



WORLD OF MOTORSPORT ZA

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NATIONAL MOTOR SPORT FEDERATION

WITH INTERNATIONAL FEDERATION AFFILIATION

2022

NINJA MIDGET CLASS (NMT) Draft Rules published and distributed 4 May 2021

4 STROKE ENGINE – ONE CLASS

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.

4 STROKE ENGINE BRAND – HOFFMANN

Minimum Weight 125kg irrespective of age.

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

PHOTOS ATTACHED AS THE SPEC FOR THIS CLASS

As of 1 January 2022, the 4 stroke Hoffman engine will become the Official Ninja Midget Engine. WOMZA reserves the right to make reasonable adjustments to the regulations on safety grounds at short notice. Competitors running the Max Torino engine may only do so at Club level in 2022 and by 31 December 2022 the Max Torino Engine will be totally discontinued.

N4M 1.	<u>4 STROKE ENGINE – MANDATORY REQUIREMENTS</u>
1.1	Each engine including the carburettor must be sealed only by a WOMZA TC with the same seal.
1.2	Failure to comply to the above regulation will result in the competitor being refused entry and/or excluded from the event.
1.3	Random engine checks – following an event, the engine may be impounded, sealed and checked by a WOMZA TC.
N4M 2.	<u>Eligibility of Vehicle</u>
2.1	Length and width references of the chassis; Refer to diagram
2.1.1	Width – maximum rear width from the outer lip of the rim to the opposite outer lip is 1200mm, maximum;
2.1.2	Only genuine manufactured kart chassis are permitted;
2.1.3	NO modifications to the chassis will be allowed;
2.2	All components must be the same make and type as original equipment as per the Karting Commissions accredited Dealer/s 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;
2.3	The axle shaft must not exceed 32mm in diameter, and be manufactured from a magnetic material not exceeding 1m in length;
2.4	The rear axle bearing carriers may be slotted for the purpose of aligning the axle;
2.5	The fitting of non-standard additional seat stays support is Permitted;

<p>N4M 3.</p> <p>3.1</p> <p>3.2</p> <p>3.2.1</p> <p>3.2.2</p> <p>3.2.3</p> <p>3.2.3.1</p> <p>3.2.4</p> <p>3.2.5</p> <p>3.2.6</p>	<p><u>Safety and General</u></p> <p>Seat Belts must be a minimum three point and mounted on the Chassis no loose end close to the chassis; Seat belts not to be mounted to the seat</p> <p>All Competitors must be equipped with:</p> <p>Neck Braces (Donut type)</p> <p>Karting Overhalls</p> <p>Racing Shoes or closed sneakers,</p> <p>Shoelaces to be secured in shoe or taped down</p> <p>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, Snell, ECE, TUV, DOT and of a higher standard and a type that is suitable for highway usage;</p> <p>No pushing up of sleeves whilst racing</p> <p>Fire Retardant racing Gloves are Compulsory. Open Finger type are not Permitted</p>
<p>N4M 4.</p> <p>4.1</p> <p>4.2</p>	<p><u>Numbers</u></p> <p>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.</p> <p>Number dimensions, designs and sizes on the bib, tail cone and side plates are free.</p>
<p>N4M 5.</p> <p>5.1</p> <p>5.2</p> <p>5.2.1</p> <p>5.2.2</p> <p>5.2.3</p> <p>5.2.4</p> <p>5.2.5</p> <p>5.2.6</p>	<p><u>Roll Cage and Body kit:</u></p> <p>The roll cage must be made out of a minimum of 19 x 2mm tubular mild steel with corner gussets.</p> <p>Body kit consist out of the following:</p> <p>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.</p> <p>1 x rear tail cone as per sprit car 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.</p> <p>2 x side bumper / side pods may be fibre glass</p> <p>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.</p> <p>Cockpit side panels are permitted and may be manufactured from Aluminium and ABS Plastic only. 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.</p> <p>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.</p> <p>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.</p> <p>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</p>
<p>N4M 6.</p> <p>6.1</p> <p>6.2.1</p> <p>6.2.2</p> <p>6.2.3</p> <p>6.2.3</p> <p>6.4</p> <p>6.5</p>	<p><u>Wings:</u></p> <p>Wings are compulsory and are not adjustable.</p> <p>Maximum wing sizes are 650mm width x 620mm length.</p> <p>Minimum wing sizes are 550mm width x 520mm length.</p> <p>Maximum wing endplate sizes are 470mm height x 650mm length.</p> <p>Minimum wing endplate sizes are 320mm height x 550mm length;</p> <p>Wing and endplate designs within these parameters are free.</p> <p>Staggered height endplates are permitted.</p>

N4M 7. 7.1 7.2 7.3	<u>Brakes:</u> Only original kart back brakes permitted; Original kart hydraulic or mechanical brake systems are permitted. Must be effective and operated by foot pedal mechanically on both wheels simultaneously.
N4M 8. 8.1 8.2	<u>Steering:</u> Must be controlled by a steering wheel, which must have a completely closed circular shape; All parts of the steering must have a method of attachments offering maximum safety (split pins; self-locking nuts or bolts);
N4M 9. 9.1 9.1.1 9.1.2 9.1.3 9.2 9.2.1 9.2.2 9.2.3 9.2.4 9.2.5 9.3 9.4 9.5 9.6 9.7 9.8 9.8.1 9.8.2 9.8.3 9.8.4 9.8.5 9.9 9.9.1 9.10 9.10.1 9.11 9.11.1 9.12 9.12.1 9.12.2	<u>Engine and Transmissions:</u> <u>Only a Hoffmann S3/HY7.0 (212CC) is permitted</u> Maximum HP 13HP Maximum torque 29.5 NM All replacement parts to be supplied by Hoffman or 4 Stroke Workshop; <u>Engine modifications</u> No material may be removed from any part of the motor unless specified; Only 4 stroke workshop may remove the Limiter It is recommended to remove the Limiter as it introduces additional oil in the casing; The Flywheel key may not be modified The Flywheel timing may not be advanced, to remain standard Valves and seats may be grind if not sealing properly The balancing of the crank is not permitted Not more than one standard valve spring may be used Only original NGK BP6ES spark plugs are permitted The washer may not be removed from the spark plug <u>CARBURETTOR</u> Only Hoffmann carburettor as supplied with the 212cc motor may be used No modifications whatsoever to the carburettor may be allowed Main jets of 77 to 80 may be used Only the standard idling jet of 35 may be used The removal of choke is not permitted <u>EXHAUST</u> Only standard exhaust supplied by engine manufacturer will be allowed. <u>AIRFILTER AND AIRBOX</u> Only Standard air filter may be used <u>CLUTCH</u> Only a approved centrifugal clutch may be used <u>GEARING</u> Only 218 pitch chains with a size 20 front sprocket and rear to be variable per venue Only size 74 or 75 rear sprockets will be allowed
N4M 10. 10.1 10.2 10.3	<u>Seat:</u> 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; Seat may be to be modified to support drivers Head; No low back rest cart style seats permitted;
N4M 11.	<u>Chain guard:</u>

11.1	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.
N4M 12. 12.1	<u>Pedals:</u> The pedals may not protrude forward of the front bumper;
N4M 13. 13.1 13.2 13.3	<u>Fuel and Oil:</u> The only pump fuel up to 95 octane is permissible; No octane boosters allowed; Engine oil open;
N4M 14 14.1 14.2 14.2.1 14.3 14.3.1 14.3.2 14.4 14.4.1 14.4.2 14.5 14.6	<u>Tyres:</u> Make – open; Rims: Kart rims, no plastic rims allowed; Only front 115mm and rear 130 to 140mm standard aluminium or magnesium rims are permissible Tyre Size: Front – 10 x 4.00, 4.50 or 5.00 Rear – 11 x 5.00 Ninja weather tyres are permitted if racing in rain or wet track; This may only happen when the Clerk of the Course declares a wet race; A 15-minute time frame for this procedure will be given; Officials will not be subject to pressure to cancel rain races; Races will continue with Competitors who comply with wet tyres provided the circuit does not have puddles of standing water that could cause aquaplaning;
N4M 15 15.1	<u>Titanium:</u> The use of titanium for any parts of a kart is forbidden;
N4M 16 16.1 16.2	<u>Additional rules:</u> No persons will be permitted in the infield at all events; Any modifications not mentioned is not allowed

CLUTCH



STANDARD HOFFMANN AIRFILTER



HOFFMANN 212 ENGINE – S3-HY7 (212CC)



CARBURETOR FOR THE 212 ENGINE



ENGINE SPECIFICATION SHEET

SPECIFICATIONS

10. Specifications

Model	HY6.0 (E)	HY7.0 (E)	HY8.0 (E)	HY10.0 (E)	HY12.0 (E)	HY14.0 (E)
Type	Single cylinder, 4-Stroke, Forced Air Cooling, OHV					
Rated power(kW/3600rpm)	3.3	4.0	5	5.5	7.2	8
Max. torque(N·m/rpm)	10.5/3000	13/3000	20/1500	22/1500	20/1500	24/1500
Fuel consumption(g/kW·h)	≤395					
Idle speed	1400 ± 150 rpm					
Speed Fluctuating Ratio	≤10%					
Transmission Mode	-	-	Clutch Mode		Chain mode	
Reduction Ratio	-	-	2:1			
Noise(≤)	70db(A)					
Bore×Stroke(mm)	665×55	70×55	75×60	85×60	85×66	90×66
Displacement(cc)	183	212	265	302	375	420
Compression Ratio	8.5:1					
Lubricating mode	Splash					
Starting Mode	Recoil start(Recoil start / Electric starting)					
Rotation	Anti-clockwise(from P.T.O. side)					
Valve Clearance	input valve: 0.10~0.15mm, output valve: 0.15~0.20mm					
Spark plug clearance	0.7~0.8mm					
Igniting Mode	Transistorized magneto Ignition					
Air cleaner	Semi-dry, Oil bath, Foam filter					
Dimension(Length) (mm)	330	330	380	380	405	405
Dimension(Width) (mm)	375	375	430	430	450	450
Dimension(High) (mm)	336	336	415	415	443	443
Net weight(kg)	16(18)	16(19)	26(29)	26.5(29.5)	31.5(33)	32(33.5)

MAXIMUM CHASSIS SIZES

