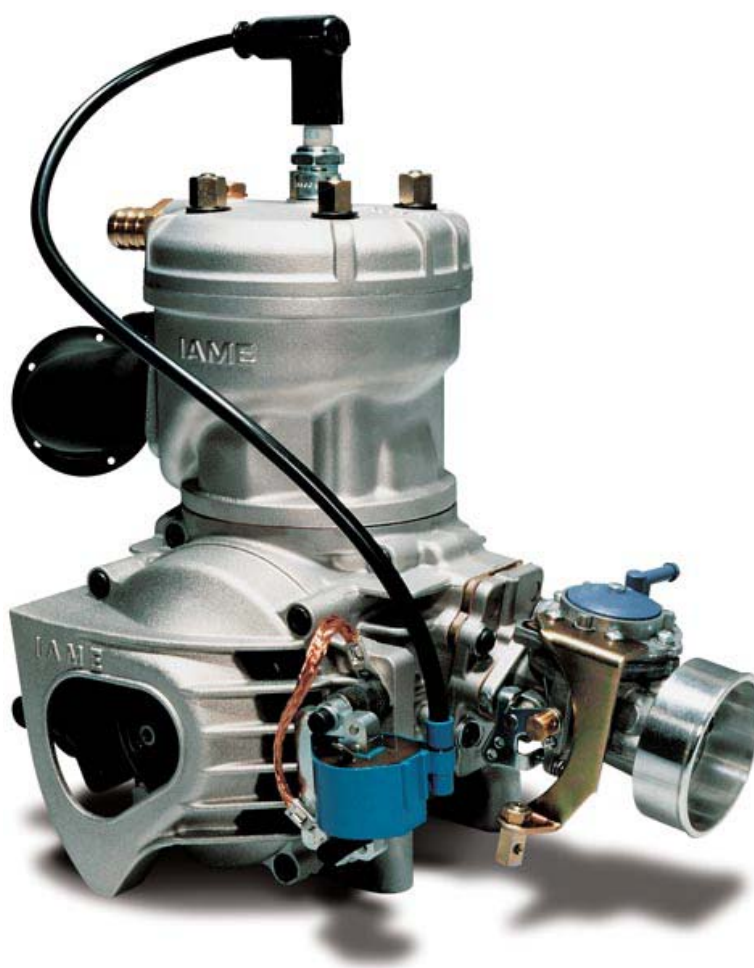




# PARILLA LEOPARD

## RL 125

### TECHNICAL SPECIFICATIONS



VERSION 1 / 2012  
UPDATED JANUARY 1<sup>st</sup>, 2012



**PARILLA LEOPARD RL125 ENGINE**  
**TECHNICAL SPECIFICATIONS**  
**DOCUMENT UPDATE SCHEDULE**

It is certified that the updates listed below have been approved by the Australian Karting Association and have been incorporated into the document under the relevant rule numbers.

<b>UPDATE NUMBER</b>	<b>DESCRIPTION</b>	<b>UPDATED BY</b>	<b>DATE</b>
1	Addition to rule RL 1.14 'An exhaust probe / fitting ..... ' as per addendum 3, 2011.	Brian Sparrow	17-2-2011
2	Addition of rules RL 1.10.7, .8 and .9 approved at 2011 August NKC meeting.	Brian Sparrow	1-1-2012
3	Addition to preamble; 'The use of thermal ..... ' requested by National Tech Co-ordinator.	Brian Sparrow	1-1-2012
4	Addition to preamble; 'The use of anti friction ..... ' requested by National Tech Co-ordinator.	Brian Sparrow	1-1-2012
5	Addition to the above rule 'OEM pistons are exempt. requested by National Tech Co-ordinator.	Brian Sparrow	5-1-2012

Preamble:



## PARILLA LEOPARD RL125 ENGINE TECHNICAL SPECIFICATIONS

The following are the Technical Specifications for the PARILLA LEOPARD RL125 engine, as approved by the Australian Karting Association.

This engine is approved for use in the following classes.

- Leopard Light
- Leopard Heavy
- TAG 125
- Restricted 125
- Open Performance

Unless otherwise specified, the engines must be original in all their components according to the PARILLA LEOPARD RL125 drawings.

Neither the engine or any of its ancillaries may be modified unless specifically authorised within these rules.

Only Genuine IAME components that are specifically designed and supplied for the Parilla Leopard RL125cc engine are legal, unless otherwise specified.

Any removal, addition or polishing of material is strictly forbidden.

Sandblasting, glass bead blasting, peening, acid etching, spark eroding and/or any other method of metal removal or displacement is not allowed.

**The use of thermal barrier coatings / ceramic coatings on or in the engine / engine components and on or in exhaust components is prohibited.**

**The use of anti friction coatings on or in the engine / engine components is prohibited. OEM pistons are exempt.**

**ANY ALTERATIONS / MODIFICATIONS ARE STRICTLY PROHIBITED EXCEPT AS SPECIFICALLY AUTHORISED WITHIN THESE SPECIFICATIONS.**

**IF THESE SPECIFICATIONS DO NOT SAY YOU CAN MAKE A MODIFICATION, THEN YOU CANNOT.**

Homologated Drawings are available at [www.karting.net.au](http://www.karting.net.au) or [www.remoracing.com.au](http://www.remoracing.com.au)

### RL 1.01 Warranty

It is strongly recommended that no modifications whatsoever be performed to Leopard 125 and Leopard X 30 engines, as this may render the warranty null or void.

### RL 1.02 Displacement

123.67cm<sup>3</sup>, BORE 54.00mm, STROKE 54.00mm, MAX BORE 54.40mm

### RL 1.03 Cylinder

All ports must be of intended design conforming to drawings supplied by the manufacture. 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.

### RL 1.04 Cylinder Head

Aluminium Cylinder Head must be of original engine manufacturer and conform to drawing supplied by manufacturer. No material to be added except for spark plug thread repair. Distance from spark plug sealing face to combustion chamber sealing 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

### RL 1.05 Crankcase, Crankshaft & Conrod

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

### RL 1.06 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.

### RL 1.07 Gudgeon Pins

No special alloys.

### RL 1.08 Clutch

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

### RL 1.09 Reed Block and Reed Valves

(1) The only permissible Reed petals are the genuine type and style that are supplied with the leopard engine. These are genuine IAME "Fibreglass" reed petals with "IAME etching/markings on the reed petals. Carbon



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fibre reed petals are not permitted. Reed petals maybe slotted at the mounting holes and corner edges maybe radiused. No other modifications are permitted.

Reed petal thickness 0.3mm +/- 0.08mm

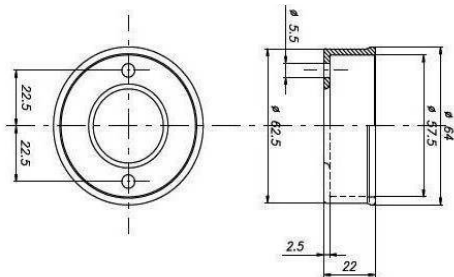
Reed block must be of the same style as the original IAME.

(2) The only permissible carburettor Reed manifold is the IAME stuffer block that is supplied with the Leopard engine and conforms to the identification photographs below.



### RL 1.10 Carburettor

- (1) The only permissible carburettor is the TILLOTSON MODEL HL-334A and MODEL HL-334 AB. The parallel Carburettor Venturi bore must not exceed 23.25 mm maximum 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 HL334 A and HL334B.
- (4) The throttle bore size has a maximum of 25.5 mm. No sleeving of the throttle bore is permitted.
- (5) All other dimensions are subject to R26.02 general tolerances
- (6) Carburettor Airbox adapter – The only permissible noise induction (airbox) adapter is the one that conforms to the drawing below. All dimensions include a +/- tolerance.



IAME Parilla Leopard 125cc RL TaG Airbox Adaptor

- (7) Adjustment of carburetor jet needles must be done by manually turning the jet needle (or its extension) only.
- (8) Carburetor throttle cannot be actuated by electro mechanical means.
- (9) It is permissible to fit a mechanical stop to limit the range of carburetor jet needle movement, however no modifications to the carburetor are permitted to mount such a stop.

### RL 1.11 Induction silencer

The only permissible induction silencers are:

1. AKA 43 as per rule 25.24.1(a)
2. Square style socorem – Minimum tube length 94.5mm
3. Righetti Rodolfi K560/22 as per Rule 25.24.1(b)
4. The AKA 43 filter is optional in points 2 and 3

AKA 43 and Righetti Rodolfi K560/22 must conform to Rule 25.24.1(b) with respect to intake tube length and diameter.

### RL 1.12 Ignition (for use in Leopard Class)

- The IAME S.p.a Selettra Digital-K "Key Start" Ignition system is the only eligible ignition system.
- The AKA20L green ignition module is the only eligible ignition module to be used.



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- The woodruff key must be retained and no modifying is permitted.
- 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.

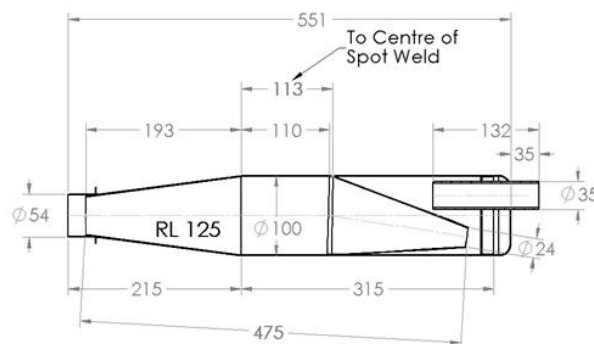
### Ignition (for use in Tag 125 and Restricted Tag 125 Classes)

There are 2 types of ignition permitted:

- Selettra 4 pole, incorporating included charging system as supplied by manufacturer (this is the original type).
- IAME S.p.a. Selettra Digital-K "Key Start" Ignition System – This is the later type Ignition. Woodruff Key must be retained and no modifying permitted.
- 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.

### RL 1.13 Exhausts

The Only permissible exhausts allowed are those that conform to the drawings in the homologation papers, conform to the image below, and comply to Rule 25.22 (1 of the AKA Manual.



### RL 1.14 Header Pipe

Original header pipe supplied with engine must be used. Flex is a non-tech item. It is permissible to fix a maximum of three separate exhaust 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. **An exhaust probe / fitting is allowed as per rule 25.09.7 of the AKA Manual.**

### RL 1.15 Cooling System

Maximum core size 330mm by 200mm by 35mm thick, having no more than 16 tubes and must carry the IAME markings when using the maximum size radiator.

### RL 1.16 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