



# **TECHNICAL REGULATION**

Ver. 1.24 (E-124)

## 1. General

- a. Each driver will be entitled to submit for technical checks the following equipment:
  - Number of chassis : 1
  - **Number of engines : Maximal 1\***  
*\*Replacement engine can be submitted during the race, after authorization from the chief scrutinner.*
- b. Changing chassis unit, fuel and tires between the various drivers is forbidden.
- c. Changing engine unit between the various drivers is allowed.
- d. Any kind of modification to the chassis, tires and/or engines is forbidden.
- e. The driver must use the same chassis and engine for the whole event.  
No change of chassis and/or engine shall be accepted after technical checks.
- f. The **"Technical Bulletin"** will communicate in advance, when possible or any change.

## 2. Engine Declarations

- a. ESHARK ROK CUP INDONESIA 2024 is restricted to :  
Vortex Rok engines distributed by the promoter only (*respecting the homologation fiche on the current year*).
- b. For Cadet and Mini category : VORTEX Mini Rok 60 cc  
For Junior, Senior and Expert category : VORTEX ROK GP
- c. All the race engine can only be used on Friday, Saturday, Sunday and during official testing day.
- d. Please kindly pay attention to the engine distribution schedule.

### 2.1 Engines

- a. Engines must be run as supplied by the PT Vortex Dignitas Indonesia. No modification or components substitution is allowed, unless otherwise specified in the "Technical Bulletin".
- b. ESHARK ROK CUP INDONESIA 2023 Technical Officials have the right to inspect any engine or any part at any time during the event and without any particular reason.
- c. ESHARK ROK CUP INDONESIA 2023 Technical Officials have the right to request, at any time during the event and without any particular reason , to have competitors exchange parts of the engine (i.e. but not limited to clutch, exhaust, carburetor, coil wiring loom, ignition, etc) with an identical part provided by organizer.
- d. Refusal to submit to inspection and/or exchange parts will result in disqualification from the event.

### 2.2 Engine Seal

- a. Engines will be sealed by Vortex Official Engine Builder prior to the event.
- b. The engine official seal must be remain intact during the whole event. If fail to do so, the participant will not be allowed to start.
- c. If the seal is broken or lost DURING each session, this matter must be reported to scrutineer, and the drivers is not disqualified.
- d. If the seal is broken or lost At The Moment entering Assembly area, the engine CAN NOT BE USED for remaining day.
- e. How to seal Cadet and Mini engine (1 of below points) :
  - 1.Sealing of (1) exhaust header nut and (1) cylinder nut and exhaust duct.
  - 2.Sealing of (1) ignition timing up to Vortex Official Engine Builder
  - 3.Sealing of (2) cylinder head nuts
- f. How to seal Junior, Senior & Expert engine (1 of below points) :
  - 1.Sealing of (1) exhaust header nut and (1) cylinder head nut and (1) ignition timing nut.
  - 2.Sealing of (1) ignition timing up to Vortex Official Engine Builder
  - 3.Sealing of (1) cylinder head nut & (1) cylinder block nut

### 2.3 Exhaust

Exhaust system must remain intact, as provided by the manufacturer, until technical inspection.

- a. Only the original muffler and header as supplied with the engine are allowed and must be kept in compliance with the homologation form, therefore no modification in structure or dimensions is allowed.
- b. The complete sealing of the exhaust gas between the cylinder and the exhaust manifold must be guaranteed at all times.
- c. The control of the sealing of the exhaust gas can be performed at any time through occlusion of the outlet hole of the exhaust header, filling of the exhaust header with liquid through the exhaust port and checking for leaks. The proper sealing of the exhaust system is the Driver's responsibility.

### 2.4 Starting System

- a. ESHARK Indonesia Karting Champion technical officials have the right to request that the drivers, at any time during the event and without any particular reason, demonstrate on-board starting.
- b. The use of an external starter is authorized only in the event that a mechanical or electrical problem prevents the operation of the starting system.
- c. On-board batteries are intended for engine starters and data logger only.
- d. One battery per kart only.
- e. Batteries must be firmly and safety secured to one of the main rails of the chassis.
- f. Batteries must be sealed and dry cell type only.

### 2.5 Vortex Rok GP Radiators

- a. The radiator must be **FREE** from all the block of the materials (*tape,plastics,card board, etc*) all the times.
- b. Only one radiator supplied by the engine manufacture is allowed and must be mounted on the left side of the driver and placed above the chassis frame.

### 2.6 Carburetor Settings.

- See Technical Appendix.

### 2.7 Air Box

- a. Cadet and Mini : as supplied with engine package with **Short Red** Inlet Cone can be used.
- b. ROK GP : as supplied by the engine package **Arrow G** type only

### 2.8 Ignition Timing

- See Technical Appendix.

### 2.9 Vortex Battery

- a. Use of aftermarket starter batteries are allowed and must be contained in the supplied battery box.
- b. Lithium polymer batteries are allowed.

### 2.10 Fuel System

Fuel filter is mandatory for VORTEX ROK category and must be installed on the fuel line.

- a. Vortex Mini Rok : See Technical Appendix
- b. Vortex Rok GP : See Technical Appendix

## 2.11 Spark Plug

- a. Spark Plug Nippon Denso IW 27, IW 29, IW 31, or IW 34 only can be used for all classes.
- b. OEM washer must be present. Washer can be removed only when cylinder head temperature sensor is utilized. Sensor washer thickness must not be less than thickness of the compressed OEM washer.
- c. The insulator must not exceed the sparkplug body and the length of the sparkplug body itself must be max. 18.5 mm. (CIK technical regulations appendix 7).
- d. Spark plug cap must be original as delivered with the engine.

## 2.12 Cylinder Head

Cylinder Head must be original as per technical fiche.

## 3. Chassis Declarations

**ESHARK ROK CUP INDONESIA 2024** is open to any chassis with either the current CIK/FIA homologation or the CIK/FIA homologation of the previous period (*including brakes and bodywork*) and in compliance with CIK/FIA technical regulations.

### 3.1 Chassis

All the chassis tubing must be from magnetic steel.

### 3.2 Bodywork.

- a. Bodywork must have current or previous period CIK/FIA homologation.
- b. Bumpers are compulsory for front, rear, and side protection. These bumpers must be made of magnetic steel. For all categories, they must be homologated with the bodyworks.
- c. The use of CIK/FIA homologated rear protection is mandatory. Anything else must be approved by the event technical official.
- d. It is mandatory to use New CIK front fairing kit (*as per attached drawing no.1*)
- e. From Qualifying until the Final, each kart must enter the Start Servicing Park with the front fairing fully detached. The Mechanic or the Driver himself must mount the front fairing in the Start Servicing Park under the supervision of a Scrutineer.
- f. Any damage on the front fairing must be well sealed to the satisfaction of the Scrutineers. The Scrutineer reserves the right to refuse front fairings or other front fairing components that does not meet the required standards.
- g. During each Race it is only allowed to restore the front fairing to the correct position in the Repair Area.
- h. The black flag with an orange disc will not be shown to Drivers with front fairings in an incorrect position.

### 3.3 Brakes

- a. Brakes must have a current or previous period CIK/FIA homologation.  
Front brakes are not allowed for all category except Shifter 150 and Rok Shifter.
- b. Safety wire between brake pedal and master cylinder is mandatory.

### 3.4 Cadet and Mini

- a. Minimum wheelbase 900 mm.
- b. Maximum wheel base 1.010 mm
- c. Maximum over all width including all body work 1.270 mm.
- d. Maximum rear track width 1.100 mm.
- e. Rear Protection :
  - 1) CIK type plastic rear protection system is a must.
  - 2) Adjustable type of rear bumper is forbidden.
  - 3) Event technical official is final acceptance of rear bumper and side protection.

- f. Bodywork :  
Side pod protection must be used as supplied from chassis manufacturer and may not be modified to allow "narrower track width". Extension devices may be used, no other modification of factory design is accepted.

### 3.5 All Other Classes.

- a. Minimum wheelbase of 1.020 mm, Maximum wheelbase of 1.070 mm
- b. Maximum rear track width on dry condition is 1.400 mm
- c. Minimum rear track width on wet condition is 1.340 mm.
- d. Minimum width of rear protection system under all condition is 1.340 mm.
- e. Rear protection and side body work :
  - 1. Wet Conditions : Side body work may not be located outside the plane passing through the outer edge of the rear tires. Side pod protrusion is not allowed.
  - 2. Rear Wheel Protection : In all condition, the rear protection must at no time protrude beyond the external plane of the rear wheels.
- f. Body work and bumpers must conform to specification for the current homologation period (*CIK – 02, 08 – 11*).
- g. Modification of body work is limited to right side of radiator for clearance only.

### 3.6 Axle

With reference to Article 2.3.4.3 of the CIK-FIA Technical Regulations:

- a. The rear shaft (axle) for the Cadet category must have a maximum external diameter of 30 mm and a minimum wall thickness 4,9 mm at all points (except in key housings) as per Article 2.3.4.3 of the CIK-FIA Technical Regulations.
- b. The rear shaft (axle) for other categories must have a maximum external diameter of 50 mm and a minimum wall thickness 1,9 mm at all points (except in key housings) as per Article 2.3.4.3 of the CIK-FIA Technical Regulations.
- c. For axle diameter below 28 mm diameter, must be solid type.
- d. Rear axle must be in magnetic steel.

### 3.7 Chain & Steering

- a. Transmission must be carried by chain only to the rear axle. Any kind of differential is prohibited.
- b. Chain guard is required. Full protection totally covering front and rear sprockets and chain is mandatory.
- c. Steering must be controlled by a steering wheel with no angles (however a single steering wheel spacer is allowed, or 1 steering wheel hub, both are allowed).
- d. The main rim of the steering wheel must be a metallic structure. Made of steel or aluminum. Plastic steering wheels are prohibited. Steering column must be magnetic steel.

### 3.8 Chassis Replacements

- a. It is forbidden to replace the chassis during the event. Each driver will be allowed to use one chassis per race. If the chassis irreparably damaged during the event, the chassis may be replaced if and only if the ESHARK ROK CUP INDONESIA technical official will check and provide their permission. The damaged chassis should be delivered to the ESHARK ROK CUP INDONESIA technical officials until the event finish. "CHASSIS EXCHANGE FORM" must be filled and presented to the Technical Official.
- b. The replacement chassis must same manufacturer and model.

### 3.9 Tires

- a. A set of registered Brand New Tires must be used during Qualifying Time Trial
- b. Each Driver must submit the Brand new "Dry Race Tires"
- c. In case of tire puncture, driver can exchange their puncture tire with their own used tire after being inspected and approve by technical official.
- d. Running in of wet tires on a dry track is prohibited.
- e. Wet tires must be mounted on correct direction.
- f. Any kind of tire treatment or modification is forbidden. Heating or warming tires in the pits and/or pre grid is forbidden.
- g. The measuring device Mini RAE Lite shall be used to determine conformity with the Supplementary Regulations. The VOC measurement of the tires may not exceed a maximum ppm limiting value of 15 under any circumstances. Pollution of the tires, e.g. by chain spray, must be avoided as it may result in the limiting value being exceeded.
- h. Should a check at the Start Servicing Park establish nonconformity with the Supplementary Regulations, the nonconforming tires will be confiscated. No additional tires will be provided or sold to the Driver in such cases.
- i. Should a check carried out after a Race establish nonconformity with the Supplementary Regulations, the Driver may be excluded from the relevant Race.
- j. No Protests and Appeals against these procedures are allowed.

### 3.10 Oil and Fuel

- a. Oil and Fuel are provided by Organizer.
- b. ESHARK ROK CUP INDONESIA technical officials have the right to do fuel test to any competitor at any time during the event and without any particular reason.

### 3.11 Transponder

Transponders should be relocated per CIK/FIA positioning: On back of seat at a height of 25 cm +/- 5 cm from tarmac.

## 4. Miscellaneous

- a. Composite material are banned, except for the seat, floor pan and chain guard.
- b. Data acquisition devices capable of recording and displaying data only are allowed.
- c. Any system capable of modifying fuel ratio mixtures, traction, throttle, ignition timing, etc. is forbidden.
- d. Any kind of suspension device or suspension system is prohibited.
- e. Maximum two on-board camera, i.e. GoPro, Smarty Cam, etc, mounted only on the bodywork or radiator is allowed.
- f. If the mounting of any device is considered dangerous by ESHARK ROK CUP INDONESIA technical officials, the technical officials may request that such devices be removed. The safety of the driver and other competitor is a primary concern for the Promoter.
- g. Communication to/from driver and/or acquisition devices via radio/telemetry or any other system is forbidden.
- h. Any kind of carbon/carbon braking system is prohibited.
- i. Products containing Ethylene Glycol are not allowed as cooling fluids.
- j. No fluids spillage on the tarmac is allowed at anytime. Catch bottles are highly recommended and are no "tech item", as far as not being considered dangerous for the user and other competitors.
- k. Fluid spillage will result in a black flag.

# 2024 APENDIX MINI ROK

## MINI ROK – ENTRY LEVEL

### 1. Fuel System:

- a. All fuel system components must be utilized as supplied.
- b. A plastic "Y" for the fuel return is a mandatory.
- c. Fuel Return valve or regulator is prohibited.
- d. Fuel filter is mandatory.
- e. **Fuel filter must be installed between fuel tank and fuel pump.**
- f. Vent tubes are mandatory, fittings must remain in carburetor.

### 2. Carburetor:

- a. **Only 1 Carburetor allowed.**
- b. Dell'Orto PHBG 18 BS provided by the promoter (Laser printed)
- c. The only allowed changes to the Dell'Orto PHBG 18 BS carburetor are main jet and needle clip position. Any other change or modification is not allowed.
- d. Carburetor airbox clamps must be used as supplied.
- e. All jets must be original Dell'Orto jets.
- f. Standard Dell'Orto PHBG 18 BS Set Up
  - Slide : #40
  - Circlip position : Free
  - Needle : W23
  - Gas needle : without spring
  - Start jet : #60
  - Pilot jet : #50
  - Spray nozzle : AN266
  - Floats : 4 gram
  - Max. venturi size : 18mm.
  - Main Jet : **Minimum 95, Maximum 105**
  - Air screw : Free

### 3. Air box

- a. Foam air filter insert is allowed.
- b. Air box must not contain any additional holes.
- c. No external form of air ducts forcing air inside of air box is permitted.
- d. Air box must be secured completely after each track event otherwise last place position is given.
- e. Plastic protection under rain conditions is mandatory.
- f. No modification on the inlet cone.
- g. Only Short Red Inlet Cone can be used. Stocking & plastic stone guard are optional

### 4. Squish Gap :

- **Minimum Thickness = 0.8mm (measured by 2mm lead wire)**
- **Only one side of squish gap required to pass the minimum thickness.**

### 5. Coil:

- a. Must be mounted as supplied.
- b. Must be mounted to the engine.
- c. Must use coil wire as supplied.

## 6. Wiring Harness:

- a. Must use all components as supplied.
- b. No additional components are permitted.
- c. Replacing the ends of the harness is acceptable
- d. Replacing the START / ON OFF Button are acceptable

## 7. Exhaust Pipe:

- a. No treatment of any kind.
- b. No sand blasting is allowed.
- c. No form of thermo wrapping is allowed.
- d. Internal dimensions may not be altered because of rust.
- e. No modifications to silencer end cap.

## 8. Exhaust Restrictor:

- a. Restrictor as per Homologation File of MINI ROK.
- b. Restrictor headers cannot be cracked or leaking.
- c. A template gauge will be used to control restrictor headers. It is allowed to clean the restrictor headers with fuel or sand paper (as long as the dimension respecting the homologation file).

## 9. Clutch:

- a. Clutch components MUST not contain significant amounts of any kind of oil or grease.
- b. **Drum Clutch Cover is mandatory**

## 10. Sprocket

For Sentul International Karting Circuit the sprocket combination :

**Front : 10 (Mandatory)**

**Rear Mini : 72 – 74**

**Rear Entry Level : 73 – 75**

For the other Circuit, the sprocket combination will be informed by the organizer.

## 11. Ignition Timing:

**Maximum = 2.8mm**

## 12. Chassis

- a. **ONLY**(chassis homologated by i.e. ACI/CSAI (Italy), FFSA (France), MSA (UK), DMSB (Germany), WKA (US), RFE (Spain), are accepted.
- b. Wheelbase minimum 900 mm and maximum 1.010 mm
- c. Bodyworks, and rear bumper homologated by ACI/CSAI (Italy), FFSA (France), MSA (UK), DMSB (Germany), WKA (US), RFE (Spain) are requested.
- d. Brake system homologated by CIK/FIA, ACI/CSAI (Italy), FFSA (France), MSA (UK), DMSB (Germany), WKA (US), RFE (Spain) is mandatory.



**2024 APENDIX ROK GP**  
**Junior – Senior – Expert- Rookie**

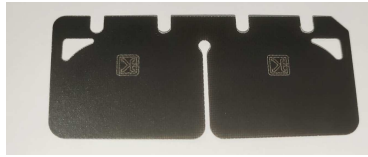
**1. Fuel System:**

- a. All fuel system components must be utilized as supplied.
- b. A plastic "Y" for the fuel return is NOT a mandatory. *(Optional)*
- c. Fuel Return valve or regulator is prohibited.
- d. Fuel filter is mandatory.
- e. **Fuel filter must be installed between fuel tank and fuel pump**
- f. Vent tubes are mandatory, fittings must remain in carburetor.

**2. Reed Valve:**

Must be as supplied with the engine package

- a. Fiber glass reed petals with OTK logo are mandatory. *(as shown in the picture)*



- b. Minimum thickness : **0.29 mm** *(as per Vortex Technical Fiche 2023)*

**3. Carburetor:**

- a. Only 1 Carburetor allowed.
- b. Dell'Orto VSH 30 provided by the promoter ( Laser printed )
- c. The only allowed changes to the Dell'Orto VSH 30 carburetor are main jet and needle clip position. Any other change or modification is not allowed.
- d. Carburetor airbox clamps must be used as supplied.
- e. All jets must be original Dell'Orto jets.
- f. Standard Dell'Orto VSH 30 Set Up:
  - Slide : #40
  - Circlip position : Free
  - Circlip washer : Must be used, position is free
  - Needle : K33
  - Needle valve : 250
  - Start jet : #60
  - Pilot jet : #60
  - Diffuser jet : CD1
  - Spray nozzle : DP268
  - Floats : 4 gram
  - Max. venturi size : 30mm
  - Main jet : **Minimum 135, Pin Control Gauge 144mm, Must be Through the Main Jet**
  - Air screw : Free

**4. Air box**

- a. Foam air filter insert is allowed.
- b. Air box must not contain any additional holes.
- c. No external form of air ducts forcing air inside of air box is permitted.
- d. Air box must be secured completely after each track event otherwise last place position is given.
- e. Plastic protection under rain conditions is mandatory.

f. No modification on the inlet cone.

Plastic screen stone guard is an option, but it is mandatory to use thin fabric / stocking to cover the two inlet cone as an air filter.



5. Squish Gap :

- Minimum thickness = 1.20mm (measured by 2mm lead wire)
- Only one side of squish gap required to pass the minimum thickness.

6. Coil:

- a. Must be mounted as supplied.
- b. Must be mounted to the engine.
- c. Must use coil wire as supplied.
- d. Ground Wire for Coil Minimal 2 psc

7. Wiring Harness:

- a. Must use all components as supplied.
- b. No additional components are permitted.
- c. Replacing the ends of the harness is acceptable
- d. Replacing the START / ON OFF Button are acceptable

8. Exhaust Pipe:

- a. No treatment of any kind.
- b. No sand blasting is allowed.
- c. No form of thermo wrapping is allowed.
- d. Internal dimensions may not be altered because of rust.
- e. No modifications to silencer end cap.

9. Exhaust Restrictor:

- a. Restrictor as per Homologation File.
  1. JUNIOR ROK : **25 mm ± 0.3 mm**
  2. SENIOR / EXPERT ROK
- b. Restrictor headers cannot be cracked or leaking.
- c. A "template gauge" will be used to control Exhaust Restrictor.
- d. Failed to pass the "template gauge" check will result disqualification, no further protest ar

10. Clutch:

- a. Clutch components **MUST** not contain significant amounts of any kind of oil or grease.
- b. **Drum Clutch Cover is mandatory**

11. Sprocket :

For Sentul International Karting Circuit the sprocket combination allowed are :

Front	: 12
Rear Junior	: 76-78
Rear Senior	: 78-80
Rear Expert / Rookie	: 80-82

For the other Circuit, the sprocket combination will be informed by the organizer.

12. Power valve :

- a. The total length of exhaust valve is **42.20 mm +/- 0.20 mm**.
- b. Width of collar is **11 mm +/- 0.30 mm**.
- c. Length of the spring : **40 mm +/- 0.30 mm**.
- d. It is Mandatory to use 2 (two) valve springs (inside and outside).

13. Ignition Timing:

**Maximal: 3.0 mm**

14. Radiator:

- a. Must be original as supplied.
  1. Minor welding is allowed to cover up small holes.
  2. Additional metal mounting brackets may be used to secure Radiator.
- b. **Water Hoses:**
  1. Must be original as supplied.
  2. No form of heat exchange is allowed on the water hoses.
  3. No form of water heater or engine heater is allowed.
  4. No Ethylene Glycol based fluids are allowed.
  5. External water pump must be installed on the center tubing behind the seat.
  6. Radiator can not be covered or blocked in whatsoever.
  7. Radiator can be used:
    - **1<sup>st</sup> version : Widht : 200mm, Length : 400mm, Thickness : 30 mm**
    - **2<sup>nd</sup> version: Widht : 200mm, Length : 480mm, Thickness : 30 mm**

c. **Water Pump:**

**Waterpump and Pulley must be original and supplied by OTK and PT. VORTEX DIGNITAS INDONESIA**



**Water pump pulley is mandatory and should be installed with 4 rubber bands.**



15. **Chassis**

- a. **ONLY** chassis homologated by CIK/FIA are accepted.
- b. Bodyworks, and rear bumper homologated by CIK/FIA are mandatory.
- c. Brake system homologated by CIK/FIA is mandatory.
- d. Safety wire between brake pedal and brake master cylinder rod is mandatory

## APENDIX ROK SHIFTER 2024

### 1. Fuel System:

- a. All fuel system components must be utilized as supplied.
- b. A plastic "Y" for fuel return is an option, if it is being used, the installation must be between the fuel pump and carburetor.
- c. Fuel filter is mandatory.
- d. Fuel filter must be installed between fuel tank and fuel pump
- e. Vent tubes are mandatory, fittings must remain in carburetor.

### 2. Reed Valve:

Must be as supplied with the engine package.

- a. Standard as supplied by Vortex.
- b. Minimum thickness : **0.30 mm +/- 0.05 mm**
- c. The drawing as below :



### 3. Carburetor:

- a. Only 1 Carburetor allowed
- b. Dell'Orto VSH 30 distributed by PT. VORTEX DIGNITAS INDONESIA
- c. Carburetor air box clamps must be used as supplied.
- d. All jets must be original Dell'Orto jets.
- e. **Standard Dell'Orto VSH 30 Set Up**
  - Slide : #40
  - Circlip position : Free
  - Circlip Washer : Must be used, position is free
  - Needle : K98
  - Needle Valve : 250
  - Start jet : #60
  - Pilot jet : #60
  - Diffuser Jet : CD1
  - Spray nozzle : DP268
  - Floats : 4 gram
  - Max. venturi size : 30 mm.
  - Main Jet : Minimum 148
  - Air screw : Free

### 4. Air box

- a. Foam air filter insert is allowed.
- b. Air box must not contain any additional holes.
- c. No external form of air ducts forcing air inside of air box is permitted.
- d. Air box must be secured completely after each track event otherwise last place position is given.
- e. Plastic protection under rain conditions is mandatory.

f. No modification on the inlet cone.



g. Plastic screen stone guard is an option, but it is mandatory to use thin fabric / stocking to cover the two inlet cone as an air filter.

**5. Squish Gap :**

**Minimum thickness = 1,30 mm**

**6. Coil:**

- a. Must be mounted as supplied.
- b. Must be mounted to the engine.
- c. Must use coil wire as supplied.

**7. Wiring Harness:**

- a. Must use all components as supplied.
- b. No additional components are permitted.
- c. Replacing the ends of the harness is acceptable
- d. Replacing the START / ON OFF Button are acceptable

**8. Exhaust Pipe:**

- a. No treatment of any kind.
- b. No sand blasting is allowed.
- c. No form of thermo wrapping is allowed.
- d. Internal dimensions may not be altered because of rust.
- e. No modifications to silencer end cap.

**9. Exhaust Restrictor:**

- a. Restrictor as per Homologation File.
- b. Restrictor headers cannot be cracked or leaking.
- c. A template gauge will be used to control restrictor headers. It is allowed to clean the restrictor headers with fuel or sand paper (as long as the dimension respecting the homologation file).

**10. Clutch:**

Clutch components MUST not contain significant amounts of any kind of oil or grease.

**11. Sprocket :**

For Sentul International Karting Circuit the sprocket combination :

**Front : 17 (Mandatory)**

**Rear : 28 (Maximum)**

For the other Circuit, the sprocket combination will be informed by the organiser.

**12. Ignition Timing:**

**Maximum = 1,6mm**

**13. Radiator:**

- a. Must NOT be smaller than ROK GP original radiator.

b. Water hoses:

1. Must be original as supplied.
2. No form of heat exchange is allowed on the water hoses.
3. No form of water heater or engine heater is allowed.
4. No Ethylene Glycol based fluids are allowed.
5. External water pump must be installed on the centre tubing behind the seat.
6. ***Water pump pulley is mandatory.***



14. Chassis

- a. **ONLY** chassis homologated by CIK/FIA are accepted.
- b. Bodyworks, and rear bumper homologated by CIK/FIA are mandatory.
- c. Brake system homologated by CIK/FIA is mandatory.
- d. Safety wire between brake pedal and brake master cylinder rod is mandatory

## PERATURAN NASIONAL TEKNIS KARTING SHIFTER 150 TAHUN 2024 (MESIN ATPM)

### A. CHASSIS

Chassis yang dipergunakan adalah chassis yang sesuai dengan regulasi tehnik dari CIK.

1. **Wheelbase** (*Jarak antara sumbu roda depan dan sumbu roda belakang*)

Maximum : 1.070 mm

2. **Rear Track Width** (*Jarak maximum roda belakang*)

Maximum : 1.400 mm

3. **Sistem Penggerak.**

Sistem penggerak mempergunakan rantai tunggal dari gir depan (rumah kopling) ke gir belakang yang terpasang pada as belakang. Semua metode pelumasan rantai pada saat kart berjalan, tidak di perbolehkan.

4. **As Belakang**

Hollow, dari bahan besi yang dapat di temple oleh magnet (magnetic) dengan diameter maximum 50 mm.

5. **Bumper**

WAJIB menggunakan bumper belakang yang terbuat dari plastik.

### B. MESIN

1. Merk dan type mesin BEBAS, berasal dari Mesin Motor bukan *Special Engine/ Motocross* dan harus dipasarkan oleh ATPM di Indonesia.
2. Bentuk luar mesin harus sesuai aslinya.
3. Dengan sistem pendingin udara (*air cooled*) atau sistem pendingin air (*water cooled*).
4. Sistem pengapian / magnet bebas (kecuali Kawasaki Ninja dan Honda NSR).
5. Harus dilengkapi dengan gearbox dan kopling sesuai aslinya dan kopling di kolom setir.
6. Jumlah lubang transfer harus sama dengan aslinya dan dapat diperbesar/dirubah.
7. Rasio kompresi bebas.
8. Perbandingan gigi / ratio bebas.
9. Sistem masuk bahan bakar bebas.
10. Penggunaan external waterpump diperbolehkan
11. **Knalpot TIDAK DIPERBOLEHKAN menghadap ke atas**
12. Ketentuan mesin :

#### 12.1 Kawasaki Ninja, Honda NSR dan Yamaha TZM 150:

- Kapasitas mesin: maksimum 155cc, sistem pendingin air.
- Pengapian standard tetapi boleh dibubut dan karburator **maksimum venturi 28 mm.**
- **Penggunaan cylinder block super kips diperbolehkan, tetapi Mekanisme Super Kips tidak boleh diaktifkan.**

#### 12.2 Kawasaki AR, Yamaha RX King, Yamaha RXZ dan Suzuki RGR atau sejenis :

- Kapasitas mesin : **maksimum 155cc**, Sistem pendingin Air atau Udara.
- Pengapian dan Karburator Bebas.

#### 12.3 Motor 4-Tak

- Kapasitas mesin: maksimum 250cc, Sistem pendingin Air atau Udara.
- Pengapian dan Karburator Bebas.
- **TIDAK BOLEH MENGGUNAKAN INJECTION**
- Diameter Valve bebas

### C. REM

Sistem Rem Hidrolik, minimum 1 buah dan maksimum 3 buah.

### D. BERAT

1. Berat minimum dari kart dan pembalap untuk mesin 2-Tak s/d 125cc, **Min.170 Kg**
2. Berat minimum dari kart dan pembalap untuk mesin 2-Tak 125cc s/d 155cc, **Min.175 Kg**
3. Berat minimum dari kart dan pembalap untuk mesin 4-Tak 150cc s/d 250cc **Min.170 Kg**