Fuels

- 9.1 Suppliers of Sustainable Fuel (as defined by Chapter 8 – Appendix 1 – Article 1.7 – Part b) must register products available for selection through the Competition Official Documents with the ASN and provide samples to serve as control samples.
- 9.2 Where fuel for the Competition is mandated by the organisers for all competitors in the class(es) to be specified through the Competition Official Documents.
- 9.3 Where Competition Official Documents permit the use of FIA fuel, competitors, must declare the product in use from the ASN Technical List in accordance with Chapter 8 – Appendix 2 – Article 4.3 – Part b).
- 9.4 Fuel Testing will be implemented in accordance with Chapter 8 – Appendix 2 – Article 4.

Date of Implementation: 01 January 2026

Reason: See supporting information here: <https://www.motorsportuk.org/about-us/environmental-sustainability/sustainable-fuels/>

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