NATIONAL MOTORSPORT FEDERATION WITH INTERNATIONAL FEDERATION AFFILIATION
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2023

NINJA MIDGET CLASS (NMT)

COMER, MAXTERINO AND 4 STROKE ENGINES (CHD only)

Introduction:

Competitor age restriction: Only competitors from the age of 5 years till the end of year in which he / she turns 14 years are permitted to enter into this class. Baby Kart ages from 4 to 6.

Reference on lengths and widths, shall be determined as follows:
Lengths – from the front bumper to the rear bumper;
Width – From the left to the Right wheel;

Only modifications specifically stated shall be allowed, anything not listed is not permitted

Minimum Weight 115 kg – Comer Engines and 125kg – Maxterino Engines – 4 Stroke 115kg

The Four Stroke Regulations will be applicable to all Ninja Midgets competing in events staged by ZONE Cape Hell Drivers during the 2023 Racing Season.

No person/s permitted on the infield

NMT 1.	**Eligibility of Vehicle**
1.1	Only genuine manufactured junior kart chassis are permitted;
1.2	The chassis must comply with their respective specification sheet;
1.3	All components must be the same make and type as original equipment as per the Karting Commissions accredited Dealers except for hubs; axles; wheels; sprockets and carriers (provided these are aluminium) as well as seats; bearings (provided these are the same type); steering wheels and bumper;
1.4	The axle shaft must not exceed 32mm in diameter, and be manufactured from a magnetic material not exceeding 1m in length;
1.5	The rear axle bearing carriers may be slotted for the purpose of aligning the axle;
1.6	The fitting of non-standard additional seat stays support is Permitted;
NMT 2.	**Safety and General**
2.1	Seat Belts must be a minimum three point and mounted on the Chassis no loose end close to the chassis;
2.2	All Competitors must be equipped with:
2.2.1	Neck Braces
2.2.2	Karting Overhauls
2.2.3	Racing Shoes or closed sneakers
2.2.4	Only full-face helmets are permitted. All helmets will be in a good condition, the only helmet that will be approved has to bear the SABS or of a higher standard and a type that is suitable for highway usage;
2.2.5	No pushing up of sleeves whilst racing
2.2.6	Fire Retardant Gloves are Compulsory. Open Finger type are not Permitted
NMT 3	**Numbers**
3.1	Must be on the outside of both wing endplates and must measure 300mm in height using a bold number in black on a white background (or a white number on a black background) with no shading or 3D effect.
3.2	Number dimensions, designs and sizes on the bib, tail cone and side plates are free.

NMT 4.	**<u>Roll Cage and Body kit:</u>**
4.1	The roll cage must be made out of a minimum of 19 x 2mm tubular mild steel.
4.2	Body kit consist out of the following:
4.2.1	1 x PVC original karting nose cone – please note that the "long track" nose cone is permitted. Nose cone must remain as per manufacturers spec. A skid plate manufactured from plastic with a rounded leading edge may be fitted below this nose cone and may not protrude forward more than 50mm when measured from the nose cone at any point.
4.2.2	1 x rear tail cone as per SDB design. This cone may only be modified to accommodate the exhaust exit and mounting points and may have no additional open holes. Grid type structures to fill the holes are not permitted. 2 x side bumper / side pods may be fibre glass 1 x front bib as per SDB design. This bib may be cut to accommodate the steering wheel allowing sufficient clearance for the competitors hands. No other open holes are permitted. Grid type structures to fill the holes are not permitted.
4.2.3	Cockpit side panels are permitted and may be manufactured from Aluminium or fibre glass. These panels must be affixed to the roll cage by means of T30 cable ties or quick remove clips provided the clip base is attached to the roll cage using purpose applied tags and not by drilling into and thereby weakening the roll cage. These cockpit sides must allow for peripheral vision level to the rear point of the helmet visor of the competitor seated in the cockpit in normal race conditions.
4.2.4	Window Nets to be affixed to both open sides of the cockpit. Net to be secured using T30 cable ties that can be ripped off on case of an accident.
4.2.5	Clearance of at least 75 mm between the top of the child's helmet and the top of the roll cage (not the wing) in the normal sitting position is required.
4.2.6	Competitors will be excluded immediately should any body part become partially detached or fall off completely without a discussion to determine the merits of such
NMT 5.	**<u>Wings:</u>**
5.1	Wings are compulsory and are not adjustable.
5.2.1	Maximum wing sizes are 650mm width x 620mm length.
5.2.2	Minimum wing sizes are 550mm width x 520mm length.
5.2.3	Maximum wing endplate sizes are 470mm height x 650mm length.
5.2.3	Minimum wing endplate sizes are 320mm height x 550mm length;
5.4	Wing and endplate designs within these parameters are free.
5.5	Staggered height endplates are permitted.
NMT 6.	**<u>Brakes:</u>**
6.1	Must be effective and operated by foot pedal mechanically on both wheels simultaneously.
6.2	Only 60 cc Brakes may be used.
6.3	Original kart hydraulic brake systems are permitted.
NMT 7.	**<u>Steering:</u>**
7.1	Must be controlled by a steering wheel, which must have a completely closed circular shape;
7.2	All parts of the steering must have a method of attachments offering maximum safety (split pins; self-locking nuts or bolts);
NMT 8.	**<u>Engine and Transmissions:</u>**
8.1	**<u>Comer W 60</u>**
8.1.1	Restricted to Comer type W60 engine as per attached specific engine rules
8.1.2	Exhausts to be standard
8.1.3	Restricted to Tillitson HL166B and Tryton carburettor not exceeding 18.01mm when measured at the throat of the unit.
8.1.4	Original factory casting marks on Tryton Carburettor to remain
8.1.5	Restricted to 12 tooth front sprocket
8.1.6	Restricted to 88,89 or 90 tooth rear sprocket
8.2	**<u>Maxterino MX-60</u>**
8.2.1	Restricted to Maxterino type MX-60 engine as per attached specific engine rules
8.2.2	Exhausts to be standard

8.2.3	Restricted to standard Dellorto PHBG 18 BS Carburettor.
8.2.4	Main jets restricted to 68,69 & 70 (inland) 71,72 & 73 (Richards Bay and Bredasdorp only)
8.2.5	Restricted to 11 tooth front sprocket
8.2.6	Restricted to 82,83 and 84 tooth rear sprocket.
8.2.7	Restrictor Plate to be supplied by WOMZA with aperture dimensions measuring ~~16.40 to 16.70mm~~ 15.49mm to be installed between the exhaust port, on the barrel, and exhaust flange, of the exhaust system, and secured by a set of common nuts.
8.2.8	TC reserves the right to interchange restrictor plates between Competitors at any stage of any event.
8.2.9	Restrictor plates that have been 'polished' will result in the Competitor being excluded from that event.
8.2.10	Extension nuts with predrilled 5mm holes, across the width of the nut, to be installed for National championship events by the Competitors.
8.2.11	WOMZA will supply restrictor plates specifically for this event and seal the nuts fastening the plate and exhaust system.
8.2.12	A tampered seal without TC approval will result in exclusion from the Championship.
8.3	**Limitation on Engines**
8.3.1	Competitors may only use a maximum of two engines at National Championship events. Both engines must be registered before the event with the TC and both engines will face a technical check regardless of whether they were both used or not;
	SEE FOUR STROKE SPECS AT THE END
NMT 9.	**Seat:**
9.1	The seat must be rigidly located on the chassis, it must be so designed as that the driver is securely located to resist movement when cornering or braking;
9.2	Seat to be modified to support drivers Head;
NMT 10.	**Chain guard:**
10.1	A chain guard is compulsory and must efficiently cover the engine sprocket and axle sprocket down a line at least level with the centre of both front and rear sprocket.
NMT 11.	**Pedals:**
11.1	The pedals may not protrude forward of the front bumper;
NMT 12.	**Fuel and Oil:**
12.1	The only fuel permitted to be used is commercially available 95 octane pump fuel.
12.2	The filling station with the closest proximity to the race track is the appointed supplier for fuels for the event.
12.3	The addition of any additive other than 2-stroke lubrication oil to either the fuel or air is prohibited;
12.4	Drivers need to declare fuel mix and present one **sealed** bottle of such when requested should control fuel be implemented;
12.5	Motul Kart is the only accepted oil at National Championship events;
12.6	Mix volume subject to Manufacturers specifications.
NMT 13	**Tyres:**
13.1	Make – open. Limited to one race set and one spare for front and one for rear.
13.2	**Size:**
13.2.1	Front – 10 x 4.00, 4.50 or 5.00
13.2.2	Rear – 11 x 5.00
13.3	Wet weather tyres are permitted if racing in rain or wet track;
13.3.1	This may only happen when the Clerk of the Course declares a wet race;
13.3.2	A 15-minute time frame for this procedure will be given;
13.3.3	Officials will not be subject to pressure to cancel rain races;
13.4	Races will continue with Competitors who comply with wet tyres provided the circuit does not have puddles of standing water that could cause aquaplaning;
NMT 14	**Titanium:**
14.1	The use of titanium for any parts of a kart is forbidden;
NMT 15	**Additional rules:**

15.1	Any modifications not mentioned ARE NOT PERMITTED

FOUR STROKE SPECIFICATIONS

No engineering tolerance/s will be allowed

This Engine is applicable to the Cape Hell Drivers for the 2023 Season only. WOMZA has reservations about the open nature of these regulations. Previous investigations by the Governing Body have restricted this engine to the GX160 only. This will be investigated, and a decision made by the end of April 2023 whereupon WOMZA reserves the right to introduce a set of researched Regulations. WOMZA is not responsible for the cost incurred by CHD Competitors who are running these engines.

FSN 1.	**ENGINE AND CLASS RULES:**			
	GENERAL			
1.1	Honda or Hoffmann or Lookalike GX200 type 4-stroke engines. (PLEASE NOTE - Referred to as the 196 engine and not the 205/6 or 212 engine which is not permitted. The onus is on the Competitor to ensure they are using the correct engine. Competitors found using the incorrect engine will be excluded and the engines will be confiscated)			
1.2	A pulse fitting for fuel pump may be fitted.			
1.3	Electric starters may be fitted.			
1.4	No turbo, nitrous, superchargers or fuel injection allowed.			
1.5	Cast iron flywheel may be machined to fit ring gear. No other machining allowed. Charging magnets may be removed.			
1.6	Engineering allowed in all classes for repairing and bringing back parts to fall within specification according to this rule book.			
1.7	If needed, valve seats on the Cylinder head may be replaced or seats may be cut. No limitation on valve seat angles.			
1.8	There is No limitation on origin, grade or type of nuts, bolts and washers used, unless specified anywhere in this rule book. Eg. Weight mounting etc			
FSN 2.	**ENGINE/S:**			
2.1	The engine (Honda / Hoffmann / look alike) must comply with the original 200cc specifications, the following changes are permitted:			
2.1.1	Machine crankshaft to fit a bearing on big end;			
2.1.2	Machine connecting rod to fit big end bearing;			
2.1.3	Machine crankshaft end to fit a clutch;			
2.1.4	No Limitation on valve seat angles;			
2.1.5	Remove low oil sensor and governor;			
2.1.6	Skimming of cylinder head;			
2.1.7	An electric starter may be fitted / no external starter allowed			
2.1.8	Top mount fuel tank may be removed, and a pulse fitting may be fitted for the fuel pump;			
2.1.9	No other machining permissible.			
2.2	Engine capacity – 200cc maximum			
2.3 2.3.1	Honda / Hoffman and “look alike” (Chinese motors) 200cc No Briggs permitted			
2.3.2	Original Honda / Hoffmann "look alike" 200cc valves and rockers for this engine only.			
2.3.3	Original Honda / Hoffmann "look alike" 200cc. Max 34.4mm free length valve springs for this engine only			
2.3.4	No machining allowed.			
2.4	**Valves and Springs:**			
2.4.1	Diameters	Head (mm)	Stem (mm)	
2.4.2	Intake valve	25 mm max.	5,318 mm -	5,48 mm

2.4.3	Exhaust valve	24 mm max.	5,275 mm -	5,44 mm
2.5	**Piston and Rings:**			
2.5.1	Original Honda / Hoffmann "look alike" pistons and rings for this engine only to a maximum of second oversize (68.5mm)			
2.5.2	No machining on piston allowed			
2.5.3	Piston may not protrude above bore.			
2.6	**Crank and Conrod:**			
2.6.1	Original Honda / Hoffmann "look alike" 200cc (Max 54mm stroke) crankshaft can only be machined to fit big end bearing and clutch.			
2.6.2	Original Honda / Hoffmann "look alike" 200cc connecting rod can only be machined to fit big end bearing			
2.6.3	No other machining allowed.			
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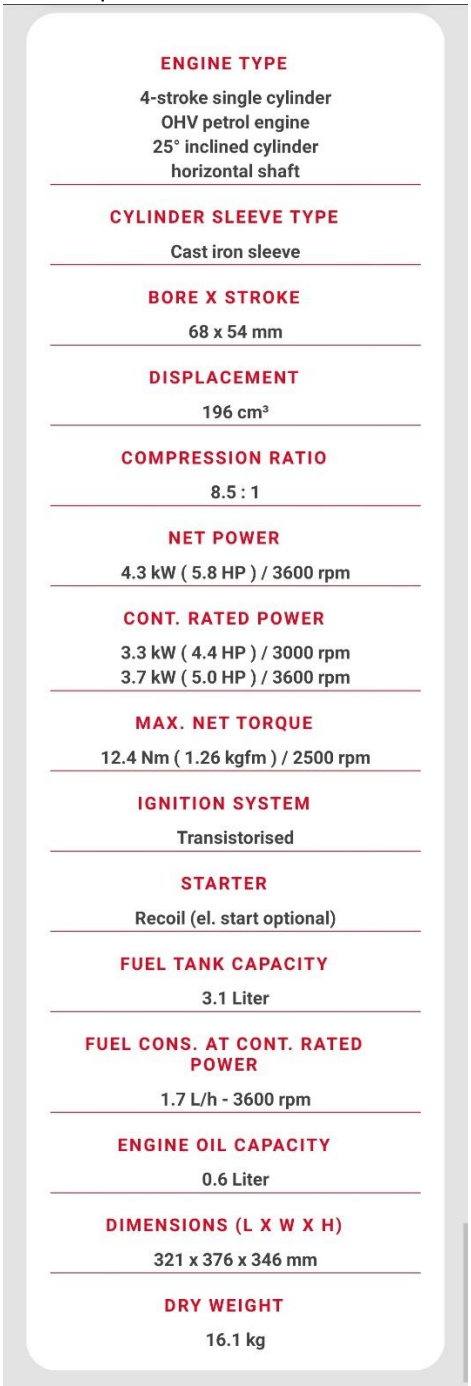
3.	**Flywheel and Cooling fan:**			
3.1	Original standard 200cc cast iron flywheel (pull start) or ring gear flywheel (electric start)			
3.2	Cast iron flywheel may be machined to fit ring gear. No other machining allowed. Charging magnets may be removed.			
3.3	Keyway slot for ignition timing allowed			
3.4	Ignition timing maximum of 28 degrees			
3.5	Step key allowed for Ignition Timing			
3.6	Standard 200cc cooling fan to be fitted, no alterations allowed.			
4.	**Coil:**			
4.1	Original standard 200cc coil and M6 bolts no machining allowed and original mounting points.			
5.	**Air Cleaner:**			
5.1	Air cleaner may be replaced and safety cable from air cleaner to motor to be fitted			
6.	**Carburetor**			
6.1	Original Honda / Hoffmann " look alike" 200cc carburettor for this engine only.			
6.2	Butterfly size = Max 19mm;			
6.3	No adjustable main jets allowed, and no machining allowed.			
6.4	Choke must be fitted. Jetting allowed			
7.	**Isolator Block:**			
7.1	Max 8mm isolator block with Max 19mm centre hole must be in position no machining allowed;			
7.2	Gaskets may be matched to carburettor and intake port.			
7.3	Air cleaner may be replaced and safety cable from air cleaner to motor to be fitted.			
8.	**Cylinder Head:**			
8.1	Cylinder head combustion chamber must have a capacity of not less than 12cc (cc to be tested with fuel sample of kart) when plug is fitted only skimming allowed no welding.			
8.2	No porting or polishing of ports allowed.			
8.3	Original carburettor mounting points.			
9.	**Head Gasket:**			
9.1	Original Honda / Hoffmann "look alike" head gasket for this engine only. No handcrafted head gaskets allowed			
10.	**Exhaust**			
10.1	Exhaust may be replaced must have 3 mounting points			
10.2	Silencer to be fitted. Minimum silencer length of 250mm.			
10.3	Club Decibel limitations to be adhered to			

11.	**Camshaft:**
11.1	Maximum cam height allowed:
11.2	Intake = 28 mm, Exhaust = 28 mm
113	No limitation on cam profile

See Spec sheet attached – Please note in the absence of a Governor the Factory Spec Sheet regarding power and torque is incorrect



ENGINE TYPE
4-stroke single cylinder
OHV petrol engine
25° inclined cylinder
horizontal shaft

CYLINDER SLEEVE TYPE
Cast iron sleeve

BORE X STROKE
68 x 54 mm

DISPLACEMENT
196 cm³

COMPRESSION RATIO
8.5 : 1

NET POWER
4.3 kW (5.8 HP) / 3600 rpm

CONT. RATED POWER
3.3 kW (4.4 HP) / 3000 rpm
3.7 kW (5.0 HP) / 3600 rpm

MAX. NET TORQUE
12.4 Nm (1.26 kgfm) / 2500 rpm

IGNITION SYSTEM
Transistorised

STARTER
Recoil (el. start optional)

FUEL TANK CAPACITY
3.1 Liter

FUEL CONS. AT CONT. RATED POWER
1.7 L/h - 3600 rpm

ENGINE OIL CAPACITY
0.6 Liter

DIMENSIONS (L X W X H)
321 x 376 x 346 mm

DRY WEIGHT
16.1 kg