

MSA KART RACE YEARBOOK – 2006

A1.0	Group	Cadet
A1.1	Class	Formula Cadet (Comer)
	Affiliation	MSA

A1.2 Introduction. Starter class from 8 years of age with maximum retail prices for basic chassis and engine. This class is included in the Stars of Tomorrow Championship series (MSA British Championship) and the Super One ABK National Championships. Chassis, engine and brakes are homologated with the MSA. Details of homologation requirements are available from the MSA.

A1.3 Chassis. MSA homologated chassis. The chassis must remain as homologated in all respects and may only be subject to approved modifications for safety reasons. A chassis manufacturer will be permitted to homologate one chassis model for any three year period and homologations will last for a total of three periods (nine years). A list of currently homologated chassis is included in Appendix 1. A manufacturer may not continue to produce new chassis to old homologation. The current chassis and brake homologation period commenced 1.1.2004; the next period will commence 1.1.2007.

A1.3.1 The only additions permitted along with modifications solely concerned with their fitment are: Seats, Nassau panels, Front Fairing, Ballast to achieve the required weight or for repair purposes. The following may not be added:

- (a) Additional seat stays.
- (b) Fuel filters, except within the fuel tank as part of the anti-surge pick up pipe
- (c) Any part not homologated except as stated above

A1.3.2 Dimensions

Wheelbase: 900mm \pm 5mm.

Overall length: 1650mm (max.).

Track: Min 2/3 wheelbase,
max. 1200mm

Tubing: 28mm or imperial equivalent unpainted (BSI tolerance allowed).

Steering: Castor, camber and king-pin inclination angles must be fixed as homologated.

A1.3.3 Floor. There must be a rigid, flat floor from the seat to the front and side chassis members, secured to them so that the tubes prevent the driver's feet from sliding off. If perforated, the holes must not have a diameter exceeding 10mm. Any perforation of the floor must be a production feature and be homologated as such.

A1.3.4 Side Pods. Must conform to MSA Yearbook regulations.

A1.3.5 Bumpers. Must conform to MSA Yearbook regulations.

A1.3.6 Front Fairing. Must conform to MSA Yearbook regulations with the exception of the mandatory requirement for a minimum vertical surface area.

A1.3.7 Torsion Bars. Karts homologated with rear torsion bars must be raced with the bars in place and locked at all times. Front and side torsion bars are not permitted.

A1.3.8 The following are specifically prohibited: Parts made of Kevlar, carbon fibre (other than seats and floor pan), magnesium, titanium.

A1.3.9 Seat. Seat is free. Additional bolt on seat stays/mountings are permitted to a maximum of one per side, position free. Bolt fixings must be used at each end of the seat stays.

A1.3.10 The complete chassis in its homologated form, with accessories and equipment as homologated and the engine as supplied by the factory are the only combination which will be allowed to race. The registered manufacturer may apply for changes to the homologation on the grounds of safety. Such changes will only be acceptable with the written approval of the MSA.

A1.4 Engine. Power Unit. Comer W60, 60cc two stroke engine equipped with recoil starter, ignition, centrifugal clutch, carburettor, air box and exhaust system. The power unit, **as raced**, must conform in all aspects with the homologation fiche and must be stamped with the official MSA stamp. Compliance with the homologation fiche may be checked at any time during an event. No addition of, or other change of material is permitted. No modifications or tuning for whatever purpose are allowed except where expressly permitted. Where specific dimensions are not given for the engine and its supplied accessories in the homologation fiche, dimensions will be checked against a control engine held by the MSA. The following repairs are specifically permitted:

- (a) Repair of damaged threads in the crank cases and cylinder with helicoils. The repair of cylinder head spark plug thread is not permitted.

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(b) Should the throttle cable bracket on the crankcase be broken the original bracket may be welded back in its original position.

Procedures for taking measurements and details of measuring gauges are defined in the MSA Measurement Guidelines document available from the MSA on request. The only replacement parts which will be allowed are those supplied by and listed on the manufacturer's parts list for the W60 60cc homologated engine (except for plug cap which may be replaced by parts of other commercial manufacture and which must be directly equivalent). The only spark plug permitted is either Bosch W2AS or Bosch W08AS.

Engine lubricant must be a synthetic oil meeting the requirements of the JASO FC standard to ensure that the exhaust emissions meet the standards set down by the MSA. The two oils detailed below will be the only types of engine lubricant legal for racing in the W.60 Cadet class. They are:

Kart Tech FC produced by Elf – retail price £11.89 + VAT per litre.

Super FC, produced by Shell – retail price £12.25 + VAT per litre.

Both products have been extensively track and dyno tested to be approved by the UK Comer distributor as suitable for use with the Comer W.60 engine. These oils will be distributed by both Atol and Zip Kart. These oils will be supplied with a trace indicator to enable identification by analysis. These are the only oils permitted.

Engine management equipments are prohibited. The use of a rev counter and data logging is permitted.

Engine ignition timing is free, provided that when it is set and locked timing cannot be varied by the driver when the kart is in motion.

A1.4.1 Engine Sealing. All engines must be sealed with an official seal to prevent modification. All engines are issued with an official identity card. It is the competitor's responsibility to ensure that the numbers inscribed on the engine and seal must correspond with those on the identity card at all times. Only authorised dealers will be issued with seals for use during maintenance of the engines. The identity card must be filled in and signed by an authorised dealer. The engine must be presented at scrutineering with the official class seal intact and the identity card lodged with the scrutineer if requested to do so. The card must be collected by the competitor at the end of the race meeting. Should a seal become damaged, loose or lost during racing it must be reported to the meeting's scrutineer before leaving parc ferme. To allow the competitor to continue racing the scrutineer may at his discretion re-seal the engine with an official MSA seal. The new seal number must be entered in the engine's identity card and signed by the scrutineer. The engine must be taken to an official dealer with MSA seal intact to be re-sealed with an official class seal before competing at the next race meeting.

A1.4.2 Permitted Modifications. The following minor modifications are permitted:

- (a) A rounded, flat washer may be fixed into the carburettor adjusting screw slot to facilitate fine adjustments under load. Alternatively a Tillotson 'T' bar or a Comer adjusting screw may be used. A short flexible extension may be fitted to the choke lever in order to ease adjustment. No other additions and/or carburettor alterations are allowed.
- (b) A wet box or splash guard may be attached to the W.60 air box providing this in no way modifies the shape or size of the intake trumpet or creates a ram effect. The W.60 air box cannot be modified to aid in the attachment of wet box and attachment must be of a non permanent type, i.e. tape, cable ties.
- (c) The carburettor needle, valve seat and pump diaphragms may be replaced with listed Tillotson spare parts. Tillotson carburettors with series number 227 are not permitted.
- (d) Main bearings part numbers 6202C3 or 6202C4 can be used. They must have 8 balls with steel cages.

A1.5 Transmission. The drive must be direct, so that the crankshaft and rear axle are connected by a single length of chain. All methods of chain oiling and greasing while the kart is in motion are forbidden. A guard covering the transmission is compulsory complying with MSA regulations.

A1.5.1 Axle. Solid, magnetic parallel bar of 25mm diameter. Horizontally split quick release bearing mountings are not permitted.

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A1.5.2 Sprockets. Free.

A1.6 Brakes Mechanical or hydraulic operation, solid disc, operating on rear axle only. No interruptions of the solid disc in the area swept by the brake pads. The brake linkage must be duplicated. The option for hydraulic brakes was included in the 2001 homologation specification, valid from 1.1.2001. All 2004 homologated chassis must use a MSA homologated brake system as specified for the particular homologated chassis or its homologated optional brake. Changes may be made to the brake homologation on safety grounds with the written agreement of the MSA.

A1.7 Wheels and Tyres. Wheels may be of two piece or mono aluminium construction, i.e. spun aluminium, diecast aluminium or sandcast aluminium. Hubs may be separate or integral.

A1.7.1 Tyres. Bridgestone

Dry - 10.0x3.6x5 (YEQ) and 11.0x6.0x5 (YEQ),

Wet - 10.0x3.6x5 (YDK) and 11.0x6.0x5 (YDK).

or Dunlop, which is the ABkC nominated class tyre.

Dry - 10.0x3.6x5 (SL3) and 11.0x5.0x5 (SL3), RAC moulded on the side wall.

Wet - 10.0x3.6x5 (KT3) front incorporating code Q35 and with RAC moulded on the sidewall and

11.0x4.5x5 (KT3) rear incorporating code 049 and with RAC moulded on the side wall.

A1.8 General. The practice of lifting karts on the dummy grid or start line while the engine is running is prohibited.

A1.8.1 Retail Prices. All prices will be subject to an agreed yearly increase.

The retail price of the new assembled kart chassis, as homologated, including brake, chain guard, sprocket carrier, axle, sprocket, tank, seat, wheels, but excluding tyres and fairings must not exceed **£1372** plus VAT.

The retail engine price when new including carburettor, ignition, clutch, engine sprocket and complete exhaust system when sold in UK, **£507** plus VAT.

The Comer W60 has a manufacturer's undertaking to be available until the year 2013.

A1.8.2 Weight. Minimum 97kg including the driver.

A1.8.3 Plates. Yellow with black numbers.

A1.8.4 Age. 8th birthday to 31st December of year of 12th birthday [see N.13.1].

A1.8.5 Official authorised homologation fiche copies for chassis, brake and engine can be obtained from the MSA. It is the responsibility of each competitor to ensure that the equipment used is in compliance with these regulations and that up to date documentation is in their possession.

A1.9 Comer S60. The Comer S60 engine will continue to be accepted for club level race events. The following extract from the 2003 regulations covers the class regulation differences to be applied during this period and must be read in conjunction with the above. The S60 Cadet karts must be run as a separate class for separate trophies/awards unless otherwise stated in event Supplementary Regulations. Details of the engine conversion options available to bring the S60 up to W60 standard will be published by the importer, Zip Kart, and the MSA.

A1.9.1 Engine. Power Unit. Comer (S60) 60cc two stroke engine equipped with recoil starter, ignition, centrifugal clutch, carburettor, air filter and exhaust silencer. The power unit, as raced, must conform in all aspects with the homologation fiche and must be stamped with official MSA stamp. Rectification is allowed to enable the engine to comply in all respects with the homologation fiche. No addition of, or other change of material is permitted. No other modifications or tuning of whatever purpose are allowed. Where specific dimensions are not given in the homologation fiche, dimensions will be checked against a control engine held by the MSA. Procedures for taking measurements and details of measuring gauges are defined in the MSA Measurement Guidelines document available from the MSA on request. The only replacement parts which will be allowed are those supplied by and listed on the manufacturer's parts list for the S60 60cc homologated engine (except for spark plug of the same type and plug cap). Compliance with the homologation fiche may be checked at any time during an event.

Engine management equipment are prohibited. The use of a rev counter and data logging is permitted.

A1.9.2 The following minor modifications are permitted:

(a) A 12mm maximum OD rounded, flat washer may be fixed into the carburettor adjusting screw slot to facilitate fine adjustments under load. Alternatively a Tillotson 'T' bar or a Comer adjusting screw may be used. A short flexible extension may be fitted to the choke lever in order to ease adjustment. No other additions and/or carburettor alterations are allowed.

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(b) The use of a wet box to protect the carburettor is optional in any weather conditions.

Engine Ignition Timing. Free, provided that when it is set and locked timing cannot be varied by the driver when the kart is in motion.

A1.9.3 1992 MSA Bulletin provided the following additional clarifications:

CADET ENGINES – WHAT YOU ARE NOT PERMITTED TO DO

a) Paint the cylinder or crankcase with heat dispersal type paint (e.g. black).

b) Alter any part of the crankshaft assembly.

c) Change or alter the small end bearing or gudgeon pin.

d) Change or alter the type of main bearing, it must remain 6202c3.

e) Change or alter the type of piston, with all head volume measurements being taken in the cold condition as race finished.

f) Machine the surface of the plug hole.

g) Alter the original Mono clutch, or clutch drum and 12T sprocket, or the clutch bearing sleeve.

h) Change or alter any component of electronic ignition, specifically the coil and spark box should only be part numbers 2204211135 (coil) and 1217280112 (spark box). Increasing the adjustment of the timing slots on the plate is prohibited.

i) Alter the flywheel and fan.

j) Remove any component from the starter and fan cover.

k) Dimensionally alter the engine cover.

l) Alter any part of the Tillotson HL166B carburettor, the sole exceptions being to replace the needle and valve seat and pump diaphragms with listed Tillotson spare parts.

A copy of the homologation fiche will be supplied by manufacturer with each engine when new.

Official authorised copies for chassis and engine can be obtained from the MSA.

A1.9.4 Weight. Minimum 95kg including the driver.

A2.0	Group	Cadet
A2.1	Class	Honda Cadet
	Affiliation	Ratpro & ABkC

A2.2 Introduction. Budget starter class from 8 years of age. This class is included in the Super Two ABkC Four Stroke Kart Championship. The engine and chassis are homologated with the MSA. Maximum retail prices for basic chassis. Full details from Ratpro at 10 Island Close, Staines, Middlesex TW18 4YZ. www.ratpro.co.uk. ratpro@btinternet.com.

A2.2.1 The use of a rev-counter and data logging is permitted.

A2.3 Chassis. This class is for MSA homologated chassis only. The chassis must remain as homologated in all respects and may only be subject to approved modifications for safety reasons. A manufacturer may not continue to produce new chassis to an earlier homologated or non-homologated design. The current chassis homologation period commenced 1.1.2004; the next period will commence 1.1.2007.

A list of homologated chassis is included in Appendix 1. Additionally those registered chassis manufactured and sold during the registration periods running from 1.1.1998 to 31.12.2000 may be used. The complete chassis in its homologated/registered form, with accessories and equipment as homologated/registered and the engine as supplied by the manufacturer is the only combination which will be allowed to race. The homologated kart manufacturer may apply for changes to accessories such as brakes on the grounds of safety. Such changes will only be acceptable with the written approval of the MSA.

A2.3.1 The only additions permitted along with modifications solely concerned with their fitment are: Seats, Nassau panels, Front Fairings, Ballast to achieve the required weight or for repair purposes. The floor mounted fuel tank may be removed if the integral Honda fuel tank is retained.

A2.3.2 The following may not be added:

(a) Additional seat stays.

(b) Any part not homologated except as above.

A2.3.3 The following materials are specifically prohibited except for use in seats and floor trays: Kevlar, carbon fibre, magnesium and titanium.

A2.3.4 Dimensions.

Wheelbase: 900 mm +/-5 mm.

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Overall length: 1650 mm (max)

Track: Min. 2/3 wheelbase. Max. 1200 mm.

Tubing: Minimum 28 mm or imperial equivalent unpainted (BSI tolerance allowed)

Steering: Castor, camber and kingpin inclination angles must be fixed as homologated.

A2.3.5 Floor. Deleted.

A2.3.6 Bumpers. Must conform to MSA Yearbook regulations.

A2.3.7 Front Fairing. Must conform to MSA Yearbook regulations with the exception of the mandatory requirement for a minimum vertical surface area.

A2.3.8 Side Pods. Must conform to MSA Yearbook regulations. Side pods may be cut away on their inner, upper and lower surfaces by the minimum amount to clear an engine and its attachments. The upper and lower surfaces may be cut away to a maximum of half the width of the surface.

A2.3.9 Torsion bars. Karts homologated with torsion bars must be raced with the bars in place and locked at all times.

A2.4 Engine.

One Honda engine of the GX160T1 QHQ4 or GX160UT1 QHQ4 designation, modified by Honda or its agents to comply with these Honda Cadet class regulations and fitted with 'tamper proof' seals, is to be fitted. Clubs that wish to permit the use of the obsolete GX160K1 engine should apply to the MSA under regulation N1.3 for permission. The GX160K1 engine must have been modified by Honda or its agents to comply with these Honda class regulations and fitted with the earlier Honda stamped metal seals. All engines types must comply with these regulations and the Ratpro Honda GX160 Technical Regulations Version 1 of January 2005 which are available on the Ratpro website www.ratpro.co.uk and from Ratpro at 10 Island Close, Staines, TW18 4YZ.

A2.5 Transmission. A dry air cooled centrifugal clutch which cannot be adjusted in position, of Noram, Horstman, Maxtorque 4000 or Premier manufacture is to be used to transmit drive with maximum engagement speed of no more than 2500 rpm engine speed. Drive is to be by 219 chain or by belt. Drive protection must be according to current MSA regulations. Chain protectors may be attached to the sprockets. A guard covering the transmission is compulsory complying with MSA regulations.

A2.5.1 Rear Axle. Rear axle to be a magnetic solid parallel bar of 25 mm nominal diameter.

A2.6 Brake. One mechanical/hydraulic disk brake to be fitted to the rear axle. A solid metal disc must be used with no interruption of the solid disc in the area swept by the brake's pads.

A2.7 Wheels and Tyres. Wheels may be of two piece or mono aluminium construction i.e. spun aluminium, diecast aluminium or sandcast aluminium. Hubs may be separate or integral.

A2.7.1 Tyres are as follows:-

SLICKS: Dunlop SL3 Front 10 x 3.6 x 5 Rear 11 x 5.0 x 5, RAC moulded on the side wall.

WETS: Dunlop KT3 Front 10 x 3.6 x 5 incorporating 035 and with RAC moulded on the side wall. Dunlop KT3 Rear 11 x 4.5 x 5 incorporating 049 and with RAC moulded on the side wall.

A2.8 General

A2.8.1 Retail Price. The retail price of the new assembled kart chassis, as homologated including brake, chain guard, sprocket carrier, axle, sprocket, tank, wheels, but excluding tyres and fairings must not exceed £1372 plus VAT. The price will be subject to an annual review.

A2.8.2 Weight. Minimum weight of the kart inclusive of engine, driver and engine oil is to be not less than 100 kgs.

A2.8.3 Plates. Number Plate. Number plates are to be yellow with red numbers.

A2.8.4 Age. 8th birthday to 31st December of year of 12th birthday.

A2.8.5 Honda will not accept warranty claims on engines used in any practice or racing capacity.

A3.0 Group Cadet.

A3.1 Class Cadet Formula WTP

Affiliation Commercial: John Mills Engineering Ltd./ABkC

A3.2 Introduction. Low cost starter class from 8 years of age. Maximum retail price for basic chassis and sealed engine (original model B1 category), now available with electric starter (B5 category). This class has its own official Formula Cadet WTP championships. Chassis and engine (and brakes from 1.1.2004) are homologated with the MSA. Details of homologation requirements are available from the MSA.

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A3.3 Chassis. MSA homologated Cadet chassis. The chassis must remain as homologated in all respects and may only be subject to approved modifications for safety reasons. A chassis manufacturer will be permitted to homologate one chassis model for any three year period and homologations will last for a total of three periods (nine years). A list of currently homologated chassis is available from the MSA. A manufacturer may not continue to produce new chassis to old homologation. The current chassis and brake homologation period commenced 1.1.2004; the next period will commence 1.1.2007.

A3.3.1 The only additions permitted along with modifications solely concerned with their fitment are:

Welded or sound mechanical bracket for the exhaust system. Upholstered seats, Nassau panel, Front Fairing, Ballast to achieve the required weight or for repair purposes.

The following may not be added : (a) any part not homologated except as stated above.

A3.3.2 Dimensions

Wheelbase	900mm +/- 5mm
Overall length	1650mm (max)
Track	Min 2/3 Wheelbase
Max	1200mm
Tubing	28mm unpainted or imperial equivalent (BSI tolerance allowed)
Steering	Castor, camber and kingpin inclination angles must be fixed as homologated.

A3.3.3 Floor. There must be a rigid, flat floor from the seat to the front and side chassis members, secured to them so that the tubes prevent the drivers feet from sliding off. If perforated, the holes must not have a diameter exceeding 10mm. Any perforation of the floor must be a produced feature and be homologated as such.

A3.3.4 Side Pods. Must conform to MSA Yearbook regulations.

A3.3.5 Bumpers. Must conform to MSA Yearbook regulations.

A3.3.6 Front Fairing. Must conform to MSA Yearbook regulations with the exception of the mandatory requirement for a minimum vertical surface area.

A3.3.7 Torsion Bars. Karts homologated with rear torsion bars must be raced with the bars in place and locked at all times. Front and side torsion bars are not permitted.

A3.3.8 The following are specifically prohibited. Parts made of Kevlar, carbon fibre (other than seats and floor pan), magnesium, titanium.)

A3.3.9 Seat. Seat is free. Additional Bolt on seat stays/mountings are permitted to a maximum of one per side, position free. Bolt fixing must be used at each end of the seat stays.

A3.3.10 The complete chassis in its homologated form, with accessories and equipment as homologated and the engine as supplied by the importer are the only combination which will be allowed to race. The registered manufacturer may apply for changes to accessories such as brakes, on the grounds of safety. Such changes will only be acceptable with the written approval of the MSA.

A3.4 Engine. Power unit, WTP 60 B1 (original model) or B5 (electric starter option model) two stroke engine equipped with recoil starter, fixed ignition, centrifugal clutch, carburettor, air box and exhaust system. The power unit, as raced, must conform in all aspects with the manufactured specifications. The engine will be a sealed unit issued with a JM official log book. The numbers inscribed on the engine and seal must correspond with those on the log book at all times. Only authorised dealers will be issued with seals for use during maintenance of the engines. The log book must be filled in stamped and signed by a WTP authorised dealer. The engine must be presented at scrutineering with the official class seal intact and the log book lodged with the scrutineer. The card must be collected by the competitor at the end of the race meeting. Should a seal become damaged, loose or lost during racing it must be reported to the meetings scrutineer before leaving parc ferme who will replace with a temporary M.S.A. seal and sign the log card- The engine must be taken to an official dealer with MSA seal intact to be resealed with an official class seal before competing at the next race meeting unless special exception. No addition of, or other change of material is permitted. No other tuning or modifications for whatever purpose are allowed. Where specific dimensions are not given in the homologation fiche, dimensions will be checked against a control engine held by the importer. The only replacement parts which will be allowed are those supplied by and listed by the manufacturers on the WTP 60cc parts listed (except for spark plug of the same type and plug cap).

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Compliance with the homologation fiche may be checked at any time during an event. Engine management systems are prohibited. The only spark plugs permitted are Nippon Denso Iridium IW24, IW27, IW29, IW31, NGK B8EG, B9EG, B10EG, B8EGV, B9EGV, B10EGV, Iridium BR8EIX, BR9EIX, BR10EIX. Other plugs may be added to the list from time to time.

A3.4.1 WTP 60 B5 engine power unit with electric starter must run at all times with the battery and starter motor fitted and with the standard starter ring gear fitted to the clutch. After fitment no more than 50% of the battery box may protrude outside of the outer chassis side rail.

A3.4.2 The following minor additions are permitted:

- (a) The use of a basic rev counter or Alfano/similar unit.
- (b) Small bracket for the support of the exhaust system.
- (c) The use of small inline fuel filter with gauze.
- (d) The fitment of a cable stop/throttle adjuster to the throttle bracket is permitted.
- (e) The air box may be turned from original straight inlet upright position only when wet tyres are in use.
- (f) A WTP gauze filter may be fitted on the inlet lugs.

A3.4.3 What you are NOT PERMITTED to do.

- (a) Painting of the cylinder, cylinder head or crankcase
- (b) Alter the original mono clutch, or clutch drum and 11 T sprocket, or the clutch bearing sleeve.
- (c) Remove or change any components from the starter unit.
- (d) Alter any component of the ignition/flywheel in any way.
- (e) Machine the surface of the plug hole.
- (f) Alter nor machine any of the surface of the cylinder head.
- (g) Alter nor machine any part of the piston and ring.
- (h) Alter any part of the cylinder or liner in any way.
- (i) Alter nor machine any part of the crankcase or crankshaft in any way.
- (j) Dimensionally alter any part of the air box.
- (k) Alter any part of the WTP carburettor, WTP replacement parts must be used. The sole exceptions being the needle valve, diaphragms, and paddle tension spring. These may be Tillotson parts of the same type/dimensions as original item. Tillotson copper seat washers must not be fitted under the needle seat.
- (l) Alter any part of the exhaust system or end can in any way. The main silencer may be painted with heat resistance paint. Black colour only or externally hand polished, but not chrome plated.
- (m) copies of full regulations are available from the importer.
- (n) The exhaust must be fitted with one standard WTP exhaust gasket between the cylinder & the exhaust stub.
- (o) The inlet must be fitted with one standard paper gasket each side of the unmodified plastic thermal hear spacer.
- (p) All intake mixture must pass through gaskets and thermal spacer.

A3.5 Transmission. The drive must be direct, so that the crankshaft and rear axle are connected by a single length of chain. All methods of chain oiling and greasing while the kart is in motion are forbidden. A guard covering the transmission is compulsory complying with MSA regulations.

A3.5.1 Axle. Solid, magnetic parallel bar 25mm diameter. Horizontally split quick release bearing mounting are not permitted.

A3.5.2 Sprockets. Rear sprockets 219 pitch. Size is free.

A3.6 Brakes. Mechanical or hydraulic operation, solid disc, operating on the rear axle only. No interruptions of the solid disc in the area swept by the brake pads. The brake linkage must be duplicated. All 2004 homologated chassis must use a MSA homologated brake system as specified for the particular homologated chassis. Changes may be made to the brake homologation on safety grounds with the written agreement of the MSA.

A3.7 Wheels. Mono aluminium construction. Hubs may be separate or integral.

A3.7.1 Tyres. Dunlop. Dry – 10.0x3.6x5 (SL3) and 11.0x5.0x5 (SL3)

Wet – 10.0x3.6x5 (KT3) 035 code and 11.0x4.5x5 (KT3) 049 code

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A3.8 General. A working ignition kill switch must be fitted and marked with a blue triangle to assist marshals in the event of an incident.

A3.8.1 Retail Prices. All prices will be subject to an agreed yearly increase. The retail price of the new assembled kart chassis, as homologated, including brake, chain guard, sprocket carrier, axle sprocket, tank, seat, wheels, but excluding tyres and fairings must not exceed £1372 plus VAT and must be available in standard form.

A3.8.2 Weight. Model B1 minimum 93kg including the driver, Model B5 with electric starter minimum 103kg including the driver.

A3.8.3 Plates. Green with White numbers

A3.8.4 Age. 8th birthday to the 31st December of the year of the 12th Birthday.

B1.0 Group: Junior, Direct Drive

B1.1 Class: Formula Rotax Junior UK

Affiliation: Commercial: J.A.G. Engineering & ABKc

B1.2 Introduction: This class endeavours to provide performance approaching that of Junior I.C.A. combined with low running costs and low noise levels. Lap times are similar to those of Junior I.C.A. It is expected that the class will continue to evolve during its early life and the promoters reserve the right to alter the technical regulations at short notice to ensure safety of drivers, fairness of competition, economy and the wishes of competitors. Enquiries to J.A.G. Engineering, 1 Windsor Business Units, Wealden Business Park, Crowborough, East Sussex TN6 2JJ, ☎ 01892 611805.

B1.3 Chassis: Any chassis conforming to MSA Direct Drive Regulations.

B1.4 Engine: The only engine permitted in this class is the Rotax FR125 JUNIOR MAX.

The Junior Max adheres to the Senior Rotax FR 125 Max fiche plus extensions for the Junior including the cylinder and the carburettor differences. The cylinder is to be of non-Power Valve type. The engine is a single cylinder, liquid cooled, reed valve two stroke. All engines must be sealed between cylinder, crankcases, cylinder head and the reed valve block with an official seal to prevent modification.

All engines are issued with an official identity card. It is the competitors responsibility to ensure that the numbers inscribed on the engine and seal must correspond with those on the identity card at all times Only authorised dealers will be issued with seals for use during maintenance of the engines. The identity card must be filled in and signed by an authorised dealer. The engine must be presented at scrutineering with the official class seal intact and the identity card lodged with the scrutineer. The card must be collected by the competitor at the end of the race meeting. (At club race meetings it is not compulsory for competitors to lodge the identity card with the scrutineers. The identity card must be available for inspection by the scrutineers at any time during the race meeting) Should a seal become damaged, loose or lost during racing it must be reported to the meeting's scrutineer before leaving parc ferme. To allow the competitor to continue racing the scrutineer may at his discretion re-seal the engine with an official MSA seal. The new seal No. must be entered in the engine's identity card and signed by the scrutineer. The engine must be taken to an official dealer with MSA seal intact to be re-sealed with an official class seal before competing at the next race meeting.

B1.4.1 Modifications: The engine and its ancillaries may not be modified in any way unless otherwise indicated by these regulations or the official MSA fiche.

UNLESS IT STATES THAT YOU CAN DO IT YOU CANNOT!!!

The engine must be raced in standard form as manufactured and supplied by Rotax unless otherwise stated. Filing, grinding, polishing, surface treating, machining or lightening of any component is forbidden unless otherwise stated. The addition of material to any component is not allowed unless otherwise stated. All parts used in or on this engine must be of original manufacture or source as supplied by Rotax except where expressly allowed. The engine is to be used with air box, carburettor, fuel pump, radiator, wiring loom, ignition system and exhaust system as supplied by Rotax unless otherwise stated. Position and method of mounting the battery, wiring loom and exhaust system are free providing they are securely fixed to the satisfaction of the meeting's scrutineers and in accordance with MSA Regulations. Filing of crankcase to allow easy fitting of water connection is allowed. Fitting of helicoils and inserts to repair damaged threads is allowed, except for the spark plug thread in the cylinder head insert, providing such repairs are not used to derive any benefit other than