

# 2024 KART RACE CHAMPIONSHIP SPORTING & TECHNICAL REGULATIONS

## 2024 – FP4 World Formula Championship

### 1. SPORTING REGULATIONS – GENERAL

#### 1.1 Title & Jurisdiction:

The FP4 World Formula Championship is organised and administered by FP4 Kart Club in accordance with the Motorsport UK General Regulations (incorporating the provisions of the International Sporting Code of the FIA) and these Championship Regulations.

Motorsport UK Championship Permit No.		Status: Kart Clubman
Motorsport UK Championship Grade	D	Type

#### 1.2 Officials

1.2.1 Co-ordinator: FP4 Committee

1.2.2 Eligibility Scrutineer: Mr Kelvin Nicholls

1.2.3 Championship Stewards: Any 3 of Mr Mark Davies, Mr Chris Kelly , Mr Kevin Mathers & Mr Alan Jacques

#### 1.3 Competitor Eligibility:

1.3.1 Entrants must be fully paid up valid membership card holding members of the FP4 Kart Club and be in possession of a valid Motorsport UK Entrants Licence. Competitors under the age of 18 must be accompanied by the holder of a Kart PG Entrant's licence who must sign on as Entrant of that competitor.

1.3.2 Drivers and Entrant/Drivers must be fully paid up valid membership card holding members of the FP4 Kart Club, be Registered for the Championship and be in possession of valid Competition Kart Clubman Licence, as a minimum.

1.3.3 A Competitor may enter the Senior Category from calendar year of their 16th birthday, or from their 15th birthday with a National licence.

1.3.4 A minimum driver weight is required for any driver below the age of 16 competing in a Senior Category, with the exception of International ITE licence holders. This weight is defined in individual Class Regulations. A competitor shall not take time off school to participate in motor sport without the prior written approval of their school.

If participation in the Championship requires absence from school, Drivers in full time school education are required to have the approval of their head teacher and a letter stating such approval from his/her school in order to fulfil registration for the Championship.

1.3.5 A Team is a commercial race company or racing team hosting drivers in providing race services or covered accommodation in the Championship and receiving financial gain where the principal is not also the PG Entrant licence holder. This includes the use of team names, team sticker kits and team race suits/clothing:

A Team shall at all times uphold and respect the provisions of the Respect Code, the General Regulations and these Championship Regulations as may be amended from time to time and shall;

- (a) hold a valid Motorsport UK Entrant licence;
- (b) have at least £5 million Public Liability Insurance;
- (c) uphold the values of the Respect Code and all applicable Motorsport UK policies and guidance;
- (d) act in a professional manner at all times and not act or permit any member of the Team to act in such a manner as to bring motor sport, the Championship or Motorsport UK or any of its officers and officials into disrespect;
- (e) adhere to the Motorsport UK Safeguarding Policies and guidance documents, complete Safeguarding training when required and ensure that any person undertaking Regulated Activity is the holder of a valid suitability check supplied through Motorsport UK;
- (f) adhere to the General Regulations in respect of anti-alcohol and illicit drugs as well as Motorsport UK processes for anti-alcohol and illicit drugs testing;

(g) nominate one member of their Team as the Team Representative at each meeting including but not exclusively for the purpose of all judicial proceedings at Events and who shall be present at all judicial proceedings concerning drivers entered under that Team licence in substitution for the driver Parent/Legal Guardian.

1.3.6.1 It is recommended the Team has:

- (a) a designated team member as a 1st 4Sport, Level 2 qualified coach;
- (b) a designated UKAD Certified Advisor, and
- (c) be responsible for carrying out and documenting a risk assessment of their activities; (risk assessment management tool available)

1.3.7 All necessary documentation must be presented for checking at all rounds when signing on.

#### **1.4 Registration:**

1.4.1 Registration for FP4 World Formula Championship is automatic when membership is accepted to the FP4 Kart Club.

1.4.2 To register an entry for a round, a member should send the entry to the club and entry fee paid to FP4 bank account. The fee for each round is communicated in advance. The entry system for each round will be communicated in advance.

1.4.3 Closing date for each round is 9 days prior to the race date, subject to committee discretion. After this date, the club can accept late entries with an additional late entry fee of £20.00

#### **1.5 Championship Rounds:**

1.5.1 Championship Rounds will be published on the club website

#### **1.6 Scoring:**

1.6.1 Championship Points will be awarded for the finishing position achieved in the heats and the final at each round. A driver will score points if they have completed 50% of the race laps.

(Rounded up, so if 11 laps completed by the leader then 6 laps count as 50%)

**Points for the heats** will be awarded as follows: 1<sup>st</sup> 30 points, 2<sup>nd</sup> 28 points, 3<sup>rd</sup> 26 points, 4<sup>th</sup> 25 points, 5<sup>th</sup> 24 points, 6<sup>th</sup> 23 points, 7<sup>th</sup> 22 points, 8<sup>th</sup> 21 points, 9<sup>th</sup> 20 points, 10<sup>th</sup> 19 points, 11<sup>th</sup> 18 points, 12<sup>th</sup> 17 points, 13<sup>th</sup> 16 points, 14<sup>th</sup> 15 points, 15<sup>th</sup> 14 points, 16<sup>th</sup> 13 points, 17<sup>th</sup> 12 points, 18<sup>th</sup> 11 points, 19<sup>th</sup> 10 points, 20<sup>th</sup> 9 points, 21<sup>st</sup> 8 points, 22<sup>nd</sup> 7 points, 23<sup>rd</sup> 6 points, 24<sup>th</sup> 5 points, 25<sup>th</sup> 4 points, 26<sup>th</sup> 3 points, 27<sup>th</sup> 2 points, 28<sup>th</sup> 1 point, 29<sup>th</sup> 1 point, 30<sup>th</sup> 1 point.

**Points for the final** will be awarded as follows: 1<sup>st</sup> 40 points, 2<sup>nd</sup> 35 points, 3<sup>rd</sup> 31 points, 4<sup>th</sup> 28 points, 5<sup>th</sup> 26 points, 6<sup>th</sup> 25 points, 7<sup>th</sup> 24 points, 8<sup>th</sup> 23 points, 9<sup>th</sup> 22 points, 10<sup>th</sup> 21 points, 11<sup>th</sup> 20 points, 12<sup>th</sup> 19 points, 13<sup>th</sup> 18 points, 14<sup>th</sup> 17 points, 15<sup>th</sup> 16 points, 16<sup>th</sup> 15 points, 17<sup>th</sup> 14 points, 18<sup>th</sup> 13 points, 19<sup>th</sup> 12 points, 20<sup>th</sup> 11 points, 21<sup>st</sup> 10 points, 22<sup>nd</sup> 9 points, 23<sup>rd</sup> 8 points, 24<sup>th</sup> 7 points, 25<sup>th</sup> 6 points, 26<sup>th</sup> 5 points, 27<sup>th</sup> 4 points, 28<sup>th</sup> 3 points, 29<sup>th</sup> 2 points, 30<sup>th</sup> 1 point.

A further 2 points will be awarded for the fastest lap in the final.

1.6.2 A driver may count a maximum of seven out of the nine qualifying rounds in the Club Championship points total. (see also 1.6.3 Here-of)

1.6.3 Should it be necessary for any championship races to be cancelled for whatever reason, then the rounds will be counted as follows:

One cancelled round – Number of rounds scored less one

Two or more cancelled rounds – Number of rounds scored less one

1.6.4 In the event of a points tie after the final round, the position will be determined by the competitor with the highest number of first places in finals, then successively descending positions will be used to decide the Winner. If this still results in a tie the results from the last round will be used to determine the final championship positions.

1.6.5 Event Penalties: Should any driver be totally disqualified from a meeting for any reason they cannot drop that round, it will count as one of their total results. Motorsport UK general regulation C3.5.1 a&b will apply.

## **1.7 AWARDS**

1.7.1 Awards will be made at each round, according to the ratio used by the hosting venue. (Expected to be at a ratio of 1 trophy per 5 entries in total).

1.7.2 Championship trophies will be presented at a date and venue, which will be advised later. Trophies will be awarded for 1<sup>st</sup>, 2<sup>nd</sup> & 3<sup>rd</sup> places in each class.

1.7.3 Championship and round awards will be restricted to cups and trophies; no bonuses or prize money will be offered.

## **2.0 SPORTING REGULATIONS-JUDICIAL PROCEDURES**

### **2.1 ROUNDS**

2.1.1 All judicial procedures will be in accordance with Section U 21.1. of the current Motorsport UK Yearbook.

### **2.2 CHAMPIONSHIP**

2.2.1 All judicial procedures will be in accordance with Section U 21.1. of the current Motorsport UK Yearbook.

2.3 By registering for the Championship all competitors, and their associates, commit to the Motorsport UK Race and Respect campaign and agree to positively promote and demonstrate the Racing Code, which is appended to these regulations.

2.3.1. Where any reports of disrespectful conduct are judged to be well founded the Championship organisers may issue warnings or require remedial actions and/or report the matter to the Championship Stewards who may impose appropriate penalties which can include loss of Championship points and/or race bans through to Championship Expulsion and referral to the Motorsport UK.

2.3.2. It is imperative that we promote the safety and wellbeing of young people and adults at risk. In addition to this all participants must be aware of their behaviour and conduct at all times and abusive language and harmful behaviour will not be tolerated. Any such incidents must be reported to the Club Safeguarding Officer and/or Motorsport UK. The Motorsport UK Safeguarding policy, guidance documents including reporting mechanisms are available on the Motorsport UK website.

## **3.0 TECHNICAL REGULATIONS**

**3.1** All karts must comply with the current Motorsport UK Yearbook Regulations, Technical and Safety Requirements.

**3.2** Club Championships will be for the following classes:

**3.2.1 Kart Clubman (World Formula).** Complying with Motorsport UK Senior Kart Clubman regulation U1.5 as published on the Motorsport UK Yearbook.

**3.3 Tyres.**

Dry: **Duro (Highline)**      **Front 10 x 4.5 x 5, Rear 11 x 7.1 x 5**

Wet: **Maxxis SLW**      **Front 10 x 4.2 x 5, Rear 11 x 6.0 x 5**

Tyres must be fitted to run in the correct direction of rotation, as indicated by the arrow on the tyres. For the avoidance of doubt, tyres can be new or used.

**3.4 Weight.**

165kg Class: 165kg Minimum including driver at all times.

179 kg Class: 179kg Minimum including driver at all times

All drivers will be entered and remain in the 165kg class at all times.

A driver may also choose to enter the 179kg class, all karts in this class must run showing white numbers on a red background and with a minimum weight of 179kg. If at any time during the season a driver drops below 179kg he will be removed from this championship.

A driver must declare their initial class when joining the club.

For Drivers under 16, the minimum driver weight is 53kg in 165kg class, and 58Kg in 179kg class

**3.5 Engine.** The only eligible engine permitted is the CIK homologated Briggs & Stratton World Formula engine.

**3.5.1 Engine Modifications: The engine and its ancillaries must be Briggs and Stratton genuine parts and may not be modified in any way except as stated here:**

**Exhaust silencer.** A standard TKM type silencer or the RLV short bore exhaust are the only models permitted. These must be un-modified with baffles in place.

**Exhaust manifold.** From the engine to the silencer must be covered with a shroud. This is to prevent burns.

**Air Filter rain covers.** A B&S or Non-B&S Rain Sock may be used as long as the original filter is in place in its original position.

**Starter motor and battery.** Starter motor and battery are optional fitments. If the starter motor is fitted then the Briggs & Stratton third support bracket is mandatory. If the starter motor is removed then it is mandatory to fit a blanking plate.

**3.5.1.5 Coil.** The standard red magneto coil with a rev limiter of 7200rpm may be replaced by a blue coil Briggs & Stratton part number 555681, which limits the rpm to 12,000.

**3.5.1.6 Crankcase pressure relief valve is permitted** – a stock item from Briggs & Stratton.

**3.5.1.7** The replacement of external fasteners with non-Briggs & Stratton parts is permitted so long as they are compatible and do not compromise safety or increase performance. Fasteners may be drilled and lock-wired. The use of helicoil or inserts to repair damaged threads is permitted.

**Bore and stroke** must remain as standard, subject to manufacturer's tolerances. Over-boring of the cylinder (up to 0.30") is permitted to extend engine life. Only original Briggs and Stratton parts may be used.

**Camshaft.** The standard .308 max. lift ground cam camshaft and valve setup must be retained. Only standard Briggs & Stratton valve springs are permitted.

**Ignition Timing.** Ignition Timing must be unaltered from standard. No modification of the keyway to the flywheel is permitted

**Carburettor.** The Walbro PZ 26 is the only carburettor used. The carburettor must be standard throughout. Jetting and needle valve may be changed to circuits. A catch tank must be used to collect fuel from the carb overflow and oil from the rocker cover breather.

**Air Inlet.** Air inlet supplied with the World Formula engine must be unmodified and used with its original supplied filter in place. No modification, porting, polishing, extensions or adapters to facilitate air or gas flow into the carburettor is allowed.

**Air Filter.** Only the stock 'green' air filter only which must be attached directly to carburettor

**Cylinder Head** may be skimmed but only to ensure that the mating surfaces are true. No further skimming is allowed. Piston pop up minimum 0.010" and maximum 0.025" above block surface in the centre of the piston.

**Oil levels** must be at a minimum of 400 ml.

**Clutch.** Only the Titan clutch is allowed as supplied and unmodified. Clutches may be run with any of the three different colour springs available from Briggs & Stratton

Either 16 & 17 tooth sprockets may be used.

**3.15 Transmission.** Direct from engine to axle via a single length of 219 chain.

**3.16 Gearing.** The Gearing limits are issued by the club for each circuit to avoid over-revving. Gearing up to these limits is open. (See Appendix 2)

Red coil gearing is open as the coil itself limits over revving.

Drivers must make their sprocket sizes available for easy inspection on race days.

**3.17 Spark Plug** Changing the spark plug to an NGK Iridium spark plug is permitted, no modifications to the plug core are permitted.

## **General Regulations**



- 4.0** The World Formula regulations are in addition to the General Regulations which can be found in the MSUK yearbook.
- 4.1** All Karts must comply with the MSUK technical regulations Section U 16.1 of the MSUK Bluebook.
- 4.2** General Chassis regulations are found in Section U of the MSUK yearbook including the requirement for brake and sprocket protectors.
- 4.3** Bodywork must conform to Motorsport UK Yearbook regulations for non-gearbox karts. The CIK-homologated detachable front fairing mounting kit is not mandatory.
- 5.0** Fuel must be Pump Fuel (Motorsport UK Yearbook U16.17) No additional additives are allowed.
- 6.0** The organisers reserve the right to remove an engine or its ancillary components, in order to check its compliance with the regulations.

FP4 Kart Club committee may also exercise the right to request the Eligibility Scrutineer.

**See appendix 1 for Race with Respect**

**See appendix 2 for Gearing Chart**

**See appendix 3 for Expanded engine regulation, specification and testing**

**Appendix 1**

**Appendix 2**

## **FP4 Gearing**

### Blue Coil - Gearing Table

	<u>FP4 Karting Gearing (Blue Coil)</u>	165 KG Minimum	
		<u>16 Tooth</u>	<u>17 Tooth</u>
	Rissington Kart Circuit	71	76
	Mansell Raceway	72	77
	Bayford Meadows Kart Club	75	80
	Lydd Kart Circuit	68	73
	Camberley Kart Circuit	75	80
	Clay Pigeon Kart Circuit	68	73
	Buckmore Park	73	78
	Forest Edge	72	77
	Thrupton	75	80
	Whilton Mill	67	72
	Ellough Park	TBC	TBC

1 Tooth may be added per 7 kg over the minimum 165kg up to a maximum of two teeth

For the avoidance of doubt, in 165kg class:

172kg minimum weight = 1 extra tooth may be added

179kg minimum weight = 2 extra teeth may be added

In 179kg class:

186kg minimum weight = 1 extra tooth may be added

A maximum of three teeth from the advertised 165kg class gearing, may be added if the driver weight allows.

The FP4 Committee will monitor the effectiveness of the gearing to ensure fair competition and protect engines from high revs and reserves the right to change the gearing table and weight to extra tooth gearing regulation.

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### Red Coil - Gearing

The red coil limits the engine to under 7200 revs and gearing is open and without restriction.

## Appendix 3

### Guidelines to support the Technical Regulations and club ethos

The main aim of these guidelines is to ensure a level playing field in engine development. This will keep costs down and reward driving skills, rather than permitting drivers to modify their machinery with no regard to cost or reliability of the engine.

The most important rule is to be remembered: **Just because it doesn't say that you can't do it, doesn't mean you can!**

#### **Air Filter rain covers**

A B&S or Non-B&S Rain Sock may be used as long as the original filter is in place in its original position, as per Figure 1



Fig 1



A B&S or Non-B&S Rain Cover may be used as long as the original filter is in place in its original position, an example is shown in figure 2

Fig 2

#### **Kart Exhaust Silencer**

A standard TKM type silencer or the RLV short bore exhaust are the only models permitted. These must be un-modified with baffles in place.

FP4 Strongly advise members that run the RLV silencer to bring along the alternative TKM type in case atmospheric conditions increase decibel levels.

#### **The standard camshaft and valve setup must be retained**

Standard camshaft is .308 max. lift ground cam. Testing can be made initially by a camshaft check taken at the valve spring retainers. With the valve clearance set at zero, the movement of the valve spring retainer may not exceed .3085"

Any camshaft with a measurement at the push rod of less than .306 should be removed and measured on the grind and checked for alteration. Camshaft must be as supplied with Stock Profile and compression relief.

#### **Cylinder Head**

Cylinder Heads may be skimmed but only to ensure that the mating surfaces are true. No further skimming is allowed. Piston pop up minimum 0.010" and maximum 0.025" above block surface in the centre of the piston. When measuring piston pop

up, it should be accomplished with bar stock on a parallel with the piston gudgeon pin and, using a dial indicator, check the piston pop-up in this area. Hard carbon may be scraped from piston crown before measuring pop up.

In response to observations and feedback, the technical regulations may be reviewed at any time to ensure conformity and fairness to produce the best possible racing experience and uphold the ethos of the club.

Any requests and observations will be discussed by the committee before a decision is made. If changes are necessary they will be communicated by official bulletin.

### **Deliberate and Active Compliance:**

Competitors are expected to be deliberate and active in complying with these rules. An unintentional violation may still be considered a violation when effort to adhere to the rule is not clearly evident.

For example: A racer has a part that is not in direct violation of a spec but for whatever reason is not in clear conformance. He chooses to run that part rather than a new stock part. While the legality of the part might be in question, that question is answered by the fact that the driver deliberately chose not to run a clearly legal new stock part, thus will be subject to disqualification.

### **Eligibility Scrutineering**

Drivers must be aware that spot checks by the host club's eligibility scrutineer will be made during a race day.

If any discrepancy is found, it will be reported to the committee members.

In addition, the FP4 Committee may also carry out checks including weight, gearing and general safety.

The driver may be allowed to continue to race on that day, but action will be taken after the event. If a trophy has been awarded to a competitor with non-compliant engine, components, kart or tyres, it will need to be returned.

If a driver wishes to challenge the legality of a fellow competitor's engine, there will be a fee of £120. The engine will be removed by a committee member and sent to an MSUK scrutineer who will dismantle it to establish legality. Appropriate disciplinary action will be taken if non conformance is established and that driver will need to pay £120 to have the engine returned. That money will then be returned to the challenger. If the engine is found to be legal, it will be returned to its owner and the challenger will forfeit the fee.