



PARILLA LEOPARD X30 125

TECHNICAL SPECIFICATIONS



VERSION 6 / 2013
UPDATED JANUARY 3rd, 2013



**PARILLA LEOPARD X30 125 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.

VERSION NUMBER	DESCRIPTION	UPDATED BY	DATE
1	Addition to rule X30 1.14 'An exhaust probe / fitting' as per add # 3, 2011.	Brian Sparrow	17-2-2011
1	Addition of preamble and Carburettor gasket / diaphragm.....to rule X30 1.16 as per add # 18, 2011.	Brian Sparrow	13-4-2011
2	Addition of rules X30 1.11.3, .4 and .5 approved at 2011 August NKC meeting.	Brian Sparrow	1-1-2012
2	Addition to preamble; 'The use of thermal	Brian Sparrow	1-1-2012
2	Addition to preamble; 'The use of anti friction	Brian Sparrow	1-1-2012
3	Addition to the above rule 'OEM pistons are exempt. approved by NKC PV2012/04 16-2-2012	Brian Sparrow	5-1-2012
4	Addition of rule X 30 1.12 Induction Silencers approved by NKC teleconference 21-2-2012	Brian Sparrow	21-2-2012
5	Change to rule X 30 1.12 Induction Silencers as per addendum 24. approved by NKC 19-8-2012	Brian Sparrow	6-9-2012
6	Removal of reference to AKA 43 Airbox and Righetti Rodolfi K560/22 as per addendum 24, 2012	Brian Sparrow	3-1-2013



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Preamble:

The following are the Technical Specifications for the PARILLA LEOPARD X30125 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 X30125 drawings.

Homologated drawings are available at www.karting.net.au or www.remoracing.com.au

Rules will be stock – standard out of the box for reliability and cost effective racing.

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 X30 125cc 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.

X30 1.01 Displacement

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

X30 1.02 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.

X30 1.03 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.

X30 1.04 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 10.3cc, 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 8TT-025/1).

X30 1.05 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.

X30 1.06 Crankcase, Crankshaft and Con Rod

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



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X30 1.07 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.

X30 1.08 Gudgeon Pins

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

X30 1.09 Clutch

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

X30 1.10 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.

X30 1.11 Carburettor

1. The only permissible carburettor is the Tryton Hobby 27/C and must conform to the IAME – X30 Tryton homologation documents and must carry IAME markings on the back face of the carburettor as supplied.
2. The throttle bore size has a maximum of 28.00 mm. No sleeving of the throttle bore is permitted.
3. Adjustment of carburetor jet needles must be done by manually turning the jet needle (or its extension) only.
4. Carburettor throttle cannot be actuated by electro mechanical means.
5. 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.

X30 1.12 Induction Silencer

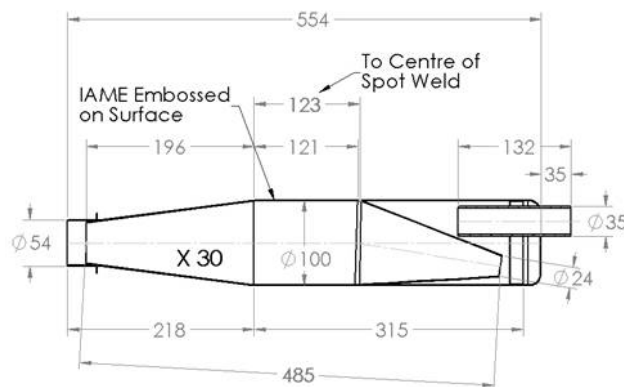
1. The only permissible induction silencer is the square style socorem as per homologation drawings.
2. Minimum tube length 94.5mm.
3. The only internal filter that may be used in this Induction Silencer/Air Box is the genuine IAME filter.
4. Use of this filter is optional.

X30 1.13 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.

X30 1.14 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 web address below) conform to the image below and comply to rule 25.22 (1)



X30 1.15 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.

An exhaust probe / fitting is allowed as per rule 25.09.7 of the AKA Manual.



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X30 1.16 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. The only permissible thermostat is the original IAME component (part number T-8400-C) as supplied with the engine

X30 1.17 Non-Tech Items

Unless specified, non-tech items are to be of the same type and style as the original. No alteration from the original manufacturers specifications is permitted to fit a non-tech item.

Non-tech items for the Parilla Leopard X30 engine include;

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, Carburettor gasket / diaphragm repair kit including needle and seat.