

CHAPTER 45

PARILLA LEOPARD 125cc and PARILLA LEOPARD X30 125cc

Preamble

It is expected that this class will continue to evolve during its early life and the promoters of the class reserve the right to alter the technical regulations with AKA approval at short notice to ensure the safety of driver's, fairness of competition, economy and the wishes of the competitors.

45.01 Spirit and Intent

IAME Spa's goals for the Parilla Leopard 125cc and Parilla Leopard X30 125cc Class worldwide are:

- (a) To provide a class with a low running cost and low noise emissions compared to conventional 100 cc racing karts.
- (b) To eliminate some of the variables within the class. The intention of this is to reduce the amount of testing and technical expertise required to be competitive, placing the emphasis on driver skill.
- (c) To have the rules of the Parilla Leopard 125cc and Parilla Leopard X30 125cc alike in all countries using Parilla Leopard 125cc and Parilla Leopard X30 125cc engine.

45.02 Modifications

It is strongly recommended that no modifications whatsoever be performed to Parilla Leopard 125cc and Parilla Leopard X30 125cc engines.

45.03 Engine Eligibility

- 1. IAME Parilla Leopard 125cc engine and IAME Parilla Leopard X30 125cc engines only. The Parilla Leopard X30 125cc engine is not eligible for State and National Championship competition until 2011.
- 2. Neither the engine or any of its ancillaries may be modified unless specifically authorised within these rules
- 3. The engine must be manufactured by IAME and Australian delivered and imported by Remo Racing Pty Ltd to be eligible for competition. Remo Racing Pty Ltd has all engine numbers recorded.
- 4. Only genuine IAME components that are specifically designed and supplied for the Parilla Leopard 125cc and Parilla Leopard X30 125cc engines are legal, unless otherwise specified.

45.04 Chassis

The kart is to conform to the general kart formula is detailed in chapter 25 of the AKA Karting Manual except where specifically mentioned in this chapter.

45.05 Braking

Front wheel brakes are not permitted. Refer a rule 25.7 (1), 1.(a)

45.06 Fuel

Refer Chapter 22 Fuel, as run, to comply with tests under chapter 22.01

45.07 Tyres

- 1. No modification permitted, tyre treatment is illegal (refer a rule 23.03)
- 2. Dry weather tyre MG FZ Yellow (1 set + 1 replacement tyre / meeting)
- 3. Wet weather tyre MG CIK group 2 wet only
- 4. Refer chapter 23, for AKA contract prices

45.08 Driver Limitation

1. To be eligible to compete in this class competitor must hold a minimum AKA B Grade Senior Licence,

45.09 Weight

- a. Parilla Leopard 125cc LIGHT - 160KG
- b. Parilla Leopard 125cc HEAVY - 180 KG
- c. Other weight divisions at the discretion of the event organisers.
Maximum kart weight for Parilla Leopard HEAVY – 100kg
(Refer Rule 25.19)

45.10 Indication Silencer

The only permissible induction silences are:

1. AKA - KIAA as per rule 25.24 part 1 (a)
2. Square style socorem - as per rule 25.24 part 1 (a)
3. Righetti Rodolfi K560/22 as per Rule 25.24 (b)
4. The AKA – KIAA filter is optional in points 2 and 3.

All types must conform to Rule 25.25 part 1 (a) with respect to intake tube length and diameter.

TECHNICAL SPECIFICATIONS PARILLA LEOPARD 125cc

45.11 Displacement

123.67cm³, BORE 54.00mm, STROKE 54.00mm, MAX BORE 54.40 mm

45.12 Cylinder

All ports must be of intended design conforming to drawings supplied by the manufacturer. No modifications or grinding is permitted to the ports. Cylinder length 89.1 +/-0.1 Refer to Rule 26.04, Steps 1, 2, 3, and 6 for compliance checking procedure.

Water connections to the cylinder are free but must retain the homologated position and threaded sizes.

45.13 Cylinder Head

Aluminium Cylinder Head must be of original engine manufacturer and conform to drawings supplied by manufacturer. No material to be added except for spark plug thread repair. Distance from spark plug sealing face to combustion chamber ceiling face 32.8mm +/-0.25mm. The combustion chamber volume shall be a minimum of 10 cc, Refer Rule 26.01. Water connections to the cylinder head are free but must retain the homologated position and threaded sizes.

45.14 Crankcase, Crankshaft and Con Rod

Must be of original engine manufacturer and conform to drawings supplied by manufacturer.

45.15 Piston

Piston must be of original manufacturer, supplied by IAME Spa with "IAME sud" marking on dome and conform to drawing supplied by manufacturer. No modifications are permitted.

45.16 Gudgeon Pins

No special alloys.

45.17 Clutch

Must be of original manufacturer and conform to manufacturers drawings with part number A-120840 marked. No modifications permitted. Drive sprocket is a non-tech item.

45.18 Reed Block and Reed Valves

The only Reed petal to be used is the genuine IAME Fibreglass Reed Petals with IAME marking. Reed Petal thickness 0.3mm+0.08mm.

Reed block must be the same style as the original IAME

45.19 Carburettor

1. The only permissible carburettor is the Tillotson model HL- 334A and model HL-334AB. The parallel carburettor venturi bore must not exceed 23.25mm at any point. Carburettor Manifold must be original IAME. It is permissible to enlarge only existing fuel/air holes, but they may not be deleted or relocated.
2. "B" Carburettor may be machined to "A" specs, however any machining of the carburettor convergent entry cone and any blend radius is not permitted to be machined past the front face of the dump tube. The dump tube, whilst dimensionally free in terms of internal passages must be retained and located in its supplied position. The ball and its retaining plate must remain in place.
3. The progression discharge jet to remain in the "as cast area" this is the transition area between the venturi and throttle bore. This area is machined in both the HL334A and HL334B.
4. The throttle bore size has a maximum of 25.5 mm. No sleeving of the throttle bore is permitted.
5. All dimensions shown in the drawing (on page 260 AKA Manual 2009) other than the throttle bore and venturi bore as indicated above are subject to R26.02 general tolerances.

The only permissible carburettor is the Tillotson model HL-334A and model HL-334AB. Carburettor venturi must remain as supplied from manufacturer and conform to drawings supplied by manufacturer. Carburettor manifold must be original IAME. It is permissible to enlarge only existing fuel/air holes they may not be deleted or relocated.

"B" carburettor may be machined to "A" specs (not to be machined past the dump tube and the dump tube remain untouched).

The progression discharge jet to remain in the "as cast area".

The throttle bore size maximum is 25.5 mm all other dimensions shown in the drawing are subject to R26.02 general tolerances.

45.20 Induction Silencer

The only permissible induction silencers are:

5. AKA - KIAA as per rule 25.24 part 1 (a)
6. Square style socoremm - as per rule 25.24 part 1 (a)
7. Righetti Rodolfi K560/22 as per Rule 25.24 (b)
8. The AKA – KIAA filter is optional in points 2 and 3.

All types must conform to Rule 25.25 part 1 (a) with respect to intake tube length and diameter.

45.21 Ignition

There are 2 types of ignition permitted.

- Selettra 4 pole, incorporating included charging system as supplied by manufacturer (this is the original type). This ignition is not permissible to be used at State or National Championships.
- IAME SPA Selettra Digital-K Ignition System – This is the later “key start” type Ignition, woodruff Key must be retained and no modifying permitted. Spark plug cap is a non-tech item. This ignition is eligible for use until 1st May 2009.
- From the 1st May 2009 the only eligible ignition module to be used is a green module marked with AKA20L.
- In the event of required repairs the plastic fittings registered and homologated as parts of the electrical looms for the ignition and starter assembly are permitted to be replaced with non-supplied fittings.

45.22 Exhausts

The only permissible exhausts allowed are those that conform to the drawings in the homologation papers (see 45.25) and comply to rule 25.22 (1)

INSERT DIAGRAM AS PER PAGE 266 2009 MANUAL

45.23 Header Pipe

Original header pipe supplied with engine must be used. Flex is a non-tech item. It is permissible to fit a maximum of three separate flange support brackets to the original header, any such support flange must not exceed 60mm maximum in total length, and not exceed 40mm maximum in total width.

45.24 Cooling System

Maximum core size 260mm by 200mm by 35mm thick, having no more than 16 tubes.

45.25 Non-Tech Items

Gaskets, Seals, Big & Little End Roller Cages, Fasteners, Washers, Spark Plug, Spark Plug Lead And Cap, Main Bearings, Engine Sprockets, Water Hoses, Hose Clamps, Water Pump, Axle O-Ring And Axle Pulley And Thermostats, Exhaust Flex.

45.26 Homologated Drawings below are also available on the

AKA Website @ www.karting.net.au and LEOPARD Website www.leopardengine.com

INSERT HOMOLOGATED DRAWINGS AS PER PAGES 267 – AND INCLUDING 271 of the 2009 AKA RULE BOOK

TECHNICAL SPECIFICATIONS PARILLA LEOPARD X30 125cc

45.27 Displacement

123.67cm³, BORE 54.00mm, STROKE 54.00mm, MAX BORE 54.28 mm

45.28 Cylinder

1. All ports must be of intended design conforming to drawings supplied by the manufacturer.
2. No modifications or grinding to the ports is allowed.
3. Cylinder length 86.6 +0.1 -0.2 Refer to Rule 26.04, Steps 1, 2, 3, and 6 for compliance checking procedure.
4. Water connections to the cylinder are free but must retain the homologated position and threaded sizes.

45.29 Base Gaskets

1. The type of material is a non tech item
2. The minimum base gasket/gaskets must be a minimum of 0.30mm and a maximum of 0.45mm. More than 1 base gasket can be used.

45.30 Cylinder Head

1. Aluminium Cylinder Head must be of original engine manufacturer and conform to drawings supplied by manufacturer.
2. No material to be added except for spark plug thread repair.
3. Distance from spark plug sealing face to combustion chamber ceiling face 29.3mm+/- 0.25mm.
4. The combustion chamber volume shall be a minimum of 9.7cc, Refer Rule 26.01.
5. Water connections to the cylinder head are free but must retain the homologated position and threaded sizes.
6. Cylinder head profile must not vary from the original profile and will be checked with the IAME Cylinder Head Profile Gauge (part number ATT-025/1).

45.31 Squish Gap

1. The Cylinder Head Squish clearance shall be a minimum of 0.9mm as per the homologation paperwork.
2. Shall be measured using a 2mm solder wire (tin).
3. When inserted in the cylinder the engine shall be rotated until the solder is squeezed between the head and piston crown.
4. Process shall be conducted on both the right and left hand side of the engine.
5. Measurements shall be averaged out.

45.32 Crankcase, Crankshaft and Con Rod

Must be of original engine manufacturer and conform to drawings supplied by manufacturer.

45.33 Piston

Piston must be of original manufacturer, supplied by IAME Spa with "IAME sud" marking on dome and conform to drawing supplied by manufacturer. No modifications are permitted.

45.34 Gudgeon Pins

No special alloys allowed, must be of magnetic material and comply with the drawing as supplied by the manufacturer.

45.35 Clutch

Must be of original manufacturer and conform to manufacturers drawings with original IAME markings on it. No modifications permitted.

45.36 Reed Block and Reed Valves

The only Reed petal to be used is the genuine IAME Fibreglass (Vetronite) Reed Petal with IAME marking. Reed Petal thickness minimum 0.3mm.

Reed block must be the original IAME one as supplied with the engine.

45.37 Carburettor

1. The only permissible carburettor is the Tryton Hobby 27/C and must conform to the IAME – X30 Tryton homologation documents.
2. The throttle bore size has a maximum of 28.00 mm. No sleeving of the throttle bore is permitted.

45.38 Ignition

1. IAME SPA Selettra or PVL Digital-K Ignition System – Key type Ignition, woodruff Key must be retained and no modifying permitted. Spark plug cap must have a resistor.
2. The only eligible ignition module to be used is a green module marked with AKA20L.
3. In the event of required repairs the plastic fittings registered and homologated as parts of the electrical looms for the ignition and starter assembly are permitted to be replaced with non-supplied fittings.

45.39 Exhausts

The only permissible exhaust allowed is as supplied from IAME SPA, must carry the IAME identification and conform to the drawings in the homologation papers (see 45.25) and comply to rule 25.22 (1)

INSERT DIAGRAM

45.40 Header Pipe

The only permissible header pipe is the one as supplied by IAME SPA and must carry the IAME identification. It is permissible to fit a maximum of three separate flange support brackets to the original header, any such support flange must not exceed 60mm maximum in total length, and not exceed 40mm maximum in total width.

45.41 Cooling System

The only permissible radiator is the one as supplied by IAME SPA and must carry the IAME identification Maximum core size 324mm by 186mm by 30mm thick, having no more than 16 cores. The only permissible thermostat is the original IAME component as supplied with the engine.

45.42 Non-Tech Items

Gaskets, Seals, Big & Little End Roller Cages, Fasteners, Washers, Spark Plug, Spark Plug Lead, Spark Plug Resistor Cap, Main Bearings, Water Hoses, Hose Clamps, Water Pump, Axle O-Ring, Axle Pulley, Exhaust Flex.

45.43 Homologated Drawings below are also available on the

AKA Website @ www.karting.net.au and LEOPARD Website @ www.leopardengine.com

INSERT HOMOLOGATED DRAWINGS