

The National Association for School and Youth Group Karting



Handbook and Regulations 2007

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NatSKA

The National Association for School and Youth Group
Karting


Handbook 2007

NatSKA is a Company Limited by Guarantee


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Registered Office:

183 Seaview Road, Wallasey, Wirral, CH45 4PB



To bring order and method to any sport, it needs to be run in accordance with certain regulations and agreed standards. Team Leaders whose groups are not yet involved in NatSKA should know these before they recommend that a kart building and racing project is set up. All groups participating shall abide by the rules as set out in this Handbook. If further clarification regarding any of these rules is needed please consult with the Technical Director or any other Director of the Association.



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Policy Statement

The NatSKA Policy Statement on Child Protection is as follows:

- ◆ The child's welfare is paramount.
- ◆ All children whatever their age, culture, disability, gender, language, racial origin, religious belief and/or sexual identity, have the right to protection from abuse.
- ◆ All suspicions and allegations of inappropriate behaviour will be taken seriously and responded to swiftly and appropriately.
- ◆ As defined in the Children Act 1989, anyone under the age of 18 years should be considered as a child for the purposes of this document.



NatSKA.co.uk



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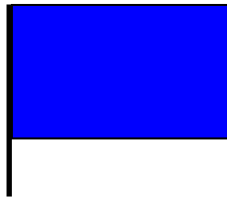
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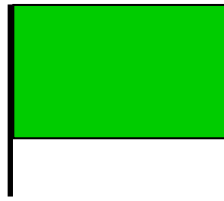
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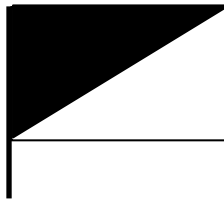
Blue
Overtaking flag



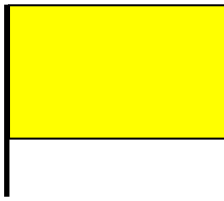
Green
Road clear



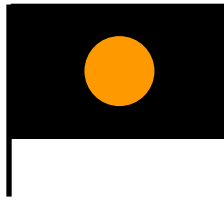
White
Service car or slow moving vehicle



Black/White diagonal
Warning flag



Yellow
Danger, no overtaking



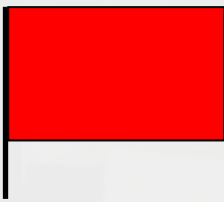
Black/Orange disc
Mechanical failure



Yellow/Red
Slippery surface



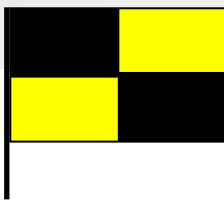
Black
Report to CofC



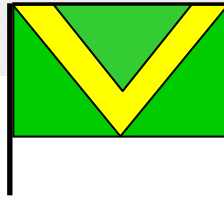
Red
Cease racing



Black/White chequered
End of race



Yellow/Black quartered
Slow down, no overtaking (karting only)



Green/Yellow chevron
False start (karting only)

Part A: Operating Regulations

A1. The Company

The name of the Company shall be NatSKA Limited, herein after called "NatSKA".

A2. Objects

A2.1 The objects of NatSKA shall be:

A2.1.1 to encourage the formation and development of karting in schools and recognised youth groups;

A2.1.2 to encourage the development of design and technological skills as a necessary branch of education

A2.1.3 to provide opportunity for free exchange of ideas and information between clubs;

A2.1.4 to standardise karting procedures and choice of engine.

A3. Membership

A3.1 There shall be membership classes as defined in Section 3 of the company articles.

A3.1.1 "Committee Members" shall undertake the management of NatSKA and shall be deemed as the Directors of NatSKA.

A3.1.2 "Full Members" shall be the Leaders of participating teams engaged in events and activities organised by NatSKA. A Team Leader must be a qualified teacher, a recognised youth leader or an individual nominated by the Governing Body of the school or youth group and approved by the Board of Directors.

A3.1.3 The Directors may from time to time admit any person, organisation or body as an additional member and may at their discretion remove any such person or body from the list of members.

A3.2 Full membership shall be open to any school or youth group, recognised by NatSKA, provided that

A3.2.1 the activity is sanctioned by the Governing Body and, if applicable, by the Head Teacher and LEA, and

A3.2.2 the group agrees to abide by the rules, regulations and obligations of NatSKA (failure to do so may result in exclusion from NatSKA.), and

A3.2.3 on joining NatSKA or renewing membership the appropriate Membership Form (Form F01) is completed, and

A3.2.4 the members of a member youth group entitled to take part in NatSKA activities shall be restricted to those whose permanent residence is within a ten mile radius of the registered address of the Youth Group. Exceptions to this rule may only be allowed by the Directors upon written application from the Team Leader.

A3.2.5 It is strongly recommended that all members carry out voluntary Criminal records Bureau (CRB) checks on adult helpers.

A3.3 When approved in writing by the Governing Body, a school may allow pupils who have left that school to continue to be full racing members of that school team until the 31st July after their 18th birthday when they have been taken on in employment under an approved apprenticeship scheme (the date on which the licence issued to them will expire). Teams should note that once a pupil has left school, even if in full time education at another establishment, they will not be covered by the member school's insurance and it is the student's responsibility to arrange suitable personal cover. Under special circumstances, and strictly on receipt of and agreement by the Directors, an individual letter of application from the team leader of the team involved; a driver, who has competed on a regular basis in NatSKA events, may apply for an extension of his licence for a period of

one calendar year in addition to the regulations stated in the NatSKA Handbook of that year. The driver must be in full time education at the same school as he/she attended for his current involvement in NatSKA events. The Directors to consider the application on an individual basis.

A3.4 Team Leaders are advised to check with their Local Authority that parents and pupils who have left the school are covered by their mini-bus insurance policies, as practice in this area varies in different parts of the country.

A3.5 Where a new team cannot be formed in a school or youth group then proposals in writing for affiliation to another existing team, within a ten mile radius of that school or youth group shall be brought to the Directors for approval. Team leaders must ensure that before an affiliated member starts to drive as a novice, agreement in writing has been obtained from the Governing Bodies of both the affiliates school/club and the teams school/club. Copies of these consents to be held by the Membership Director.

A3.5.1 Where a team already exists and Team Member wishes to affiliate to another team, this may be possible when:

a) both Team Leaders and Governing Bodies are in agreement; this to be supported in writing explaining why team member wishes to affiliate.

b) by approval of the NatSKA Committee. Where the Team Member in question has a direct connection to a director, this would require the support of the members by postal vote.

c) that rules A3.3 and A3.4 are adhered to.

A3.6 Children of Team Leaders may be allowed to join their parent's team with the approval of Head Teachers and youth group leaders.

A3.7 Arbitration

Where a full member or team member are experiencing difficulties within the team, either the team leader or team member can approach the committee to act as arbitrators.

A3.7.1 The scheme is an entirely voluntary system of dispute resolution: it will only apply if both parties have so agreed.

A3.7.2 Any agreement to submit a dispute to arbitration must satisfy the following requirements:

a) The agreement must be in writing an existing dispute

b) The agreement must concern an existing dispute

c) The agreement must not seek to alter or vary any part of NatSKA Handbook and Regulations

d) The agreement must not seek to alter or vary any part of a team/club constitution

Where an agreement fails to satisfy any one of these requirements no valid application to the scheme will have been made, and the parties will have to settle their dispute by other means.

A3.7.3 Resolutions of disputes is intended to be confidential, informal, and relatively fast and cost efficient. Arbitral decisions ("Awards") will be final and must be abided by both parties with very limited opportunities to appeal or otherwise challenge the result.

A3.7.4 Appeals must be put to a postal vote of the full membership

A3.7.5 For the purpose of A3.7:

1. Full Member is as defined in A3.1.2

2. Team Member maybe either:

a) Pupil

b) Parent

c) Anyone associated with the team

A4. Voting Rights

A4.1 Voting rights at the Annual General Meeting (AGM), Extraordinary General Meetings (EGM) and any other general meetings will be one vote per member school or youth group on production of the clubs membership card.

A4.2 At an AGM or EGM members will be entitled to proxy votes as in A4.1. These votes must be sent in writing to the Secretary, to be received by the first post on the day before the meeting. Each vote must refer specifically to a proposal and may not be used to vote for or against any amendment which the meeting may put to that proposal, and may not be used to vote for or against a motion once that motion has been amended.

A4.3 The Chairman of any meeting, in addition to his or her own vote as a member, shall also have a casting vote.

A4.4 All directors shall each have one vote.

A5. Subscriptions

Subscriptions will become due from September every year and must be received by the Membership and Licensing Director by last post on the day before the AGM. Full membership will be £35 per annum. Subscriptions renewed on or after the AGM will be charged at £55 per annum per member. Membership to run from the date of one AGM to the date of the next AGM. Members who have not renewed their subscription by last post on the day before an AGM will lose their right to vote at that AGM and all other benefits of membership.

A6. Records Officer

If possible the Directors shall appoint a Records officer to build an archive of information and maintain it up to date.

A7. Annual General Meeting

A7.1 NatSKA shall in each year hold an Annual General Meeting (AGM), in addition to any other meetings in that year and shall specify the meeting as such in the notices calling it. Not more than 15 months shall elapse between the date of one AGM of NatSKA and that of the next. Provided that so long as NatSKA holds its first AGM within 18 months of its incorporation it need not hold it in the year of incorporation or in the following year. The AGM shall be held at such time and place as the Directors shall appoint. All General Meetings other than the AGM's shall be called Extraordinary General Meetings.

A7.2 The Secretary shall give at least 21 days notice in writing of the AGM.

A8. Extraordinary General Meeting

A8.1 The Directors may, whenever they think fit, convene an Extraordinary General Meeting (EGM) and an EGM shall also be convened on the requisition of three or more voting members or in default may be convened by such requisitions as provided by Section 368 of the Act. If, at any time, there are not sufficient directors capable of acting to form a quorum, any Director, or any three voting members of the company, may convene an EGM in the same manner, as nearly as possible, as that in which meetings may be convened by the Directors.

A8.2 This meeting is to be called within 21 days of the receipt in writing of the request.

A9. Directors Meetings

At each meeting of the Directors one item on the agenda will be the discussion of proposals, from the membership for the amendment of the Operating Regulations, NatSKA Meeting Regulations, Kart

Specifications or Kart Classes with a view to these being implemented or carried through to the next AGM.

A10. Quorum

Twenty per cent (20%) of the voting membership of NatSKA shall constitute a quorum. At a General Meeting only paid up members shall be entitled to vote.

A11. Directors

A11.1 Directors shall be elected at either an AGM or EGM. Nominations must be made by a team leader not less than 14 days prior to the meeting, in writing and seconded by a different team.

A11.2 The Directors shall be Chairman, Vice-Chair, Secretary, Treasurer, Technical Director, Membership and Licensing Director, Southern Regional Director, Northern Regional Director, Competition Secretary, Development Director and Promotions Director.

A11.3 The Chairman to be elected for a period of three years, all other directors to relinquish their posts annually but be eligible for re-election.

A12. Auditor

The Accounts of NatSKA will be produced annually by a professional body for submission to Companies House and the AGM.

A13. National Licence Scheme

A13.1 In order to obtain a Novice Licence the driver must be at least 10 years of age and fulfil the following requirements:

A13.1.1 prior to the first meeting in which the driver wishes to take part the driver must apply to the Membership and Licensing Director for a Novice Licence, using form F03;

A13.1.2 the driver must have completed the current Oral test;

A13.1.3 if the driver is an affiliated member of the team the appropriate form F08 must be completed and submitted with the licence application;

The team leader shall send the application together with the appropriate fee, a passport size photograph with the driver's name printed clearly on the back and a stamped addressed envelope to the Membership and Licensing Director who will issue a Novice Licence and Record Card (Form F02) on which a record of all practice and marshalling events and must be kept. The application and licence number shall be filed for future reference.

A13.2 To upgrade from a Novice Licence to a Full Racing Licence the driver must fulfil the following requirements, evidence of which shall be recorded on the driver's record card:

A13.2.1 be observed to have driven competently in two practice sessions at two separate NatSKA race meetings by a suitably experienced team leader from another school or youth group who must complete the appropriate section of the National Licence Application Form. A suitable novice observer may be nominated by a team leader to assist with the role of signing novice licences.

A13.2.2 be observed to have driven competently in two race sessions having started from the back of the grid at two separate NatSKA race meetings by either the MSA Steward or MSA Clerk of the Course. Only the MSA Steward or the MSA Clerk of the Course may complete the appropriate section of the National Licence Application Form.

A13.2.3 on completion of the required signatures the driver must continue to

start from the back of the grid for the remainder of the meeting.

A13.2.4 marshal competently during at least four practice or race sessions at NatSKA meetings;

Upon completion of the requirements of A13.2 the team leader shall send an application for an upgrade to an existing licence (Form F04) together with a passport size photograph with the driver's name printed clearly on the back and a stamped addressed envelope to the Membership and Licensing Director who will issue a Full Licence. The application and licence number shall be filed for future reference.

A13.3 The requirement of regulation **A13.3.1** is waived provided that the driver holds and produces a full MSA Karting licence with their application form. The applicant must present evidence to the Licence Director that he/she has obtained six Kart race signatures from MSA Stewards. The requirements of regulations A13.1, A13.2.2 and A13.2.3 still remain. In this instance the certification of competency outlined in regulation A13.2.3 must be carried out at the drivers' first race meeting, during practice, by the Clerk of the Course or his nominated observer and signed off by said observer before racing.

A13.4 Licences shall be valid as shown in appendix B.

A13.5 The charges for a Novice Licence, upgrade to a full licence, renewal of a lost licence and temporary licences shall be set at the AGM. The new charges shall be effective from 1st January following each AGM. The charges are as noted in Appendix B.

A13.6 There will be a tear off slip on the application for an upgrade to an existing licence, which shall entitle the

applicant to race for up to 30 days from the time of completion of the requirements of A13.2 until he/she receives a full licence.

A13.7 A licence will only be valid whilst the driver is a member of the school team or youth group named on the licence. The driver must reapply for a licence if he/she changes school or youth group.

A13.8 The driver shall produce his/her licence at official scrutineering at a NatSKA event.

A13.9 The team leader responsible shall ensure that applicants are competent and safe when driving, and that applications for upgrading to a full licence are not made too early.

A13.10 It is the responsibility of team leaders to ensure that licence photographs are up to date. If it is necessary to update a licence, send the old licence, a new photograph and a stamped self addressed envelope to the Membership and Licensing Director for renewal.

A14. Medical Declaration

A14.1 Any applicant for a NatSKA Licence with a congenital abnormality of any limb, or amputation or with any other disability should first contact the NatSKA Directors who will be pleased to advise and help the applicant.

A14.1.1 The following are regarded as being incompatible with fitness to race: Paraplegia, Hemiplegia, quadraplegia, epilepsy, myocardial infarction, myocardial ischemia, coronary artery by-pass surgery, coronary angioplasty, valvular disease of the heart or other abnormal condition whether operated on or not, and severe hypertension which has given rise to cardiopulmonary problems.

A14.1.2 It is strongly recommended that asthmatics should wear an identity

tag (ie bracelet or necklace) declaring that they are asthmatic and that they should inform the event's chief medical officer of their condition prior to competing.

A14.1.3 When applying for a NatSKA licence all applicants are required to declare any physical disability.

A14.1.4 Disabled drivers may be required to provide a note from his/her GP describing the applicant's disability and, if applicable, an opinion from any specialist who has been consulted. The cost of any such report shall be the responsibility of the applicant.

A14.2 The above regulations are intended as a guide for applicants. It is the responsibility of the applicant to ensure that they are fit to hold a NatSKA licence.

A15. Expenses and Payment

A15.1 For any expenditure on behalf of NatSKA over £50 quotations shall be sought and submitted to the Treasurer for approval.

A15.2 Payment of out of pocket expenses will only be made upon production of a receipt with the exception of petrol costs which shall be paid at a rate to be set by the Directors from time to time.

A15.3 Payments due to NatSKA shall be paid within 28 days of the date of invoice/request. Failure to honour any payment may result in sanctions being taken against the debtor.

Part B: NatSKA Kart Meetings

B1. Generally

B1.1 These regulations combine the requirements of both organisers and competitors at kart meetings. By this means it is hoped that all concerned with karting will obtain a clear picture of the activity and organisers will find their tasks simplified.

B1.2 No meeting may take place without due reference to the relevant, current Road traffic Act.

B1.3 All NatSKA kart meetings held at licensed MSA circuits shall have the appropriate MSA Permit.

B2. Insurance

B2.1 All schools and youth groups must consult their controlling authority with regard to insurance.

B2.2 All teams should have in place third party insurance cover as required by their school, Local Education Authority or Governing Body.

B2.3 All students/pupils/youth group members attending NatSKA meetings shall be covered by Personal Accident Insurance for the duration of all meetings. It is strongly recommended that cover be put in place for travel days outside of the event duration. Adult team members /helpers/leaders may also obtain cover at their own discretion.

B2.4 Team leaders are urged to ensure that all safety precautions are observed with regard to driver instruction, kart construction, track procedure and track layout.

B2.5 Team leaders must gain the permission of their sanctioning body before carrying out any karting activities.

B3. Track Safety and Inspection

The entire circuit shall be given a safety inspection, before the drivers' briefing,

and at any point during the meeting when, where the track conditions have changed, by the MSA Clerk of the Course, Club Stewards, and MSA Steward if present. The inspection shall be performed specifically to check the safe condition of the circuit, e.g. tyre barriers in place and intact, stones/metalwork/other debris not on track, condition of run off areas, provision of marshalling points, notification of other general hazards.

B4. Equipment

B4.1 The following signalling equipment shall be available at all events:

B4.1.1 for the Clerk of the Course, red and black flags;

B4.1.2 for each Flag Marshal Post: red, green, yellow, white, blue, black and yellow quartered flags;

B4.1.3 for the Starter, starting equipment, standard marshal post flags plus black and white chequered flag, black flag with orange disk in centre, red and yellow striped flag to signify changing track conditions, green with a yellow chevron false start, national flag, black flag, number board and also a board inscribed "Last Lap";

B4.1.4 fire extinguishers (minimum 2kg dry powder, with annual certification that they are in working order) shall be positioned as follows: one at the start line; two in the paddock in clearly visible position; and others at agreed points on the circuit;

B4.1.5 one blackboard and chalk or a suitable means of displaying notices to drivers;

B4.1.6 each team must carry at least one 2kg dry powder fire extinguisher that is in working order in their pit area.

B5. Officials

B5.1 The officials identified in regulation B5.2 shall be appointed and briefed prior to the meeting. They shall be present throughout the event and be responsible for carrying out the duties defined. No chief official shall be under 16 years of age, and these officials shall, where possible, be taken from people who have previous experience of that post at NatSKA meetings. In certain circumstances one official may do more than one job (this does not apply to the Clerk of the Course or the Chief Scrutineer). All officials named in the Supplementary Regulations (SR's) are to wear badges, to be provided by the Secretary of the meeting, stating name and function at all meetings. Only those officials are to act in the functional capacity stated unless the Clerk of the Course co-opts, and announces or publishes to the meeting, other suitably qualified personnel. Team leaders must wear their identifying badges at all times during a meeting.

B5.2.1 Stewards

Two club stewards shall be appointed by the organisers to be responsible for the regulations and ensuring that the officials are performing their duties properly. If appropriate they shall be prepared to be part of a hearing, chaired by the MSA Steward (if present), to consider appeals.

B5.2.2 Secretary of the Meeting

.2.1 Shall be in charge of all paperwork and responsible for all equipment and materials being available.

.2.2 Shall be responsible for receiving any protests or appeals from team leaders, noting time of receipt, and ensuring that all protests are passed on to the Clerk of the Course, and all appeals to the Stewards of the meeting, as rapidly as possible.

B5.2.3 Clerk of the Course

B5.2.3 The Clerk of the Course is the first judicial body. The Clerk and his deputy shall have the power to impose penalties. He/she is responsible for the conduct of the meeting and liaising with other officials as is appropriate. Current MSA permits require that an MSA licensed Clerk of the Course be appointed to this post, who will also be responsible for:

.3.1 in conjunction with the MSA Steward and Club Steward deciding on the abandonment or postponing of a meeting in the event of unforeseen circumstances; and

.3.2 ensuring that no unauthorised running of karts takes place; and

.3.3 declaring a meeting wet, in which case only karts running on wet tyres, with a minimum of 2 mm tread depth over the entire contact area at the start of a heat, shall be allowed to participate (no hand cutting of tyres is permitted). A definition of a wet tyre is given in regulation D2.7.

B5.2.4 Chief Medical Organiser

Shall be appointed in accordance with MSA Permit requirements.

B5.2.5 Chief Scrutineer

B5.2.5 Shall be responsible, with the help of NatSKA recognised scrutineers, for:

.5.1 ensuring that all karts are fit to be driven and comply with current NatSKA specifications; and

.5.2 ensuring that all drivers have suitable clothing and, at all race meetings, a valid NatSKA racing licence; and

.5.3 inspecting and checking specification and identity of all helmets; and

.5.4 re-inspecting any kart and/or helmet involved in an accident; and

.5.5 enforcing current noise limits.

Current MSA Permits require an MSA licensed Scrutineer to be appointed to this position. He/she may be supported by NatSKA “Gold Card” Scrutineers.

It shall be the responsibility of the Team Leader to ensure that all Gold Card scrutineers within a team have access to copies of these regulations together with any updates, addenda, etc., which may be issued during the course of a season.

Each team must provide a Gold Card scrutineer for each meeting who must attend a briefing with the Chief Scrutineer prior to commencement of the safety scrutineering, unless they are new members of NatSKA in which case they must provide a Gold Card scrutineer at meeting they enter starting twelve months after the date of their having first joined NatSKA.

All measuring equipment used by scrutineers must be measured against a test piece held by the NatSKA Committee that will be available at every NatSKA race meeting in the absence of MSA equipment.

B5.2.6 Chief Timekeeper

Shall record times taken if required.

B5.2.7 Chief Lapscorer and Judge

Shall keep a record of the laps covered and act as starting and finishing judge if required. Each team with seven or more over 18 years old shall provide one suitable lap scorer to the team organising the meetings. Organising team to inform on day when and where required. Refer to scoring system in Appendix N for details.

B5.2.8 Chief Course Marshal

B5.2.8 Shall be responsible for:

.8.1 ensuring that the track surface and protective works are maintained in good order throughout the meeting; and

.8.2 ensuring that fire fighting equipment is readily available and correctly sited; and

.8.3 ensuring that track cleaning equipment is sited at suitable points; and

.8.4 supervising the removal of any kart which may have stopped on or adjacent to the track; and

.8.5 seeing that no unauthorised person or persons come within the area of the track.

B5.2.9 Paddock Marshal

Shall assemble drivers in grid order prior to entering the track, ensure that no vehicle goes out onto the track until it has been approved by the Scrutineer and exclude from the grid any unauthorised person or persons.

B5.2.10 Starter

Shall be responsible for starting and finishing events and communicating warnings and other on track penalties to drivers. The starter shall be over 18 years of age and may have a maximum of two assistants, over 16 years of age. The starter shall be a judge of fact. In the event that the start line position also doubles as a marshal post a maximum of 2 marshals will man the post, these marshals shall be over 16 years of age.

B5.2.11 Chief Observer

If a suitably experienced and qualified person is available, i.e. a British Motorsports Marshals Club (BMMC) Kart Observer or equivalent, a Chief Observer may be appointed to observe driving standards.

B5.2.12 Flag Marshals

.1 Flag Marshals may be recruited from those under 16 years of age who have shown responsibility. They must report and be responsible to the Chief Course Marshal. A maximum of three marshals shall be permitted on each marshal post if the marshal posts at a particular circuit are of sufficient size. Marshals shall remain in their posts at all times whilst karts are on the circuit. An experienced marshal is a person who has completed the marshalling requirements of the National Licence Scheme to a standard whereby he/she is eligible to hold a full NatSKA Racing Licence.

.2 It is recommended that each team nominate one person (minimum 18 years of age) to co-ordinate marshalling on behalf of their team and be responsible for the training of parents and students within their team.

B6. Rights and Duties of Organisers

B6.1 The organisers shall be entitled to:

B6.1.1 refuse any entry; and

B6.1.2 exclude any driver or kart appearing on examination to be ineligible for the event; and

B6.1.3 publish mandatory instructions, all race meetings shall have Supplementary Regulations (SR's) and entry details published before the opening date for entries, any changes to the SR's shall be subject to MSA regulation B8.4 as noted in Appendix I; and

B6.1.4 change the order in which events are run at a meeting.

B6.2 The organisers shall be responsible for:

B6.2.1 compliance with these regulations; and

B6.2.2 ensuring that all karts are fitted with effective silencers; and

B6.2.3 ensuring that no unauthorised running of karts takes place before, during or after the meeting.

B6.3 The Organisers of any NatSKA meeting shall sign a declaration (Form F12) stating that the meeting shall be organised and run in accordance with the current NatSKA Handbook and Regulations.

B7. Signals

B7.1 Signals shall be displayed to drivers by means of flags, boards or lights. None of the signals in regulation B7.3 shall be used for any other purpose and no signal shall be given which might be mistaken for one of these official signals.

B7.2 Competitors who fail to obey these signals shall be penalised.

B7.3 The official signals are:

B7.3.1 Red/Green lights or National flag: Start

Red and Green lights are mandatory for the starting signal. The National Flag should only be used as a starting signal if the lights fail.

a) Rolling start – start at the moment flag is raised.

b) Standing start – start at the moment the flag is dropped.

B7.3.2 A Green Flag with Yellow chevron – false start, proceed on further rolling lap in grid formation.

B7.3.3 Blue flag – Stationary: Another competitor is following close behind.

B7.3.4 Blue flag – Waved: Another competitor is trying to overtake.

B7.3.5 White flag: A service vehicle or slow moving kart is on the circuit. The white flag will be waved to indicate the sector of the track that the slow moving vehicle is in, and held stationary whilst the vehicle is in the next sector.

B7.3.6 Yellow flag – Stationary: Danger, slow down sufficiently to

ensure that full control of the vehicle can be retained. No overtaking.

B7.3.7 Yellow flag – Waved: Great danger. Slow down considerably. Be prepared to suddenly change from the projected racing line, or take other evasive action including stopping if necessary. No overtaking.

B7.3.8 Yellow flag with Red Stripes – Stationary: Slippery surface ahead.

B7.3.9 Yellow flag with Red Stripes – Waved: Slippery surface imminent.

B7.3.10 Green flag: All clear, at the end of a danger area controlled by yellow flags. Also used to signal the start of a formation lap and shown at all posts during first lap of each practice session and during the formation lap.

B7.3.11 Red flag: Immediately cease driving at racing speed and proceed slowly, without overtaking, and with maximum caution to pits or start line obeying marshal's instructions, and being prepared to stop should the track be blocked.

B7.3.12 Black flag with Orange disc displayed with the competitor's number: Notification of apparent mechanical failure or of a fire which might not be obvious to the driver. The kart concerned must call at its pit for repairs on the next lap.

B7.3.13 Black and White Rectangular flag split diagonally and displayed with the competitor's number: A warning, to the driver that their behaviour is suspect and that they may be Black-flagged on further reports.

B7.3.14 Black flag displayed with the competitor's number: The driver must stop at their pit within one lap of receiving the signal and report to the Clerk of the Course. A penalty of exclusion may be enforced by display of the Black flag.

B7.3.15 Black and White Chequered flag: End of Race or Practice, cease driving at racing speed and proceed

slowly, without overtaking and with caution to the pits.

B7.3.16 Yellow/Black Quartered flag: This flag may be introduced by the Clerk of the Course following a report from an Observer. The flag will first be displayed at the start/finish line and then in trackwise order at all flag posts. On passing the flag at the start/finish line, the Race leader must slow down sufficiently to a steady pace as used on a rolling start and all competing Karts must line up in order behind the Race leader who will act as the pace setter. No overtaking is permitted. The field will remain in close formation, at reduced speed, for as long as it takes to clear the obstruction or remove the hazard, whatever its nature. Competitors who fail to slow down sufficiently or who overtake under the Yellow/Black flag, thereby gaining advantage, may be excluded or otherwise penalised. When the Clerk of the Course is satisfied that the track is clear, or the problem resolved, the Race will be resumed with a Green Flag at the start/finish line and the simultaneous withdrawal of all Yellow/Black flags around the circuit.

B7.4 At an incident where the track is obstructed, or marshals are working at the trackside, the following signals will be used:

- a) A Stationary Yellow at the post before a Waved Yellow.
- b) A Waved Yellow flag at the post immediately preceding the incident. N.B. In very serious cases, this flag may be supplemented by an additional waved yellow flag at a preceding post.
- c) A Stationary Green flag at the post immediately after the incident.

d) If the incident is well off the track and marshals are not working at the trackside, the incident may be indicated by a stationary yellow flag, followed by a stationary green flag.

B7.5 It shall be an offence to overtake or fail to slow down from wherever yellow flags are displayed until the green flag or next marshal post not displaying the yellow flag is passed.

B7.6 The black flag and black and yellow quartered must be used only by, or on the instructions of, the Clerk of the Course.

B7.7 It is an offence to break formation before crossing the start/finish line when participating in a rolling start.

B8. Licences

All competitors must be holders of a current full NatSKA racing licence or NatSKA novice licence and shall bring their licence to all meetings for inspection.

B9. Eligibility

B9.1 Chassis and engines – any kart entered for a NatSKA meeting must comply with NatSKA's Kart Specifications and be in sound mechanical condition.

B9.2 All karts must be made available for inspection by the organisers at any time during the meeting. Any inspection may include dismantling the karts engine or engines to any extent deemed necessary by the officials of the meeting. The Scrutineer may at his discretion seal the engine and/or associated parts and carry out such inspection after the last heat or at the end of the meeting in which it is used or at a later date by consent of interested parties.

B9.3 All karts and equipment shall be presented for inspection in a clean condition.

B9.4 Any kart which, after the approval of the scrutineer, has been dismantled or modified in a manner which may affect its safety, or which has been involved in an accident, shall be represented for the approval of the scrutineer.

B9.5 Drivers must complete a minimum of three practice laps before competing in any event at racing speed.

B9.6 Before any kart proceeds on the track a check may be made that it has been approved by the scrutineer.

B10. Drivers

B10.1 Only persons who are, at the time of the event, eligible for a NatSKA licence and are accompanied by a nominated team leader of the school or youth group of which they are a member are eligible to enter. If the nominated team leader cannot be present at an event, then written permission is needed from the Head Teacher or recognised controlling body, authorising an alternative team leader to be responsible for the team and signing the scrutineering sheets and parental consent forms that must be brought to an event and handed to the Secretary of the Meeting before the team can race.

B10.2 Teams must have a current Medical Data Form for each of their drivers at the meeting, which must be available in the event of an accident. The only acceptable is Form F07 contained in this document.

B10.3 Any driver at the National Sprint Championship must have, during the preceding twelve months raced in the class they are entering at a minimum of three NatSKA approved meetings after gaining their full

NatSKA licence. At the end of each meeting each team leader is required to submit a list, as form F13, giving the names of all drivers who have raced in a heat and the class in which they raced. Each list is to be signed by the team leader as a true record.

B10.4 All drivers shall attend drivers' briefing prior to taking part in any practice or race sessions. It shall be an offence not to attend drivers' briefing. The penalty for not attending drivers' briefing shall be on the first offence a £10 fine levied on the driver concerned and upon the second and subsequent offences a £10 fine and endorsement of the licence of the driver concerned.

B10.5 Any driver entering classes 7, 8 or 15 from a less powerful class are required to carry an additional rear number plate on his/her kart with the letter "N" clearly displayed and start racing from the rear of the grid for their first two meetings in these classes. It shall be the responsibility of the team leader to properly notify the organisers of the meeting of the status of these drivers when submitting their entry. For the purposes of this regulation classes 7 and 8 are deemed to be of equal performance, whilst Class 15 is the highest class.

B11. Helmets and Clothing

B11.1.1 Drivers shall wear, whilst driving, a crash helmet which conforms to the standards noted below. Visor and complete gloves (of abrasive resistant material and not open backed or mitts) must also be worn when driving. As from 1st January 2007 only helmets complying with the following standards are acceptable:

BS 6658/85 types A and A/FR (type B is not acceptable)

Snell SA2000

Snell SA2005

SFI Foundation 31.1A, 31.2A

FIA 8860-2004

Snell K98 & K2005 (provided that the correct MSA sticker stating "Helmet Approved For Karting Use Only" is attached)

All crash helmets shall carry the current MSA approval sticker.

Note: The new European Standard E22 is not acceptable. Although this has been accepted as an equivalent to BS6658 Type A by the British Standards Institute, the FIA and MSA do not recognise it for motor racing, it is important, therefore, that when purchasing as BS6658 Type A or A/FR crash helmet the purchaser ensures that the appropriate BS sticker has been applied to the helmet.

B11.1.2 The user must ensure that the helmet is to a standard currently specified, that it fits properly, is secured properly and that it is in acceptable condition.

B11.1.3 Only one piece shell full face helmets are permitted.

B11.1.4 A visor must be worn at all times during training, practice and competing, goggles are not permitted. Recommended visor standard (minimum) BS4110Z. Visors must be clear or neutral density filters. "Whirley" visors are acceptable when fitted on top of normal visors, but holes must not be cut in normal visors.

B11.2 In all classes the minimum protective clothing requirements shall be a currently homologated CIK/FMK or MSA approved suit. The latest CIK homologated suits are listed on the CIK website (www.cikfia.com)

Note: From 1st January 2005 suits homologated by the CIK prior to 1st January 1997 are not acceptable.

B11.3 All helmets, suits, gloves and boots must be presented as separate items for scrutineering at all meetings, and be identified as acceptable for the duration of that meeting. Only those items, which have been scrutineered, may be worn at that meeting. Any helmet being failed at scrutineering for a second time will be impounded and may be returned directly to the head of the school or youth club. A record of helmets that have been rejected by the scrutineers will be kept.

B11.4 All drivers must wear footwear that provides adequate cover and protection to the ankles. It is recommended that Kart racing boots are worn. High or stack healed boots are not permitted.

B11.5 All drivers shall present themselves at the designated section(s) of scrutineering with the NatSKA approved driving suit, footwear, helmet and gloves they intend to wear whilst driving.

B11.6 It is strongly recommend-ded that in all classes all drivers should wear a neck support and rib protectors to reduce the risk of injuries.

B12. Drivers' Conduct

B12.1 All persons shall conduct themselves in an orderly manner. Any failure to obey official instructions or any breach of these regulations shall render the driver liable to penalty.

B12.2 There shall be no wild or disorderly driving. No kart may be driven other than in properly authorised areas.

B12.3 The rule of the track shall be "the responsibility for overtaking rests with the driver overtaking".

B12.4 In no circumstances may a kart be driven or pushed in any direction except the direction of racing.

B12.5 Any driver stopping on the track or its verges should move to a position

of safety and only if it is safe to do so, push his or her kart to a position of safety. They shall remain there until an official gives permission to move. In the event of a kart being disabled, the driver must be able to remove his/her own kart from the circuit. Drivers MAY be asked to demonstrate this ability to an appointed official before being allowed to race.

B12.6 Any driver leaving the track more than twice in any one heat, whatever the reason, may be excluded from the race. Where a driver consistently drives with a wheel off the track or leaves the circuit, this may be deemed as "Careless Driving".

B12.7 Any driver attempting to regain the circuit as the consequence of a racing incident must do so at the nearest possible point compatible with safety, and gain no advantage as a result of that action.

B12.8 Manoeuvres liable to hinder or endanger other drivers, such as premature direction changes on a straight, or any other abnormal changes of direction, may be deemed to be careless, reckless or dangerous driving, depending upon their severity.

B12.9 If there is a pit area, it shall be entered and left only by the correct routes. No kart shall be driven in the pit area and no kart shall enter the circuit without the permission of the paddock marshal.

B12.10 Refuelling whilst competing in a heat or final is forbidden, unless permitted by Supplementary Regulations in which case a refuelling area shall be designated with at least two fire extinguishers provided (minimum 2KG dry powder with annual certification that they are in working order). It is expressly forbidden to refuel karts on the track or dummy grid. Drivers must not be in

the kart and the engine must be switched off during refuelling.

B12.11 Whenever karts are fuelled the position of fire extinguishers shall be noted. The engine must not be running and the driver must not be in the kart. No container holding more than five gallons of petrol shall be allowed in the paddock and only containers designed for the storage of petrol shall be used for this purpose.

B12.12 All karts must leave the grid in a safe manner, at slow speed, so as not to endanger the pushers of other karts.

B12.13 After receiving the end of competition (or practice) signal each driver shall continue slowly, without overtaking and with caution to the pit entrance.

B12.14 Drivers shall raise an arm and move off the racing line when slowing or leaving the circuit.

B12.15 Drivers shall be aware of other drivers when driving.

B12.16 No kart engine may be restarted in a heat or final, except karts in gearbox classes, which may be restarted if they stall on the start line when carrying out a standing start. A heat starts once the kart has passed the failed start line. Once any part of a driver's body has touched the track surface then that driver may not continue in that heat.

B12.17 No Kart engine may be run on the dummy grid or surrounding paddock unless the driver is seated in the kart wearing the appropriate racing clothing including a helmet.

B12.18 Kart engines shall not be run whilst the kart is on a kart stand or trolley unless both front wheels are in contact with the ground when properly attached to the kart and the kart is in a condition to be safely driven in a heat.

B13. Race Procedure

B13.1 Notice

Warning to the public.

Motor Sport can be

Dangerous!

Despite the organisers taking all reasonable precautions, unavoidable accidents can happen.

In respect of these you are present at your own risk.

The attention of all persons attending a meeting, including officials, shall be drawn to the following notice:

B13.2 The number practising at any time shall not exceed the maximum permitted on the track for a race. Adequate practice periods must be allotted to all classes which must include sufficient time for competitors requiring observation to be seen. Where possible novice and experienced drivers should be allocated separate sessions.

B13.3 At no time shall gearbox and non-gearbox classes practice or race together. Any gearbox karts taking part in heats with direct drive karts must have their gear change mechanism disabled and secured. It shall be an offence to change gear whilst competing with direct drive karts and the driver committing said offence shall be excluded from the heat, further penalties shall be at the discretion of the Clerk of the Course. However, due regard must be paid to driver experience and the relative speed of the karts if different classes are on the track at any one time during practice or racing.

B13.4 The course or its features or markings may only be changed between the last practice period and the event itself in exceptional circumstances. Should it be necessary to make any change following the scheduled practice an additional period of practice must be arranged.

B13.5 The starting order in which the Karts shall be arranged will be determined by:

- a) Ballot
- b) Lap times recorded in practice
- c) Order of receipt of entry
- d) Finishing order of a preceding race
- e) As defined in SRs

In all races where the grid position is determined by (a), (c) or (e), restricted drivers must occupy the rearmost grid positions.

B13.6 The Pole position shall be on the side of the track that is on the inside of the first corner after the start, or, as defined on the track licence.

B13.7 When the Starter is ready for a race, they must signal by raising a Green Flag. A Marshal will then raise a Green Flag which will be the signal for the Karts to be released on to the circuit. After the marshal has lowered the Green Flag, the entrance to the track will be closed and no further karts will be allowed to join the track.

Once the signal to start the race has been given, karts may not stop, be it intentionally or unintentionally, and make repairs or adjustments. However, they may return to the pits, or a designated maintenance area, to undergo repairs or changes. During a NatSKA Enduro event, the supplemental regulations may indicate the place of driver change, and areas of repair or refuelling.

B13.8 Karts will be formed up in the dummy grid and will be push started when authorized by the Paddock official following the Green Flag being shown.

B13.9 Each track will establish a 'Failed Start Line'. Any competitor who, having passed that 'Safety Line', receives assistance from anyone other

than a signed-on official, may be excluded from the results.

B13.10 Drivers will be under Starter's orders from the moment that the Green flag is displayed.

B13.11 Starts for races shall be:

- a) Non-gearbox karts – A rolling start or a standing start if permitted by the track licence.
- b) Gearbox karts – A standing start with engines running, or a rolling start.

B13.12 In the case of a rolling start, on display of the Green flag, karts will proceed round the course in grid formation at a steady pace to await the starting signal. The karts may be preceded by an official Pace vehicle which will control their speed. If there is no pace vehicle the driver in No. 1 position shall control the speed. When the starter is satisfied that the karts are approaching the start line in correct formation, the starting signal will be given by a Red/Green light signal, or by raising the National flag. It is an offence to break formation before crossing the start line itself and may result in the offender being moved to the back of the grid or otherwise penalised. Such penalties will not incur points or be recorded on a competition licence.

B13.13 The Clerk of the Course (or their designated representative(s) may decide to stop a race or practice. Should a race be stopped by the display of red flags the following procedures shall apply:

B13.14

- a) If 25% or less of the race distance has been completed by the leader, the race shall be abandoned, or if possible, the race should be re-run in its entirety. Unless re-run the race will be null and void.

b) If more than 25% but less than 75% has been completed by the leader, the Clerk of the Course shall, at their discretion, decide to:-

i) Abandon the race

In which case the race (result) shall be declared as the order of finishing the race leader on the last full lap completed by him and before the race was stopped.

ii) Consider the race suspended and run it as a two-part race

In this case, the karts will be restarted in a single file, rolling start. The starting order for the second part of the race shall be the order at the last full lap completed by the leader, before the race was stopped. 'Drivers one lap down' shall be put in their correct position i.e., behind the drivers on the same lap as the leader. The race distance shall be the number of laps required to make up the full race distance. The finishing order of the second part, shall be the finishing order of the race (drivers' one lap down' in the first part shall be deemed to have finished the race 'one lap down' unless they have unlapped themselves).

iii) Re-run the race in its entirety

If the race is to be re-run or completed the following will apply:

While the race is stopped, the whole course shall be considered as Parc Ferme and no work may be carried out to any kart. Mechanics will not be allowed on the circuit until permission is given by the Clerk of the Course and they, or Incident Marshals already on the circuit, shall not approach or touch any kart until permission is given.

If/when authorised by the Clerk of the Course spark plugs may be changed and finger adjustments may be made to the carburettor settings.

If a kart leaves the circuit during the stoppage, it will not be permitted to rejoin the race. Any kart not racing before the incident, that caused the race to be stopped, shall not rejoin the re-started race. Karts involved in the incident that gave rise to the stoppage or who subsequently stopped racing prior to the displaying of the red flag because of the incident, may only rejoin the race if the Clerk of the Course, in consultation with the Chief Scrutineer, is satisfied that a kart is safe to continue without repair, and the Chief Medical Officer is satisfied a competitor is fit to continue racing and they must start at the rear, whether it is run over the full race distance or as a two-part race. Those karts that stopped after the incident that gave rise to the stoppage because they were instructed to do so or because the track was blocked, may join the restarted race in their proper place. Exceptionally, if it is decided to run the race in its entirety but becomes necessary to remove all karts from the circuit, repairs may be made and all karts that came under starter's orders for the original race will be permitted to start the re-run race from the dummy grid in their original positions.

c) If 75% or more of the race distance has been completed by the leader, the race will be deemed to have ended. The race results shall be declared as the order of finishing behind the leader on the last full lap completed by him and before the race was stopped.

B13.15 Race Finish

After receiving the end of race signals all karts must proceed directly to the Parc Ferme without stopping, without giving or receiving any object whatsoever and without any assistance

(except that of marshals, if necessary). Any classified kart unable to reach the Parc Ferme by its own means will be placed under the control of marshals who will supervise the movement of the kart to the Parc Ferme.

B13.17 Parc Ferme

- i) Only authorised officials may enter the Parc Ferme. No intervention of any kind is allowed there unless authorised by such officials.
- ii) When the Parc Ferme is in use, Parc Ferme regulations will also apply in the area between the finishing line and the Parc Ferme entrance.
- iii) Only the driver and one helper permitted per kart.

B14. Penalties

B14.1 Any breach of these regulations may result in the application of a penalty.

B14.2 The penalties shall be as laid down in Appendix A.

B15. Protests and Appeals

B15.1 Any protest or appeal shall be lodged with the Secretary of the Meeting in accordance with regulation B15.2, in writing on the appropriate form (Form F10), stating the grounds for the protest or appeal, by the team leader alone, together with the appropriate fee. The fee for a protest or appeal shall be a minimum of twice the event entrance fee.

B15.2.1 Protests relating to a racing incident must be lodged no later than 30 minutes after the end of the heat in which the incident occurred.

B15.2.2 Protests relating to posted results must be lodged no later than 30 minutes after the posting of said result.

B15.2.3 Appeals must be lodged within 30 minutes of the result of the protest to which the appeal relates being posted.

B15.2.4 All timings made by the officials of the meeting shall be deemed accurate and shall be those used.

B15.3 The parties must have the details of the decision explained to them before any public announcement is made.

B16. Additional Notes for Organisers

B16.1 The organisers of an event will, if possible, provide a dimensioned drawing of the circuit.

B16.2.1 The organisers of a race meeting must use the NatSKA scrutineering/signing on sheet. Only the current form number F09 as included in this document may be used.

B16.2.2 Team leaders must ensure that any adult helpers over 18 years of age sign the Team Helpers Signing On sheet (Form No. F11) as enclosed in this handbook. This must be handed in at race control when the team leader signs on. Any late comers will be expected to visit race control to sign on after the form is handed in.

B16.3 All requests for MSA permits must be notified to the NatSKA Committee. Dates and venues for all meetings should be sent to the NatSKA Competition Secretary as early as possible so that all members may be given a full calendar of events.

B16.4 The organisers of an event shall be responsible for competitors signing on sheets, including examining licences. They should also maintain a record of novice drivers.

B16.5 It is recommended that drip trays shall be used in the paddock to minimise the effect of oil spillage. The pits and paddock shall be left in a clean, neat and tidy state at the end of any NatSKA event.

B16.6 Regulation deleted.

B16.7 A disabled driver will be permitted up to **three** adult assistant on the circuit (provided that that assistants have signed on) to assist with moving the kart to a safe place in the event that the driver fails to finish an event. The assistant must not restart the kart if it should stall or stop in a position that would be the cause of an able bodied driver withdrawing from an event, ie if the kart is beached on a kerb or stuck in long grass.

B16.8 The running in of engines during a race is not permitted.

B16.9 Organisers should ensure that results are ready for prize giving ten minutes after the thirty minutes allowed for protest. Should a protest occur then results should be announced, and prizes given for classes that are not under a protest. Protested classes should be announced within ten minutes of the conclusion after protest.

B17. Useful Checks

B17.1 It is worthwhile inspecting and lubricating karts before each drive and Team Leaders should actively encourage drivers and team members to do so.

B17.2 Special attention should be paid to brakes, steering, wheels and bearings, fuel tap (is it turned on), engine mountings, kart number (correct and legible), position of ignition cut-out, throttle return spring, checking fuel pipes for leaks, checking chassis for cracks and breaks, inspecting and lubricating chain and ensuring that the drivers safety clothing conforms to the regulations.

B18. Spectators and Dogs

Spectators must be behind barriers where applicable and under control. Dogs shall at all times be kept on a lead while at the circuit and are not permitted in the dummy grid area.

B19. Definitions

B19.1 A meeting or event is defined as being all sessions of practice or racing from signing on to prize giving which may span more than one day.

B19.2 A session is defined as one complete run through of all classes involved in a meeting or event.

B19.3 A heat is defined as an individual race or practice for a class, or group of classes competing together in accordance with regulation D7, within a session.

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Part C: Kart Specifications

C1. Chassis

C1.1 The chassis in general shall be of safe, sound and adequately strong construction, shall not include any components of a temporary nature, and shall comply with the following requirements:

C1.1.1 Wheel Base - Minimum 101cm, maximum 127cm, on both sides.

C1.1.2 Length - Maximum overall length of kart 210cm including bodywork.

C1.1.3 Track - Minimum of two-thirds of the measurement of the wheelbase. Maximum 140cm measured to the outside of the wheels.

C1.1.4 Height - Maximum overall height of any part of the Kart from the ground 60cm except for a structure solely designed as a headrest.

C1.1.4.1 Weight – No Kart to be more than 100kg without driver.

C1.1.5 Generally - No detailed specification as to design is laid down, but whatever the construction it must be judged safe by the scrutineers. It must perform safely and present no special hazard to its driver or any other competitor.

C1.1.6 Numbers - Each chassis will be allocated a national number for each meeting which shall be displayed on number plates, in accordance with regulations C16 and D5. This number may not be transferred to another chassis at any time during a meeting. A team may enter multiple chassis as one entry for a meeting but each chassis must be presented at official scrutineering bearing its national number and must be scrutineered by the same scrutineer.

C2. Wheels and Tyres

C2.1 The wheels must be equipped with pneumatic tyres with minimum

and maximum external diameters of 22.2cm and 44.1cm respectively.

C2.2 The attachment of the wheels/hubs to the axles must incorporate a safety locking system such as split pins or self-locking nuts.

C2.3 In the event that a meeting is declared “open” wet or dry tyres may be used. The two shall not be mixed in any combination. In the event that a meeting is declared “wet” only wet tyres may be used.

C3. Bodywork

No form of bodywork may extend behind the rear bumpers. Nothing except a bubble shield, if fitted, may be vertically above any portion of the driver’s head, body or limbs. Any form of bodywork must be soundly constructed and designed to provide maximum safety. No bodywork may exceed a height of 50cm.

C4. Bumpers

C4.1 The kart must have protection (bumpers) connected to the chassis at the front and rear which shall have a strength and construction appropriate to their function. They shall be designed to minimise the risk of the front wheels of a kart being able to ride up over the wheels of another kart in the event of a collision. As a maximum they shall not extend beyond the outer rims of the wheels, at any time, and as a minimum they shall extend to the centre line of the tyre, with the wheels in the straight ahead position.

C4.2 Both front and rear bumpers shall be parallel to the rear axle of the kart.

C4.3 No part of the kart or driver may protrude beyond the bumpers or chassis members except wheels and tyres.

C4.4 The front bumper for karts of all classes shall comprise either:

C4.4.1 – Regulation deleted.

C4.4.2 a commercial front fairing must:

- comprise on its front face, centrally located, a vertical surface (with a tolerance of $\pm 5^\circ$ in relation to the theoretical vertical plane) with a minimum height of 50mm and a minimum length of 300mm located immediately above the ground clearance.
- Not be designed to hold back water, gravel or any other substance.
- Have a ground clearance of 25 mm minimum, 60 mm maximum

that is securely attached to a front bumper which comprises a minimum of a single tube, the top of which must be a maximum of 22cm and a minimum of 15cm above the ground, presenting a flat surface a minimum of 30cm wide and linked to the chassis side members and reinforced by either two tubes, which when viewed from the side must be vertical, firmly attached to the chassis. These tubes shall be a minimum of 20cm apart or in the case of front fairings designed to work without vertical tubes a single, central metal clamp designed to hold the bumper tube in a position so as to lock the commercial front fairing in place. Two commercial metal clips for the fitment of such fairings must be attached to the upper bumper tube and the chassis, used in the way they were designed and cable tied to the chassis.

C4.5 The rear bumper for karts of all classes shall consist of two horizontal and parallel rails with outer extensions forming a closed loop, to be made from at least 18mm diameter tube of at least 16swg thickness material, with two vertical link tubes not more than 25cm apart. The lower rail shall cover, as a minimum the distance between the outer chassis rails. The upper rail and the uppermost extension element must be between 16cms and 30cms above the ground in dry configuration and be

made of tube of at least 18mm diameter with a wall thickness of at least 16swg. No corner of the bumper, when viewed from behind, shall have an external radius of less than 5cm. The lower rail to be up to 13cm above and parallel to the ground in dry configuration and cover at least the distance between the chassis side rails. In a side view the bumper must present a vertical flat face to the rear of at least the distance between the outer chassis rails. The overall width of the bumper must not exceed the width of the rear of the kart at any time, measurement to be taken to the outside of the wheels or tyres, whichever is the greater and must cover at least 50% of the width of each rear tyre.

C4.6 Further guidance regarding front and rear bumpers is given in appendices L and M.

C4.7.1 Lateral Bumpers or side pods must be fitted to all classes of kart on both sides. These may be any commercially available side-pods, provided that the requirements of Figure N6 of the MSA Competitors Yearbook as reproduced in Appendix P are met.

C4.7.2 Regulation not used.

C4.7.3 Side pods must not extend beyond the plane through the outside of the front and rear tyres with the front tyres in the straight ahead position in dry conditions and shall cover two thirds of each rear tyre at all times. In wet conditions the tyres may be inside the pods. The bottom face of the side pod shall be a maximum of 40mm above the ground with the driver in the kart. The surface of the pods must be uniform and smooth. The pod on the engine side may incorporate the possibility of being used as a noise box for the engine intake. Pods may be modified to incorporate provision for an air box,

radiator, transponders and starter access. No other modifications are permitted with the exception that the holes at the front and rear of the pod may be partially or wholly blanked. Side pods must be securely fixed to the chassis frame by a minimum of two points each and may incorporate lateral support to the bottom and face nearest the kart. Lateral support bars must be positively attached to the chassis by a minimum of two fixing points each side.

C4.7.4 Regulation not used.

C4.7.5 Regulation not used.

C4.7.6 Regulation not used.

C4.8 Karts with bodywork shall carry front and rear bumpers, as above, firmly attached to the chassis.

C4.9 All front, rear and lateral bumpers shall be free of grease or oil.

C5. Steering

Steering must be controlled by a steering wheel, which must have a circular shape, and be completely closed. The upper part above 2/3 of the circumference of the wheel may be flat. Flexible steering controls by cable or chain are prohibited. All parts of the steering must have a method of attachment offering maximum safety such as split pins, self-locking nuts. A fixture (jubilee clip or locking collar) shall be fitted to the steering column, below the top support; to prevent the steering column becoming detached should the bottom fastening fail.

C6. Brakes

The minimum is efficient braking, foot operated, on both rear wheels for all classes. Brakes must be either drum or disc type. If a hydraulic system is used, the master cylinder must be fitted in a position safe from impact; hydraulic pipes shall be protected against damage. A secondary connection

comprising a rod or cable of 1.8mm minimum diameter and fit for purpose of sufficient strength to operate the braking system in the event of failure of the primary connection shall be fitted between the pedal and the operating mechanism of the brake.

C7. Exhausts

C7.1 Silencers are compulsory and must be so designed that exhaust gases are carried away from and to the rear of the driver (except where this is prevented by the engine design in a Box Stock class). No part of the silencer or exhaust pipe shall protrude rearward beyond the chassis or bumpers, or sideways beyond a line drawn between the outer edges of the front and rear tyres. The open end must point sideways and downwards so as not to present a hazard. The exhaust system must not constitute a hazard to the driver when he or she is in the normal driving position. Maximum sound levels will be 108 dBA with a microphone set at 1.8m +/- 0.1m above the track, or 105 dBA with a microphone set at 3.6m +/- 0.1m above the track. These maximum values include any tolerance permitted. Tests shall be conducted using a microphone suspended over the track above the normal driving line and connected by cable to the sound level meter. The microphone should be positioned above a straight section of track at a point where karts are at maximum power and in a position where the effects of ambient and reflected sound are minimised. The organisers of any meeting reserve the right to exclude any kart, which in their view is clearly noisier than the others. (Event organisers are reminded that a noise meter must be in use at all times.)

C7.1.1 If overhead readings not taken

then drive by readings can be used at a maximum of 105db.

C7.1.2 Drive by readings:

Will consist of sound readings taken with equipment equal to or better than the minimum requirements of c 12.7 of the 2007 MSA blue book, from any point on the public side of the track fence with the meter at a height of 1000mm minimum from the ground and 3000mm from the track edge and the back ground noise to be at least 10db below the measured level.

C7.2 In classes 6, 7, 8 and 14 exhaust flex must be wrapped with suitable proprietary webbing designed for the purpose in order to reduce noise.

C8. Pedals

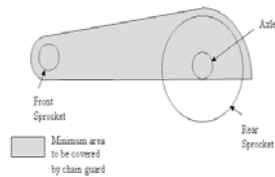
Whatever the position of the pedals, they must not protrude forward of the chassis including the bumper. The accelerator must be operated by a pedal equipped with a return spring and provision must be made at the carburettor for the throttle to be fully closed to the stop when the pedal is released, or in the event of a break in the linkage.

C9. Transmission and Chain Guards

The drive shall always be to the rear wheels. All automatic methods of chain oiling and greasing are forbidden. A chain guard covering the chain, engine sprocket and rear axle sprocket is compulsory. Protection must be provided over the top and both sides of the chain and sprockets and extended to at least the lower plane of the rear axle. It must not be possible for a finger to be inserted into the transmission in the areas covered by the mandatory guard. Access for starters is permitted. Clutches on non-gearbox karts must be

covered, metal guards are recommended. Refer to Fig. C9.

Figure C9



C10. Flooring

All karts must have flooring made from rigid material that stretches from the seat to the front of the chassis, which must be attached with bolts. There must be no possibility of the drivers' feet coming into contact with the track surface.

C11. Seating

C11.1 The seat must provide adequate back and lateral support. The legs of the driver must always be in the front half of the kart.

C11.2 It is recommended that the seat be made of fire retardant material. It must be rigidly located on the chassis and designed to securely locate the driver without movement relative to the chassis when cornering or braking.

C11.3 It is mandatory that all seats comprise metal or nylon reinforcement at all their anchorage points (including seat stays) between the supports and the seat. Reinforcements must have a minimum thickness of 1.5mm and a minimum diameter of 40mm. All seat supports must be securely welded or bolted to the chassis.

C12. Self Starting Karts

C12.1 In the case of karts capable of self-starting, i.e. by means of an electric starter or recoil pull cord, the following shall apply:

C12.1.1 the kart must be fitted with a functional on/off switch, capable of being operated by the seated driver with a gloved hand, the on and off positions must be clearly marked; and

C12.1.2 the driver must be in the driver's seat when the engine is started, with the brake on.

C13. Fuel and Oil Containers

Containers may be of any appropriate material provided they are of leak proof construction and securely mounted. They must not project beyond any of the permanent elements of the chassis at the front or rear.

C14. Fuel Pipes and Feeds

Pipes and feeds must be flexible or have flexible inserts. A positive means of turning off the fuel for gravity feeds shall be easily operable by a gloved hand. Adequate provision must be made to see that any overflow of fuel from vented caps shall not be discharged in a manner that will present a hazard or inconvenience to other drivers. High level or gravity fed fuel tanks are not permitted vertically above any part of the engine and/or exhaust, except where supplied integrally with the engine by the manufacturer. In any case, no part of the tank may be above the top of the seat.

C15. Fuel and Oils

Any unleaded pump fuel as available from any roadside filling station in the UK. ~~The use of bio ethanol fuel is permitted.~~ (Not approved by MSA). No special race fuels or additives other than two stroke oil allowed.

C16. Number Plates

C16.1 All karts shall be fitted with 4 number plates, which shall be fitted to the front rear and both sides of the kart in clearly visible positions. They must

be square in shape and measure 20.5cm. The numbers must be at least 15cm high and each stroke at least 2cm wide. The number plates shall not be made of metal but of a flexible material which is supple enough to be bent through a right angle, and shall have radiused corners. Number plates must be securely attached and be clearly legible. The legibility of the numbers shall be subject to the lapscorer's/scrutineer's approval.

C16.2 Disabled drivers shall carry an additional rear number plate which shall be orange and carry a black letter "A".

C17. Aerofoils

No form of aerofoil shall be fitted to any kart.

C18. Suppression

The engine must be fitted with a radio interference suppresser.

C19. Rear Axle

Care must be taken to ensure that rear hubs are used in the way for which they were designed, i.e. they must not overhang the end of the axle unless they were designed to do so and are provided with suitable fixing methods.

C20. Hand Controls for Disabled Drivers

Special dispensation can be given to any group who have children with lower limb disabilities requiring hand controlled karts, as approved by the MSA, to use modified proprietary chassis to cater for their needs.

C21. Radiator

All karts requiring cooling radiators must meet the following requirements.

C21.1 The radiator must be fitted to the left hand side of the kart, except in

class 15 where it must be fitted as supplied by Rotax,

C21.2 The use of thermal barrier coatings on or in the engine or exhaust system is not allowed.

C21.3 Blanking of the radiator to control engine temperature is free. The use of 'tear off strips' are not permitted. Strong tape may be used providing it is wrapped all the way around the radiator,

C21.4 The use of thermostatic devices is allowed,

C21.5 Minor repairs to the radiator are allowed,

C21.6 All radiators must incorporate a catch tank for the overflow of coolant from the radiator,

C21.7 The radiator cap must have a fixing to prevent it from unscrewing and or falling off, where possible,

C21.8 The use of quick-release hose breaks are allowed,

C21.9 All the hoses must be of a material designed to withstand suitable heat and pressure, and must be secured by clips of a suitable strength to withstand their operating conditions,

C21.10 It is recommended that the hose pipes are securely fastened down in at least two points to prevent contact with the exhaust, axle, brakes or other damaging components,

C21.11 It must be noted that in the case of class 15 the specified regulations laid out by Rotax concerning the radiator must also be adhered to.

Part D: Kart Class Rules and Engine Specification

D1. Generally

D1.1 All engines and transmissions must comply with these regulations. All modifications not detailed herein must be cleared in the first instance with the Technical Officer who must apply to the National Committee for clarification.

D1.2 In all classes where school tuning is permitted, no involvement in the modification, tuning or preparation of chassis or engines is allowed by persons connected in any way, with the karting or motor-sports trades. Engine cylinder boring, crank nose grinding, aluminium welding of engine mounts, rebuilding of crankshafts, engine rebuilds which do not alter the tuning of an engine and welding of chassis members are classed as engineering work that can be bought in, and are unrestricted. Anyone who is uncertain as to whether any of their helpers may come into this category should consult the committee for approval.

D1.3 If any member is in doubt regarding the regulations clarification should be sought from the committee.

D1.4 NatSKA reserves the right to add new classes or to delete or alter existing classes, as listed in regulation D4, at an AGM. Any changes made to classes of racing at an AGM will become operative on 1st January.

D1.5 A group, on first joining NatSKA, may be allowed to run one kart with a commercial chassis in a class where this is not normally permitted in their first year of racing.

D2. Definitions

D2.1 Team Leader – the person or persons accredited by the school /college governors or the governing body of the youth group (or their

representative) and NatSKA to be responsible for the karting of that group at the time of the meeting.

D2.2 Engine – to include crankcase, crankshaft and con rod, cylinder, barrel and head from the same model engine and to be of the original engine manufacturer's specification or pattern to the same specification. After-market ready tuned parts are not allowed. In the case of a gearbox engine being converted to direct drive it is permitted to use two crankshaft halves of the same hand to assist sprocket retention. All engines in all classes must carry an identification number or letter(s), either manufacturer or user applied, in order to match engines to scrutineering sheets, Compliance with this requirement does not affect an engines "box stock" status.

D2.3 School Tuning – all tuning should be done in the school or club workshop by a teacher, leader or recognised helper under the supervision of the team leader. If specific tasks cannot be undertaken in the school or club workshop, they may be undertaken in other suitable premises, under the supervision of the team leader, provided always that the provisions of regulation D1.2 are complied with. The person undertaking the tuning must be declared on the Scrutineering Form at Race Meetings. Race meeting organisers reserve the right to question those whose name is given as the tuner before finalising the results. Should that person not be present, details must be made available by the team leader who may then be questioned. Proprietary exhaust systems available on the open market may be used, but it is prohibited to commission purpose built or designed exhaust systems.

D2.4 Box Stock – as supplied by the manufacturer in its original form, with

no modification either by the removal or addition or substitution of any material or part that forms the original power unit

D2.5 Series Production or Production – being produced, or having been produced, in a minimum quantity of 500; these having been sold, in the UK via the main dealer network, nationwide. Engines must have pre-printed performance figures and specifications available from the manufacturer.

D2.6 Kart chassis

D2.6.1 School built chassis – a chassis will be considered to be school built if all the chassis members are bent or formed in any school workshop, or the place where the youth group normally meets. Welding or brazing of the chassis may be carried out elsewhere. The chassis must conform to the NatSKA Kart Specifications for the classes in which it will be entered.

D2.6.2 Commercial chassis – any commercially available chassis may be used provided that it conforms to the NatSKA Kart Specifications for the classes in which it will be entered and Regulation D4 allows their use.

D2.7 Wet tyres – to qualify as a wet tyre, tyres must be moulded in such a way as to ensure that grooves are created to leave a minimum of 60% and a maximum of 85% of the total surface area as a raised tread pattern. The grooves to have a minimum depth of 2mm at the start of a heat. Hand cutting of all tyres is prohibited.

D3. Tuning Modifications in all Classes Except 5, 10, 11, 12 and 14

D3.1 Maximum bore size must not exceed the limits set in each class specification.

D3.2 Over sized barrels may be relined to original manufacturer's specification with the same material.

D3.3 The onus of proof of eligibility of any engine, in any class, is upon the team leader responsible for the entry at the time of the event.

D3.4 No modification to stroke is permitted.

D3.5 No modification to the con-rod is permitted as supplied by a commercial manufacturer.

D3.6 No modification to the number of transfer passages or number of inlet ports into the cylinder wall is permitted.

D3.7 No modification to the number of exhaust ports and passages is permitted.

D3.8 No externally programmable ignition systems are permitted.

D4. Kart Classes

D4.1 Class 1: 50cc Single Ratio Open

D4.1.1 Engine – any standard production 2 or 4 stroke production engine up to 50cc capacity, with the engine/gearbox fixed in a single ratio. Maximum re-bore must not exceed 2.00mm.

D4.1.2 Tuning restrictions as in D3.1, .2, .3 and .8.

D4.1.3 School built chassis only.

D4.1.4 Rear wheel braking only.

D4.1.5 School tuning only as defined in regulation D2.3.

D4.1.6 This class will compete with and against karts from class 2, separate trophies or certificates will not be awarded for each class and karts from both classes shall be mixed on the grid.

D4.2 Class 2: Honda C70, C90 and C90 Cub Direct Drive

D4.2.1 Engine – Honda C70, C90 and C90 Cub.

D4.2.2 Tuning restrictions as in D3.1, .2, .3, .4, .5, .6, .7 and .8. In addition the standard carburettor and standard Ignition system must be retained. No

modification to the inlet and exhaust passages/valves and no change to the camshaft from the manufacturers specification is permitted.

D4.2.3 School built and commercial chassis' may be used.

D4.2.4 Rear wheel braking only.

D4.2.5 School tuning only as defined in regulation D2.3.

D4.2.6 The standard bore may be re-bored to a maximum of 1.00mm oversize.

D4.2.7 Engines to be locked in one gear and the gear change immobilised whilst racing.

D4.2.8 The internal gears must be the standard fitted ratios as specified by the Fiche for that engine.

D4.3 Class 3: 50cc Gearbox Restricted

D4.3.1 Engine – any standard production 2 or 4 stroke gearbox engine produced with a maximum of 4 gears as listed in appendix D. The original gear ratios and drive train to be retained. Any additional engines to those listed in Appendix D must be presented to the committee for approval before use. Maximum re-bore must not exceed 2.00mm.

D4.3.2 Tuning restrictions as in D3.1, .2, .3, .4, .5, .6, .7 and .8.

D4.3.3 Standard type of carburettor to have a maximum choke size of 19mm.

D4.3.4 Standard disc valve or reed block to be retained but may be modified. All gases must pass through the standard stub, no material may be added.

D4.3.5 No stuffing of the crankcases and/or passages is permitted.

D4.3.6 Original internal gear ratios must be retained. Gearbox output sprocket may be changed.

D4.3.7 Engines eligible for class 4 are excluded.

D4.3.8 School built chassis only.

D4.3.9 Rear wheel braking only.

D4.3.10 School tuning only as defined in regulation D2.3.

D4.3.11 Until such time as regulations for the new 50cc open gearbox class are issued, this class will compete with and against karts from class 4, separate trophies or certificates will not be awarded for each class and karts from both classes shall be mixed on the grid.

D4.4 Class 4: 50cc Gearbox Open

D4.4.1 Engine – any standard production 2 stroke or 4 stroke engine up to 50cc capacity, produced with a maximum of 5 gears. Maximum re-bore not to exceed 2.00mm.

D4.4.2 Tuning restrictions as in D3.1, .2, .3 and .8.

D4.4.3 School built chassis only.

D4.4.4 Rear wheel braking only.

D4.4.5 School tuning only as defined in regulation D2.3.

D4.5 Class 5: 80cc Box Stock

D4.5.1 Engine – “Box Stock” Comer S80 series production engine to current manufacturer's specification or “Box Stock” Comer K80 series production engine to current manufacturer's specification.

D4.5.2 No material may be either added to or removed from the supplied power unit.

D4.5.3 The standard exhaust muffler box to be retained on Comer S80 or K80 engines.

D4.5.4 The standard Tillotson HL166B or HL166C carburettors, without power-valve, must be used on the Comer S80 or K80 engines.

D4.5.5 The centrifugal clutch may be replaced with a manufacturer's alternative or converted to a direct drive sprocket.

D4.5.6 The pull start mechanism may be removed.

D4.5.7 Decarbonising may only be undertaken using solvents.

D4.5.8 Any evidence of the use of abrasive materials/tools will be considered as tuning.

D4.5.9 The standard spark plug or equivalent must be used.

D4.5.10 Essential repairs which do not contravene the spirit of 'box stock' engines may be considered acceptable by the scrutineer. Team leaders are reminded of the provisions of regulation D3.3 and should check before racing that such repairs are acceptable.

D4.5.11 School built or commercial chassis' may be used.

D4.5.12 Rear wheel braking only.

D4.5.13 It is permitted to add a washer or other proprietary item to the high and low jet for the sole purpose of adjusting the carburettor mixture. No other modifications to the carburettor are permitted.

D4.6 Class 6: 100cc Low Power

D4.6.1 Engine – any single ratio drive, 2 stroke or 4 stroke piston, reed or rotary valve timed, air cooled, single cylinder engine with a manufactured capacity of not more than 100cc or two single cylinder air cooled engines with a combined manufactured capacity of not more than 100cc. Maximum power 12.5 BHP (DIN) manufacturer's figure for single cylinder engines and 12.5 BHP (DIN) combined for multiple engine karts. Maximum oversize piston must not exceed the standard by more than 2mm. A list of eligible rotary valve engines is given in appendix E.

D4.6.2 Tuning restrictions as in D3.1, .2, .3, .4, .5, .6, .7 and .8.

D4.6.3 Comer 80 and Racket 85 engines eligible for Classes 5 and 14 respectively are excluded.

D4.6.4 The crank may be modified to take a drive sprocket and/or different ignition.

D4.6.5 The crankcases may be modified to enable gearbox engines to be converted to a single drive.

D4.6.6 No driver-operated clutches are allowed.

D4.6.7 School tuning only as defined in regulation D2.3.

D4.6.8 School built chassis only.

D4.6.9 Rear wheel braking only.

D4.6.10 All exhausts shall be fitted with auxiliary can mufflers with outlet holes pointing downwards towards the track surface.

D4.6.11 All karts shall be fitted with an effective intake silencer.

D4.6.12 All karts shall be fitted with commercial side pods.

D4.7 Class 7: 100cc Piston Ported

D4.7.1 Engine – either Junior TKM BT82 to current MSA /manufacturer's fiche and compliant with section 5 of the Formula TKM regulations and technical guide (where relevant to the Junior Engine) or Yamaha KT100 up to current MSA fiche.

D4.7.2 Tuning restrictions as in D3.2, .3, .4, .5, .6, .7 and .8.

D4.7.3 School built or commercial chassis' may be used.

D4.7.4 Rear wheel braking only.

D4.7.5 Bumpers must conform to NatSKA specifications defined in regulation C4.

D4.7.6 Only tyres for use in MSA Junior Formula TKM classes may be used, ie Maxxis Formula TKM tyres. This will apply to slicks and wet tyres. Wet tyres may be the new or old type.

D4.7.7 This regulation take precedence over the Formula TKM regulations and technical guide section 5.6.

All engines must use a single TKM manufactured aluminium carburettor

restrictor plate. This is a flat metal plate with a mini-mum thickness of 3mm and a central parallel round bore of 19mm maximum diameter through which all the mixture feeding the engine must pass. This part must not be modified or polished in any way and must be made and supplied by Tal-Ko. It must display the genuine TKM logo. If used with the Yamaha KT100 engine this plate may be modified to facilitate fitting as long as the central bore is untouched. No blenders are permitted under any circumstances.

D4.7.8 All karts shall be fitted with commercial side pods.

D4.7.9 All exhausts shall be fitted with auxiliary can mufflers with outlet holes pointing downwards towards the track surface. The use of the new 2007 Tal-Ko homologated exhaust is optional.

D4.7.10 All karts shall be fitted with an effective intake silencer. The use of the new 2007 Tal-Ko homologated air box is optional.

D4.7.11 Drivers must have passed their 12th birthday and have completed at least 4 race meetings in classes 2, 5, 8, 10, 11, 14, 15 or hold a National A MSA karting licence or a fully completed National B MSA karting licence. Before entering this class their NatSKA licence must be returned to the Licensing Director for upgrade.

D4.7.12 As a trial for twelve months starting in January 2007, a kart may use a single TKM manufactured aluminium gold anodised carburettor restrictor plate between the carburettor and engine. This is a flat metal plate with a minimum thickness of 3mm and a central parallel round bore of 20.5mm maximum diameter through which all the mixture feeding the engine must pass. No blenders of any configuration are allowed. This part must not be modified or polished in any way and must be made and supplied by Tal-Ko.

It must display the genuine TKM logo.

The gold anodizing must be intact.

On completion of any part of the event, the combined weight of the kart and driver (the driver must be in full racing equipment) must be a minimum of 129kg. No more than 25kg of ballast is allowed to be added to any kart. All ballast is to be fixed by two mechanical fixings and no one piece to be more than 5kg maximum. Should a kart be using such a restrictor plate as described above the driver must consent to be weighed with their kart, and this trial regulation will supersede regulation D4.7.7.

D4.8 Class 8: 100cc Rotary/Reed

D4.8.1 Engine – eligible engines are as listed in Appendix F.

D4.8.2 Tuning restrictions as in D3.1, .2, .3, .4, .5, .6, .7 and .8.

D4.8.3 Drivers must have passed their 14th birthday and have completed at least 4 race meetings in classes 2, 5, 7, 10, 11, 14, 15 or hold a National A MSA karting licence or a fully completed National B MSA karting licence. Before entering this class their NatSKA licence must be returned to the Licensing Director for upgrade.

D4.8.4 Bumpers must conform to NatSKA specifications defined in regulation C4.

D4.8.5 Rear wheel braking only.

D4.8.6 Carburettor – a standard Tillotson 334A, butterfly type with centre axle with a maximum venturi diameter of 19.8mm. No modifications, other than D4.8.13, are permitted and no components are allowed to enter the carburettor bore. Stuffers, diffusers or blenders are not permitted.

D4.8.7 All engines must use a single TKM manufactured aluminium carburettor restrictor plate. This is a flat metal plate with a minimum of

thickness of 3mm and a central parallel round bore of 19mm maximum diameter through which all the mixture feeding the engine must pass. This part must not be modified or polished in any way, drill one hole for a pulse tube, and must be made and supplied by Tal-Ko. It must display the genuine TKM logo. No blenders are permitted under any circumstances.

D4.8.8 The only dry tyre to be used will be Vega SL6; with a manufacturer's marking of JAG or GB. Wet tyres to be any from MSA direct drive classes.

D4.8.9 All karts shall be fitted with commercial side pods.

D4.8.10 All exhausts shall be fitted with auxiliary can mufflers with outlet holes pointing down-wards towards the track surface.

D4.8.11 All karts to be fitted with an effective CIK approved air box for a 100cc kart.

D4.8.12 School built or commercial chassis' may be used.

D4.8.13 It is permitted to add a washer or other proprietary item to the high and low jet for the sole purpose of adjusting the carburettor mixture. No other modifications to the carburettor are permitted.

D4.9 Regulation not used

D4.10 Class 10: Comer 60 Box Stock

D4.10.1 Engine – “Box Stock” Comer S60 series production engine up to following NatSKA specification.

D4.10.2 No material may be either added to or removed from the supplied power unit.

D4.10.3 The standard exhaust muffler box to be retained on Comer S60 engine.

D4.10.4 The standard Tillotson 166B or 166C carburettors must be used on the Comer S60 engine. The

choke/butterfly unit may not be removed or modified.

D4.10.5 The centrifugal clutch may be replaced with a Comer S80/K80 series clutch or converted to a direct drive sprocket.

D4.10.6 The pull start mechanism may be removed.

D4.10.7 Decarbonising may only be undertaken using solvents.

D4.10.8 Any evidence of the use of abrasive materials/tools will be considered as tuning.

D4.10.9 The standard spark plug or equivalent must be used.

D4.10.10 Essential repairs which do not contravene the spirit of 'box stock' engines may be considered acceptable by the scrutineer. Team leaders are reminded of the provisions of regulation D3.3 and should check before racing that such repairs are acceptable.

D4.10.11 School built or commercial chassis' may be used.

D4.10.12 Rear wheel braking only.

D4.10.13 It is permitted to add a washer or other proprietary item to the high and low jet for the sole purpose of adjusting the carburettor mixture. No other modifications to the carburettor are permitted.

D4.11 Class11: 4 Stroke Box Stock Direct Drive Junior

D4.11.1 Engine – Honda Series QH or QX type up to GX160, or Briggs & Stratton "Vanguard" or "Industrial Plus" production engines up to a maximum 5.5BHP conforming to the tuning regulations contained in appendix J. In the case of the Honda GX160, both engine types are permitted provided that the correct piston for each type of engine is used. Use of the incorrect piston will be deemed to be tuning and a contravention of these regulations.

D4.11.2 Standard exhaust assembly and carburettor must be used; the choke/butterfly assembly and/or filter may not be removed or modified.

D4.11.3 Tuning restrictions as in D3.1, .2, .3, .4, .5, .6, .7, .8 and appendix J. In addition governors must be disconnected externally and may be removed. The 160 valve springs must be changed to standard 140 valve springs.

D4.11.4 No material may be either added to or removed from the supplied power unit.

D4.11.5 The centrifugal clutch must be used.

D4.11.6 Decarbonising may only be undertaken using solvents.

D4.11.7 Any evidence of the use of abrasive materials/tools will be considered as tuning. The lapping of inlet and exhaust valves is permitted.

D4.11.8 The standard spark plug or equivalent must be used.

D4.11.9 Essential repairs which do not contravene the spirit of 'box stock' engines may be considered acceptable by the scrutineer. Team leaders are reminded of the provisions of regulation D3.3 and should check before racing that such repairs are acceptable.

D4.11.10 School built or commercial chassis' may be used.

D4.11.11 Rear wheel braking only.

D4.11.12 Bumpers must conform to NatSKA specifications defined in regulation C4.

D4.11.13 Bolts shown in Appendix Q must be drilled across their flats with a 2mm diameter hole to enable scrutineers to apply lock wire seals if required. In the event that the scrutineers require that an engine be sealed then all karts in class eleven competing at that meeting shall have their engines sealed.

D4.11.14 Drivers must have held a full NatSKA Racing Licence for less than 12 months to compete in this class. Once the driver has held a full NatSKA Racing Licence for 12 months the driver becomes ineligible for this class and must move into Class 12 4 stroke Box Stock Direct Drive Senior or another class.

D4.12 Class12: 4 Stroke Box Stock Direct Drive Senior

D4.12.1 Karts must comply with Regulation D4.11.1 to D4.11.13 in all respects.

D4.12.2 Drivers must have held a full NatSKA Racing Licence for a minimum of 12 months.

D4.12.3 Class 11 shall not be run with Class 12 except where specifically allowed by the Supplementary Regulations (as in the event of the National Enduro).

D4.13 Regulation not used.

D4.14 Class 14: 85cc Box Stock

D4.14.1 Engine – “Box Stock” Racket 85 series production engine to current manufacturer's specification

D4.14.2 No material may be either added to or removed from the supplied power unit.

D4.14.3 The standard exhaust as supplied by the manufacturer to be used on the Racket 85 engine. Lugs may be welded or brazed onto the exhaust silencer to enable longer retainer springs to be fitted.

D4.14.4 The standard Tillotson HS175 type carburettor as supplied with the engine by the manufacturer must be used on the Racket 85 engine.

D4.14.5 Decarbonising may only be undertaken using solvents.

D4.14.6 Any evidence of the use of abrasive materials/tools will be considered as tuning.

D4.14.7 The standard spark plug or equivalent must be used.

D4.14.8 Essential repairs which do not contravene the spirit of 'box stock' engines may be considered acceptable by the scrutineer. Team leaders are reminded of the provisions of regulation D3.3 and should check before racing that such repairs are acceptable.

D4.14.9 School built or commercial chassis' may be used.

D4.14.10 Rear wheel braking only.

D4.14.11 All karts shall be fitted with a CIK approved air box for a 100cc kart.

D4.15 Class 15: Rotax Max.

D4.15.1 Engine – Rotax FR125 Junior Max and Rotax FR125 Max.

D4.15.2 The Rotax FR125 Max must be restricted by disabling the exhaust power valve, which must be fixed in the closed position by means of a NatSKA approved locking kit.

D4.15.3 Any version of the junior or senior engine types may be used.

D4.15.4 Dry tyres must be those used currently or previously in Formula Rotax Junior UK. Wet tyres to be open.

D4.15.5 Bumpers must conform to NatSKA specifications as defined in Regulation C4.

D4.15.6 Commercial chassis' must be used.

D4.15.7 Drivers must have passed their 14th birthday and have completed at least 4 race meetings in classes 2, 5, 7, 8, 10, 11, 14 or hold a National A MSA karting licence or a fully completed National B MSA karting licence. Before entering this class their NatSKA licence must be returned to the Licensing Director for upgrade.

D4.15.8 Subject to the above the class must comply with the provisions of the

MSA Kart Race Yearbook for both Formula Rotax Junior UK or Formula Rotax 125 Max, depending upon the engine used. The appropriate regulations are reproduced in Appendix R.

D4.16 Class 16: Honda C70, C90 and C90 Cub Gearbox

D4.16.1 Engine – Honda C70, C90 and C90 Cub to run with a maximum of four gears.

D4.16.2 Tuning restrictions as in D3.1, .2, .3, .4, .5, .6, .7 and .8. In addition the standard carburettor and standard ignition system must be retained. No modification to the inlet and exhaust passages/valves and no change to the camshaft from the manufacturer's specification is permitted.

D4.16.3 School built and commercial chassis' may be used.

D4.16.4 Rear wheel braking only.

D4.16.5 School tuning only as defined in regulation D2.3.

D4.16.6 The standard bore may be re-bored to a maximum of 1.00mm oversize.

D4.16.7 The internal gears must be the standard fitted ratios as specified by the Fiche for that engine.

D5. Number Plates

D5.1 National Sprint title holders are entitled to use one additional plate bearing the letter S and shall be entitled to use this plate until the next equivalent championship event.

D5.2 National Enduro title holders are entitled to use one additional plate bearing the letter E and shall be entitled to use this plate until the next equivalent championship event.

D5.3 Combined National Sprint and Enduro title holders are entitled to use one additional plate bearing the letters ES and shall be entitled to use this

plate until the next equivalent championship event.

D5.4 In practice sessions where novices may be driving with licensed drivers, novices are to carry an additional yellow plate with a black letter N alongside their rear number plate. This additional plate must be removed when the kart is being driven by anyone other than a novice.

D5.5 There will be a National Numbering System for all karts operating under NatSKA regulations (i.e. at all events requiring an MSA permit granted in the name of NatSKA).

D5.6 Each class (or pair of classes where classes are combined for event purposes) will have a quota of numbers.

D5.7 The first 10 numbers in each class will be credited to the top ten placings at the National Sprint Championships of the preceding season.

D5.8 All numbers will be reallocated annually, beginning 1st September each year and shall be valid until 31st August of the following year.

D6. Numbers and Plate Colours

D6.1 Class 1 – 50cc single ratio open – blue plates – white numbers

D6.2 Class 2 – Honda C70, C90 and C90 Cub Direct Drive – black plates – white numbers

D6.3 Class 3 – 50cc Gearbox restricted – red plates – white numbers

D6.4 Class 4 – 50cc Gearbox Open – green plates – white numbers

D6.5 Class 5 – 80cc Box Stock – yellow plates – black numbers

D6.6 Class 6 – 100cc Low Power – black plates – white numbers

D6.7 Class 7 – 100cc Piston Ported – red plates – white numbers

D6.8 Class 8 – 100cc Rotary/Reed – blue plates – white numbers

D6.9 Regulation not used

D6.10 Class 10 – Comer 60 Box Stock – red plates – white numbers

D6.11 Class 11 – 4 Stroke Box Stock Direct Drive Junior – red plates – white numbers

D6.12 Class 12 – 4 Stroke Box Stock Direct Drive Senior – red plates – white numbers

D6.13 Regulation not used.

D6.14 Class 14 – 85cc Box Stock – white plates – black numbers

D6.15 Class 15 – Rotax Max – white plates – black numbers

D6.16 Class 16 – Honda C70, C90 and C90 Cub Gearbox – black plates – white numbers

D7. Classes which may be combined for event purposes

D7.1 The following classes may be placed in combined grids for event purposes. The fastest class shall always be placed to the front of the grid.

D7.1.1 Classes 10, 2 and 1.

D7.1.2 Classes 16, 4 and 3.

D7.1.3 Classes 6, 14 and 5.

D7.1.4 Classes 15, 8, 7 and 6.

D7.1.5 Classes 1, 2 and 11.

D7.1.6 From time to time and at the discretion of the event organisers other combinations may be permitted.

D7.1.7 It is allowed for the meeting organisers to modify the possible running orders to reflect changes in class sizes and current trends. The option for the meeting organisers to run any combination will still exist.

Appendix A: Disciplinary Procedures

Offences

Below are noted specific offences under the NatSKA Regulations, contravention of these regulations or any other regulation not specifically mentioned may result in a penalty being applied. In the event that there is no specific NatSKA regulation, the MSA Blue Book shall apply.

Offence Code	Offence	NatSKA Regulation	MSA Regulation
A	A positive result of any test for the presence of alcohol or drugs	-	B20.2
B	Failure to attend drivers briefing	B10.4	C5.4.10
C	Not slowing down or overtaking is an offence from wherever yellow flags are displayed until the green flag or next marshal post is passed.	B7.5	J16.1.2
D	Not complying with flag signals	B7.2	C5.4.2
E	Breaking formation before crossing the start line	B7.7	N6.3.8
F	Receiving outside assistance	-	N10.7
G	Restarting a kart	B12.16	-
J	Action resulting in entry of ineligible kart or driver	B9/B10.1	O1.1.2
K	Any fraudulent act or proceeding in connection with an event or motor sport generally	-	O1.1.3
L	Any proceeding act or prejudicial to motor sport generally		O1.1.4
M	Driving in a manner incompatible with general safety, or departing from the standard of a reasonably competent driver.	B12.8	O1.1.5
N	Misbehaviour or unfair practice	-	O1.1.8
O	Abusive language or behaviour , or assault, within the area under control of the Organising Club*	B12.1	O1.1.9
P	Failure to honour a cheque payable to NatSKA	-	O1.1.10
Q	Failure to agree to eligibility examination	B9.2	O3.2
R	If it is proved to the satisfaction of the Stewards of the Meeting that the author of any protest has acted in bad faith, he shall be deemed guilty of a breach of these Regulations and may be penalised accordingly.	-	O5.7

The Clerk of the Course shall be the first Judicial Body in the cases of the offences noted above except those marked * which shall be dealt with in the first instance by the Stewards of the Meeting.

Penalties

The penalties that may be inflicted are, in order of severity, as follows: reprimand, five-position penalty, exclusion, suspension, disqualification.

One or more of the penalties below may be imposed as appropriate and at the discretion of the Clerk of the Course or Stewards of the Meeting, and a record made on the competitor's licence. Should a competitor receive three penalties within a period of 12 months, it may result in the suspension of his licence for 3 months in addition to any other penalty imposed.

Any competitor who receives a suspension or becomes liable to suspension may request a hearing before the Directors of NatSKA to show why his licence should not be suspended or should be suspended for a lesser period. Any such request shall be made in writing and submitted to the Secretary together with a fee of £100, which shall be non-refundable.

Penalty Code	Penalty
1	A reprimand may be imposed by the Clerk of the Course, the Stewards of the Meeting or the MSA.
2	The Clerk of the Course or the Stewards of the Meeting may move a kart back up to five places in the results.
3	A sentence of exclusion from an event, or part thereof, may be pronounced by the Clerk of the Course, the Stewards of the Meeting or the MSA.
4	A person, body, vehicle or make of vehicle shall be said to be suspended when forbidden, by the Clerk of the Course, Stewards of the Meeting or MSA, to take part in any NatSKA event for a stated period. Suspension shall render void any entry made for an event taking place during such suspension and the entrance fee paid shall be forfeit.
5	A person, body, vehicle or make of vehicle shall be subject to disqualification when permanently forbidden after a meeting of the Directors of NatSKA to take part in any event whatsoever.

Penalties Continued

The penalty for failing to attend Drivers' Briefing shall be as noted in Regulation B10.4

For the offences of reckless driving, dangerous driving, abusive language, physical abuse or the threat thereof, the Stewards of the Meeting are empowered to impose an immediate sentence of suspension of not more than thirty days. If the Stewards of the meeting are satisfied that a physical assault or threat thereof is proven then no further appeal against their sentence is permitted. In the event that a Novice is found guilty of Reckless or Dangerous Driving his or her licence application will need the additional approval of a NatSKA Director (not from the driver's team).

In the event that a team leader wishes to appeal against a penalty imposed by the Clerk of the course, said appeal must be made in accordance with Regulation B15.

These rules shall apply to the competitor; however, if the offence is committed by a non-driving member of the team then the penalty may be transferred to the whole team.

In all cases where a penalty is imposed the competitor shall return his licence to the Membership and Licensing Director for endorsement. Any endorsement shall be valid for a period of 12 months. Endorsements shall be coded as noted above, ie a penalty of exclusion for not complying with flag signals shall be recorded thus: D3(10/9/00). If a penalty of suspension is imposed the period of the suspension shall be included thus: D4(10/9/00)30days.

Endorsements shall be effective for a period of 12 months from the date of the offence. Licence holders may apply to have endorsements removed from their licence after this period has expired. Team Leaders shall forward all information required as if upgrading a Novice Licence to a Full Licence to the Membership and Licensing Director for processing. There shall be a fee charged for this process which shall be the same as that for replacing a lost licence.

Appendix B: Expiry Dates and Fees for NatSKA Licences

Birthday falling on or between	In school year at present	Expires
1 September 1996 to 31 August 1997	Year 4	31 st July 2015
1 September 1995 to 31 August 1996	Year 5	31 st July 2014
1 September 1994 to 31 August 1995	Year 6	31 st July 2013
1 September 1993 to 31 August 1994	Year 7	31 st July 2012
1 September 1992 to 31 August 1993	Year 8	31 st July 2011
1 September 1991 to 31 August 1992	Year 9	31 st July 2010
1 September 1990 to 31 August 1991	Year 10	31 st July 2009
1 September 1989 to 31 August 1990	Year 11	31 st July 2008
1 September 1988 to 31 August 1989	Year 12	31 st July 2007

Type	Condition	Current Cost
Novice Licence	Issued prior to first meeting attended	Free
First Full Licence/Upgrade	Expires on the 31 st July	£10.00
Replacement Licence	If lost	£10.00
Replacement Licence	If transferring clubs	Free
Temporary Licence	Forgotten at race meeting	£5.00

Appendix C: NatSKA Racing Licence Oral Test

The answers are to be rational and full but may be general descriptions rather than evidence of rote learning.

	Question	Answer
Marshalling		
1	When may you walk onto the track?	<i>When instructed to do so by the paddock marshal.</i>
2	If you are marshalling what is it your duty if an accident occurs?	<i>Maintain position and show the relevant flag.</i>
3	If an accident occurs what flag should be displayed and for how long?	<i>A waved yellow flag, from the start of the incident until it is cleared and the track is no longer obstructed.</i>
4	If you are responsible for the yellow flag which section of track should you watch the most?	<i>All of the section between your marshal post and just past the next.</i>
5	If a kart is left unattended off the track but near to it, should a flag be displayed and if so which?	<i>Yes, a waved yellow flag should be displayed if the kart is in a dangerous position, such as the outside of a corner, near the racing line or at a popular overtaking point.</i>
6	When and to whom should the blue flag be shown?	<i>To the driver of a kart who is being caught and overtaken by a much faster kart to be lapped.</i>
7	When and where should the green flag (if used) be displayed?	<i>At the marshal post after an incident while the yellow flag is displayed at the post before the incident.</i>
8	What position should the marshal take up on post?	<i>The marshal with the yellow flag should stand with their back to the traffic whilst the marshal with the blue and green flag should stand facing towards the traffic, the marshals should stand facing each other, never back to back. The marshal facing the traffic should always be aware of traffic approaching the post and be able to warn or pull his partner out of the way in an emergency. Marshals should remain standing at all times.</i>
Kart Preparation		
1	When the kart arrives at the track what should be checked by you?	<i>Tightness of nuts and bolts, that there is fuel in the tank, the brakes are operating correctly, the ignition cut out, the state of the tyres.</i>
2	How do you check tyres, brakes and cut out?	<i>Visual inspection of tyres for splits and accident damage, inflation by use of pressure gauge; brakes by removing the sparking plug, operating the brake pedal and trying to pull or push the kart; ignition cut out by spinning the engine, with the plug out, and looking for a spark between the plug and the head with the switch in both ON and OFF positions (there should be no spark when switch is OFF).</i>
3	What is the maximum size of petrol container allowed in the pits?	<i>Five gallons.</i>

Clothing		
1	What are the minimum clothing requirements for karting?	<i>A driving suit that meets CIK/FMK or MSA standards, footwear giving protection to the ankles, or racing boots; gloves; a safety helmet with goggles or visor.</i>
2	What is special about the gloves?	<i>They must not have open backs.</i>
3	What is the required helmet standard?	<i>BS 6658/85 types A and A/FR (type B is not acceptable) Snell SA2000 Snell SA2005 SFI Foundation 31.1A, 31.2A FIA 8860-2004 Snell K98 & K2005 (provided that the correct MSA sticker stating "Helmet Approved For Karting Use Only" is attached) All crash helmets shall carry the current MSA approval sticker.</i>
Driving		
1	Is driving permitted in the pits?	<i>No</i>
2	When do you go out onto the track?	<i>When instructed to do so by the paddock marshal.</i>
3	In which direction do you drive on the track?	<i>In the direction of racing</i>
4	When driving you may see the following flags, what do they signify?	
a	National Flag e.g. Union Flag	<i>The start of the race.</i>
b	Black & white check	<i>The end of race or practice, cease driving at racing speed and proceed slowly, without overtaking and with caution to the pits.</i>
c	Yellow flag, stationary	<i>Danger, slow down sufficiently to ensure that full control of the kart can be retained. No overtaking.</i>
d	Yellow flag, waved	<i>Great danger. Slow down considerably. Be prepared to suddenly change from the projected racing line, or take other evasive action including stopping if necessary. No overtaking.</i>
e	Blue flag, Stationary	<i>Another competitor is following close behind.</i>
f	Blue flag, waved	<i>Another competitor is trying to overtake.</i>
g	Red flag	<i>Immediately cease driving at racing speed and proceed slowly, without overtaking, and with maximum caution to pits or start line obeying marshal's instructions, and being prepared to stop should the track be blocked.</i>
h	Green flag	<i>All clear, at the end of a danger area controlled by yellow flags. This flag is not used at all NatSKA meetings. Drivers should not recommence racing until they have passed a marshal post that is not showing the yellow flag. Also used to signal the start of a formation lap and shown at all posts during first lap of each practice session and during the formation lap.</i>
i	White flag	<i>A service vehicle or slow moving kart is on the</i>

		<i>circuit. The white flag will be waved to indicate the sector of the track that the slow moving vehicle is in, and held stationary whilst the vehicle is in the next sector.</i>
j	Yellow flag with Red Stripes, Stationary	<i>Track conditions are changing ahead.</i>
k	Yellow flag with Red Stripes, Waved	<i>Slippery surface imminent.</i>
l	Black and White Rectangular flag split diagonally and displayed with the competitor's number	<i>A warning, to the driver that their behaviour is suspect and that they may be Black-flagged on further reports.</i>
m	Green flag with yellow chevron	<i>False Start, proceed on further rolling lap in grid formation.</i>
n	Yellow/Black Quartered flag	<i>The flag will first be displayed at the start/finish line and then in trackwise order at all flag posts. On passing the flag at the start/finish line, the Race leader must slow down sufficiently to a steady pace as used on a rolling start and all competing Karts must line up in order behind the Race leader who will act as the pace setter. No overtaking is permitted. The field will remain in close formation, at reduced speed, for as long as it takes to clear the obstruction or remove the hazard, whatever its nature. When the Clerk of the Course is satisfied that the track is clear, or the problem resolved, the Race will be resumed with a Green Flag at the start/finish line and the simultaneous withdrawal of all Yellow/Black flags around the circuit.</i>
5	What do you do if the Black flag is displayed with your number alongside it?	<i>The driver must stop at their pit within one lap of receiving the signal and report to the Clerk of the Course. A penalty of exclusion may be enforced by display of the Black flag.</i>
6	What does a Black flag with Orange disc displayed with your number mean and how should you proceed if it is shown to you?	<i>My kart has an apparent mechanical failure or a fire which might not be obvious to me. Return to the pits on the next lap, repair the defect and have the kart re-scrutineered before taking part in any further heats.</i>
7	How do you re-enter the pits?	<i>By slowing, raising your right hand and coming to a stop in the pit entrance.</i>
8	What do you do if your kart slows and stops on the track?	<i>Raise your hands in the air, look behind you and if it safe and there is no kart coming get out and pull your kart to the side of the track or preferably onto the verge.</i>
9	When overtaking occurs who carries responsibility?	<i>The person overtaking.</i>
10	How do you recognise a novice on the track?	<i>By his/her additional yellow number plate alongside his/her rear number plate carrying a black letter N.</i>
11	How do you drive when approaching a novice?	<i>With care and giving him/her every consideration.</i>
Racing		

1	How many practice laps do you have to complete before racing?	Three.
2	How do you line up on the dummy grid?	<i>In the order that the race is gridded.</i>
3	What is the purpose of the first lap on leaving the dummy grid?	<i>To enable the karts to start and take up positions as on the grid.</i>
4	How do you drive on this lap?	<i>In such a way as to maintain grid positions. The two leading karts must not drive so slowly as to cause the following karts to stall, or so fast as to spread out the field.</i>
5	How is the start of the race signalled?	<i>By the green light signal or by the raising of the National Flag e.g. Union Flag.</i>
6	What is your precise reaction to either of these signals?	<i>Remain in your grid position and do not pull out of line until you are past the starter, then race.</i>

Appendix D: Regulation Deleted

Appendix E: Regulation Deleted



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Appendix F: Engines eligible for Class 8 – 100cc Rotary/Reed

All engines must be single cylinder with a cast iron cylinder bore and have a maximum cubic capacity of 100cc, without a gearbox. All types of power valve are forbidden.

Engines eligible for use from 1ST January 2001	
Rotary Any engine homologated by the MSA for use in Formula 100 National from 1 st January 1995 to 31 st December 1997.	Reed Any engine homologated by CIK/FMK for use in ICA from 1 st January 1992 to 31 st December 1994
Engine	Engine
Atomikart AKV92	Atomikart AKL92
Comer MIK350V	Comer MIK 350L
DAP T71	DAP T96
DAP T79	Dino 502
FOX 96V	FOX 98
Hetschel KZH 100D	Hetschel KZH 100M
IDK TSV	IDK TSL
Ital MV1	Ital ML1
Kilt KV 103/FA/FK	Ital ML2
Parilla TT36	Komet K35
PCR TSV 100	Kilt KR103
Rotax DSC	Minarelli MAC Me109
Rotax DSC/3	PCR TSL 100
Solo TT42 with new head	RKD CB82
Solo TT46	REFO EM3
TKM KA100	Rotax VM92
TKM KA100 B with new head	Sirio TT95
Tecno OS ITL 100	Solo SR45
	TKM KA101
	Tecno JSE100
Any engine homologated in previous periods	

Engines eligible for use from 1ST January 2004			
Rotary Any engine homologated by the MSA for use in Formula 100 National from 1 st January 1998 to 31 st December 2000.		Reed Any engine homologated by CIK/FMK for use in ICA from 1 st January 1995 to 31 st December 1997	
Engine	Homologation	Engine	Homologation
Arisco Terminator V-95	204/M/95	Arisco Terminator L-95	203/M/95
Atomikart AKV95	275/M/95	Atomikart AKL95	274/M/95
CMP GP-25	231/M/95	CMP MP43 Lam	212/M/95
CRG S20-TI		CRG S10-T1	220/M/95
Dino M1	226/M/95	DAP T85	222/M/95
Fox MC20V	235/M/95	Dino M2	227/M/95
Hetschel KZH-1-D95	241/M/95	Fox MC101	234/M/95
Italsistem MV21	263/M/95	Hetschel KZH 100M95	240/M/95
Jako 1VA	201/M/95	Italsistem ML21	261/M/95
Parilla TT37	251/M/95	Italsistem ML22	262/M/95
PCR TSV 95	277/M/95	Jako 2LA ICA	202/M/95
Refo F3	233/M/95	Komet K95 TT	250/M/95
Rotax R-100 DS-D-R	207/M/95	Parilla MAG95	246/M/95
Saetta SV11	259/M/95	PCR TSL95	278/M/95
Sirio TT53	252/M/95	Rotax VM95	208/M/95
Titan RV1	239/M/95	Rotax VM95 XP	209/M/95
Vortex VR95	289/M/95	Sirio RAP 95	247/M/95
Vortex VR95-B	287/M/95	Sirio KAT 95	248/M/95
		Sirio BAT 95	249/M/95
		Solo SR55	224/M/95
		Titan WL1	237/M/95
		Tecno OS JSE2	285/M/95
		Vortex VL95	290/M/95
Any engine homologated in previous periods			

All of the above engines were originally homologated as air cooled.

The following water cooled variants are also eligible; refer to appendix 2 of the MSA kart race year book 2006.

Water cooled engine variants eligible for use from 1ST January 2004			
Rotary Water Cooled variants registered with the MSA for use in Formula 100 National from 1 st January 1998 to 31 st December 2000		Reed Water Cooled variants registered with the MSA for use in ICA from 1 st January 1995 to 31 st December 1997	
Engine	MSA Variation	Engine	MSA Variation
Atomikart AKV95lc	100lc/13/99	None	
CRG S20 TI lc	100lc/5/98		
DAP T86 lc	100lc/9/98		
Dino M1 lc	100lc/1/98		
Hetschel KZH-100d lc	100lc/4/98		
Italsistem MV1 lc	100lc/6/98		
Italsistem MV21 lc	100lc/8/98		
Italsistem SV11 lc	100lc/7/98		
Kilt KV103lc	100lc/3/98		
Parilla TT37 el	100lc/10/98		
Rotax 100 DS/lc	100lc/4/98		
Saetta SC11 lc	100lc/7/98		
Titan WR1	100lc/12/98		
Vortex VR95 w	100lc/11/98		

Engines eligible for use from 1ST January 2006			
Rotary Any engine homologated by the MSA for use in Formula 100 National from 1 st January 2001 to 31 st December 2003.		Reed Any engine homologated by CIK/FMK for use in ICA from 1 st January 1998 to 31 st December 2000	
Engine	Homologation	Engine	Homologation
Rotax R-100 DS-E-R	100/M/06	Rotax R-100 VM-E	102/M/06
Rotax R-100 DS-E-L	101/M/06	Folghera GM-3	107/M/06
Folghera G-3	106/M/06	Hetschel 100 M 98	117/M/06
Hetschel 100 D 98	114/M/06	Dino M12	122/M/06
Dino M13	121/M/06	Dino M121	123/M/06
CRG SW 97	127/M/06	CRG RPM 100L	130/M/06
CRG TR 97	128/M/06	CRG SS 97	131/M/06
CRG RPM 100V	129/M/06	CRG SL 97	132/M/06
Comer MIK 351 V	141/M/06	Comer MIK 545 F	138/M/06
Comer MIK 351 VTI	142/M/06	Comer MIK 351 L	140/M/06
Frizi Stark FR21	146/M/06	Frizi Stark FR11	145/M/06
Iame Parilla TT38 Super	148/M/06	Iame Komet K55TT	151/M/06
Iame Parilla TT39 Maxi	149/M/06	Iame Parilla 100 Reedjet	152/M/06

Iame Sirio TT56 Super	150/M/06	Iame Sirio 100 Wildcat	153/M/06
Italsistem MV31	160/M/06	Italsistem ML31	162/M/06
Italsistem Saetta SV21	161/M/06	Italsistem Saetta SL21	163/M/06
Haase Titan RV-2	171/M/06	Haase Titan LL-2	172/M/06
MAC Minarelli MC 202	180/M/06	Haase Titan LL-3	174/M/06
PCR ATK EV S 98	183/M/06	MAC Minarelli ME 110	179/M/06
PCR ATK RS V 98	184/M/06	PCR ATK EL S 98	187/M/06
PCR TSV98	185/M/06	PCR ATK RS L 98	189/M/06
PCR TSX2000	186/M/06	PCR TSL 98	191/M/06
Sonik VL 98	202/M/06	Sonik LR 98	203/M/06
Vortex VR/C	228/M/06	Sonik LL 98	204/M/06
Vortex VR/D	229/M/06	Vortex VL/B	216/M/06
Vortex VR/E	230/M/06	Vortex VL/C	218/M/06
Vortex VR/F	231/M/06	Vortex VL/D	220/M/06
		Vortex VL/E	222/M/06
		Vortex VL/F	224/M/06
		Vortex VL/G	226/M/06
Any engine homologated in previous periods			

All of the above engines were originally homologated as air cooled.

The following water cooled variants are also eligible.

Water cooled engine variants eligible for use from 1st January 2006			
Rotary		Reed	
Water Cooled variants registered with the MSA for use in Formula 100 National from 1 st January 2001 to 31 st December 2003		Water Cooled variants registered with the MSA for use in ICA from 1 st January 1998 to 31 st December 2000	
Engine	MSA Variation	Engine	MSA Variation
Vortex VR/cw	Lc/fa/16/00	Haase Titan w12	Lc/ica/15/00
PCR ATK RS V 98 lc	Lc/fa/20/00	Vortex VLC/w	Lc/ica/17/00
Iame Parilla TT38 lc	Lc/fa/22/00	Metalscale Fox mc101 lc	Lc/ica/18/00
Comer MIK 351 V & VTI lc	Lc/fa/25/01	Iame Parilla MAG 95	Lc/ica/21/00
Iame Parilla TT38 Super LC	Lc/fa/26/01	Iame Parilla Reedjet	Lc/ica/23/00
Iame Parilla TT39 Maxi LC	Lc/fa/27/01	Vortex VL95/w	Lc/ica/24/00
Italsistem Saetta SV21 LC	Lc/fa/29/01		
Rotax R-100 DS-F-R/LC	Lc/fa/30/01		

In all cases, engines must match the homologation for their particular year and must not be of later model types.

THE ONUS OF PROOF OF ELIGIBILITY RESTS WITH THE TEAM LEADERS.
IF IN DOUBT CHECK WITH THE TECHNICAL DIRECTOR.

Appendix G: Not Applicable to NatSKA

Appendix H: Not Applicable to NatSKA

Appendix I: Extracts from MSA Competitors Year Book 2007

Alteration to Supplementary Regulations – B8.4

No alteration or addition may be made to the Supplementary Regulations after the commencement of the period for receiving entries unless:

- A: The MSA and all competitors already entered agree in writing to the alteration; or
- B: The Stewards of the meeting so decide for reasons of safety or force majeure.
- C: Where a Championship Permit has been issued, Championship Sporting and Technical regulations may not be amended after publication unless the MSA and all competitors registered for the Championship agree in writing to the alteration. Such amendments must be circulated to all registered competitors, championship Stewards, Eligibility Scrutineer, Clubs organising Rounds of the Championship and to the MSA.
- D: Championships exempt from registering with the MSA do not need to comply with (c) above.

Appendix J: Tuning regulations for Classes 11 and 12 – Honda GX160QH/QX Box Stock

1. Valve springs must be changed for the GX140 type, part number 14752-ZE1000
2. The governor mechanism must be disconnected and may be removed.
3. Only carburettor jets as listed hereafter may be used: sizes 68, 70, 72 and 75.
4. The engine may be rebored to a maximum of 0.75mm only, using Honda standard parts for a GX160 QH and QX type.
5. A linkage may be manufactured to operate the standard hand throttle.
6. The air filter must not be removed or adapted in any way.
7. Fasteners may be drilled and lock-wired to improve safety.
8. NO parts other than genuine Honda parts specified for the type of engine used are to be fitted.
9. NO MODIFICATIONS including any machining, polishing, gas flowing, or adding material to the Honda engine inclusive of induction and exhaust will be permitted (except where permitted in the foregoing regulations).
10. Fuel tank cap securing devices may be fitted.

11. Where the Honda GX160 with the dished piston is used, the piston has a minimum dish of 0.080 as measured from the top of the piston at the outer edge to the lower central portion.
12. PISTON – no lightening of the piston, coating of the piston with Teflon or other substances is not allowed.
13. EXHAUST BOX (MUFFLER) – exhaust pipe flange may not be matched to the exhaust port.
14. FUEL – Any unleaded pump fuel as available from any roadside filling station in the UK. The use of bio-ethanol fuel is permitted. No special race fuel is allowed.
15. ENGINE – the engine used must be the same in all heats. However, in the event of catastrophic/irreparable failure and with the prior permission of the Chief Scrutineer, an alternative engine can be fitted.
16. IGNITION – No alterations of any kind are permitted to the ignition system:
 - i) the flywheel and the key must be retained;
 - ii) enlargement of the coil mounting hole and or resizing of the mounting bolt diameter is NOT permitted;
 - iii) no modification to the flywheel or the nylon blades is permitted;
 - iv) stock Honda spark plug cap must be used.
17. CARBURETTOR – the venturi must remain stock size; no drilling, modifying, plugging or alteration of the of the carburettor body, jet or emulsion tube, needle valve or passages are permitted.
18. HEAD GASKET – the head gasket may not be altered in any way.
19. CAMSHAFTS – camshafts must be properly installed with the timing marks aligned on the camshaft and crankshaft gear.
20. The lapping of inlet and exhaust valves is permitted.

Appendix K: Not Applicable to NatSKA

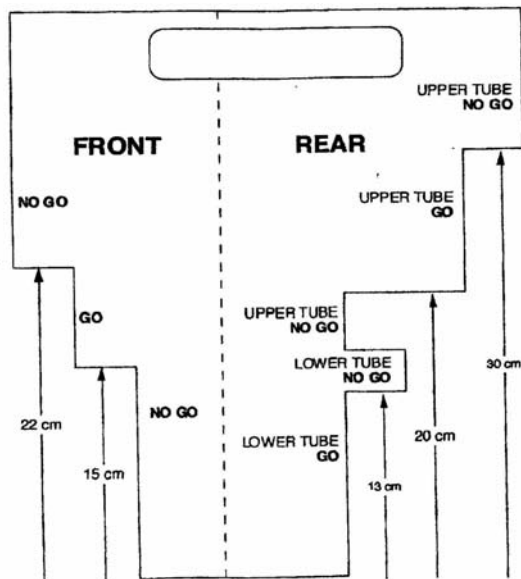


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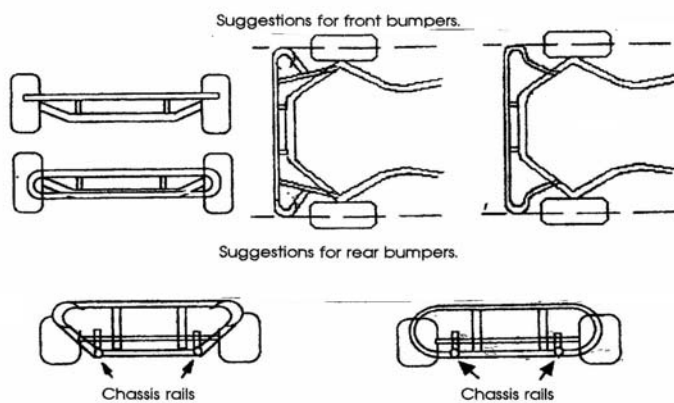


Appendix L: Suggested Template for Bumper Gauge

Not to Scale



Appendix M: Bumpers



NOTE: All external radii of rear bumpers when viewed from behind must exceed 50 mm.

NOTE: Bolts and other fixing devices must not protrude beyond the outer face of front or rear bumpers.

Appendix N: NatSKA Event Scoring System

Sprints scoring – all heats to count

Contributory heats	All points for each kart from each heat are totalled	1 st	= 0 points	
		2 nd	= 2 points	
		3 rd	= 3 points	
		4 th	= 4 points	
		Etc.		
		Non finish		= grid
		Non start		= grid +1
		Disqualification or exclusion by C of C		= grid +2
		Penalty by C of C		= loss of up to 5 places

If the final result is a tie then the result is a tie.

Sprints scoring – best three heats out of four

The number of heats may be varied but the same basic principal applies. Any variation to the principal should be posted prior to the event.

Contributory heats	The best three results will be used and totalled, the worst will be discarded (see note).	1 st	= 0 points	
		2 nd	= 2 points	
		3 rd	= 3 points	
		4 th	= 4 points	
		Etc.		
		Non finish		= grid
		Non start		= grid +1
		Disqualification or exclusion by C of C		= grid +2
		Penalty by C of C		= loss of up to 5 places

Any kart penalised, excluded or disqualified from a heat must use those points in its final score.

For any technical exclusion given by the Clerk of Course the kart is given the points equivalent to DNF, but this can be dropped like any other points score.

In the event of a tie the points from the discarded heat will be used to determine the score. If the final result is still a tie then the result is a tie.

Enduro scoring

The highest number of laps recorded for a kart during a specified period determines the positions in descending order, i.e. highest = 1st, next highest = 2nd, etc. Penalty by C of C = up to 5 laps. Disqualification = exclusion from results.

Driver changeover regulations will be specified in SR's.

Where a team is involved in a changeover at the signal for the end of the event that kart should be allowed to complete the interrupted lap. Where a kart becomes

incapable of continuing then its number of recorded laps up to that point shall be its score. If the final result produces a tie then the result shall be a tie.

Special Meeting - where appropriate or deemed desirable race organisers may run special meeting based on the heats and a final.

Definitions

Grid positions will normally be determined by a random method for the first grid and then in as fair a method as possible thereafter. Single races may be determined by ballot.

Grid is normally the number of entries per class. Where the number of entries exceeds the permitted maximum for the circuit and the grid is "split", the entries will be divided into as near as possible equal numbers for each of their grids. Where there are unequal numbers, the bigger number will be used when calculating points for non finishers etc.

Non Start is a kart which has failed to leave the dummy grid and enter the circuit under starter's orders.

Lap Scoring

Lap scoring should take the form of at least three people independently observing the drivers, this is important should a dispute arise in order that a majority decision may be made. The practice of one person "calling" the drivers is not encouraged. If transponders are used then there should be at least one manual scorer.

Novices

To have novices grided and to do a formation lap at all the race meetings.



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Appendix O: Memorandum, Articles and Certificates of Association

The Companies Acts 1985 and 1989

PRIVATE COMPANY LIMITED BY GUARANTEE AND NOT HAVING A SHARE CAPITAL

MEMORANDUM OF ASSOCIATION OF NatSKA Limited

1. The Company's name is NatSKA Limited
2. The Company's registered office is to be situated in England and Wales.
3. The Company's objects are:
 - (A) to encourage the formation and development of karting in schools and recognised youth groups, to encourage the development of design and technical skills as a necessary branch of education; to provide members with information advice and assistance on matters connected with karting and kart construction; to standardise on karting procedures and choice of engine; to organise events both locally and nationally as from time to time determined and in the furtherance of these objects, but for no other purpose, to raise funds by such ways and means as the company from time to time shall decide, provided that the company shall not undertake any permanent trading activities in raising funds for its primary objects; and as incidental or conducive to any of these objects the Company shall have the following powers:
 - (B) to let out or take on hire as places of assembly, display centres or otherwise any part or parts of any land or buildings and in such divisions and manner as may seem expedient;
 - (C) to edit print and publish books papers reports guide books periodicals circulars articles and other matters whatsoever;
 - (D) to hold conferences seminars meetings lectures courses and discussions;
 - (E) to employ and remunerate all such officers, advisors and servants as may be required for the purposes of the Company and to grant pensions and retirement benefits to or for employees or former employees of the Company and to the widows children or other dependants of deceased employees who are in necessitous circumstances and to pay or subscribe to funds or schemes for the provision of pensions and retirement benefits for employees of the Company their widows children and other dependants;
 - (F) to borrow or raise funds for the purpose of the Company on such terms and on such security (if any) as may be thought fit;
 - (G) to establish promote form and support or aid in the establishment promotion formation and support of any other charitable associations or institutions and to subscribe or guarantee money for charitable purposes in any way connected with or calculated to further the objects of the Company;
 - (H) to raise funds and to invite and to receive subscriptions endowments grants

(whether government municipal or from any statutory or charitable body or otherwise) and donations (whether of real or of personal property) and devices and bequests for all or any of the purposes aforesaid and generally to manage invest and expend all monies belonging to the Company;

- (I) to invest the monies of the Company not immediately required for its purpose in or upon such investments securities or property as may be thought fit subject nevertheless to such conditions (if any) that may for the time being be imposed or required by law and subject also as hereinafter provided;
- (J) to sell or co-operate with others in selling terms any postcards souvenirs novelties promotional items articles and gift merchandise for the purpose of promoting the objects of the Company;
- (K) to establish operate and carry on or to co-operate with others in establishing operating and carrying on in any building which the Company is interested the supply thereof of food and drink and other refreshments by way of sale provided always that the amenities mentioned in this paragraph shall be provided only for the purposes of attending a performance meeting or function sponsored by the Company;
- (L) to make representations at public enquiries appeals or in such other ways as shall appear necessary from time to time in furtherance of the objects of the Company;
- (M) to employ and pay architects engineers construction experts accountants solicitors chartered secretaries and other professional persons clerks and other staff for the purpose of fulfilling the objects of the Company;
- (N) to do all such things as are necessary to the attainment of the above objects or any of them.

4. The income and the property of the Company whencesoever derived shall be applied solely towards the promotion of the objects of the Company as set forth in this Memorandum of Association and no member shall have any personal claim on any property of the Company and no portion thereof shall be paid transferred or distributed directly or indirectly by way of dividend bonus or otherwise howsoever by way of profit to members of the Company provided always that nothing herein shall prevent the payment in good faith by the Company of a reasonable and proper remuneration to any officer or servant of the Company or to any member of the Company in return for any services actually rendered to the Company or interest on money lent or reasonable and proper rent for premises demised or let by any member to the Company but so that no member of the Committee of the Company shall be appointed to any salaried office of the Company or any office of the Company paid by fees and that no remuneration or other benefit in money or moneys worth shall be given by the Company to any member of such Committee except repayment of out of pocket expenses and interest on money lent or reasonable and proper rent for premises demised or let to the Company provided further that the provision last aforesaid shall not apply to any payments to any Company of which a member of the Committee may be a member and in which such member shall not hold more than one hundredth part of the capital and such member shall not be bound to account for any share of profits he may receive in respect of any such payment.

5. The liability of the members is limited.

6. Every member of the Company undertakes to contribute such amount not exceeding £10.00 as may be required to the assets of the Company if It should be wound up while he is a member or within one year after he ceases to be a member for payment of the debts and liabilities of the Company contracted before he ceases to be a member and the costs charges and expenses of winding up and for the adjustments of the rights of the contributors among themselves.

7. True accounts shall be kept of the sums of money received and expended by the Company and the matters in respect of which such receipts and expenditure takes place and of the property credits and liabilities of the Company and subject to any reasonable restrictions as to the time and manner of inspecting the same that may be imposed in accordance with the regulations of the Company for the time being such accounts shall be open to the inspection of the members. Once at least in every financial year the accounts of the Company shall be examined and the correctness thereof and of the balance sheet ascertained by one or more auditor of auditors qualified to act as auditor pursuant to the provisions of the Companies Act 1985.

8. If upon the winding up or dissolution of the Company there remains after the satisfaction of all its debts and liabilities any property whatsoever the same shall not be paid to or distributed amongst the members of the Company but shall be given or transferred to some other Company or charitable institution or institutions having objects similar to the objects of the Company and which shall prohibit the distribution of its or their income or property amongst its or their members to an extent at least as great as is imposed on the Company under or by virtue of clause 4 hereof such Company or institution to be determined by the members of the Company at or before the time of dissolution

I THE SUBSCRIBER TO THIS MEMORANDUM OF ASSOCIATION WISH TO BE FORMED INTO A COMPANY PURSUANT TO THIS MEMORANDUM OF ASSOCIATION

Name and address of subscriber:

PHILIP CHARLES VIBRANS

1 Ashfield Road

Davenport

Stockport

Cheshire

SK3 8UD

England

Dated: 15th May 1998

Witness to the above signature(s):

NEIL EDWARD WAKEFIELD

22 Stopford Street

Edgeley

Stockport

Cheshire
SK3 9HE

Appendix O: Memorandum, Articles and Certificate of Association Continued

The Companies Acts 1985 and 1989

PRIVATE COMPANY LIMITED BY GUARANTEE AND NOT HAVING A SHARE CAPITAL

ARTICLES OF ASSOCIATION OF NatSKA Limited

INTERPRETATION

1. In these Articles:

“the Act” means The Companies Act 1985

“the Seal” means the common seal of the Company

“secretary” means any person appointed to perform the duties of the secretary of the Company

“member(s)” shall have ascribed to it the meaning as defined in section 22 of the Act and means all members who pay a subscription to the Company and any such other individuals or organisations as shall be added or substituted in accordance with articles 3 and 4 hereof

“associate(s)” means any individual company partnership or other organisation resident in part of the world

Expressions referring to writing shall unless the contrary intention appears become construed as including references to printing lithography photography and other modes of representing or reproducing words in a visible form. Unless the context otherwise requires words or expressions contained in these Articles shall bear the same meaning as in the Act or any statutory modification thereof in force at the date at which these Articles become binding on the Company. The regulations in Table C schedule to the Companies (Tables A to F) Regulations 1985 shall except where they are varied by or are inconsistent with the Articles apply to the Company.

OBJECTS

2. The Company is established for the objects expressed in the Memorandum of Association.

MEMBERS

3(a) The subscribers to the Memorandum of Association, Team Members as defined in Article 3(b) and such other persons as the Directors shall admit to membership shall be members of the Company. Every member of the Company shall either sign a written consent to become a member or sign the register of members on becoming a member. Regulation 3 of table C shall be varied accordingly.

3(b) "Team Members" shall be representatives of participating teams engaged in events and activities organised by the Company. A Team Member must be a qualified teacher, a recognized youth leader or an individual nominated by an appointed school headmaster and the governing body of a school or youth group and approved by the Board of Directors.

3(c) All Members must abide by the Company's operating regulations as defined by the Board of Directors.

4. The Directors may from time to time admit any person organisation or body as an additional member and may at their discretion remove any such person organisation or body from the list of members.

GENERAL MEETINGS

5. The Company shall in each year hold a general meeting as its Annual General Meeting in addition to any other meetings in that year and shall specify the meeting as such in the notices calling it and not more than 15 months shall elapse between the date of one Annual General Meeting of the Company and that of the next. Provided that so long as the company holds its first Annual General Meeting within 18 months of its incorporation it need not hold it in the year of its incorporation or in the following year. The Annual General Meeting shall be held at such time and place as the Directors shall appoint. All general meetings other than Annual General Meetings shall be called Extraordinary General Meetings.

6. The Directors may whenever they think fit convene an Extraordinary General Meeting and Extraordinary General Meetings shall also be convened on the requisition of three or more members or in default maybe convened by such requisitionists as provided by Section 368 of the Act. If at any time there are not sufficient Directors capable of acting to form a quorum any Director or any three members of the Company may convene an Extraordinary meeting in the same manner as nearly as possible as that in which meetings may be convened by the Directors.

NOTICE OF GENERAL MEETINGS

7. An Annual General Meeting and a Meeting called for the passing of the Special Resolution shall be called by twenty one days notice in writing at the least and a Meeting of the Company other than an Annual General Meeting or a meeting for the passing of a special resolution shall be called by fourteen days notice in writing at the least. The notice shall be exclusive of the day on which it is served or deemed to be served and of the day for which it is given and shall specify the place the day and the hour of the meeting and in the case of special business the general nature of that business and shall be given in manner hereinafter mentioned or in such other manner if any as may be prescribed by the Company in General Meeting to such persons as are under the Articles of the Company entitled to receive such notices from the Company.

Provided that a Meeting of the Company shall notwithstanding that it is called by shorter notice than that specified in this article be deemed to have been duly called if it is so agreed:-

- a) In the case of a meeting called as the Annual General Meeting by all the members entitled to attend and vote thereat; and
- b) In the case of any other meeting by a majority in number of the members having a right to attend and vote at the Meeting being a majority together representing not less than 95% of the total voting rights at that Meeting of all the members.

8. The accidental omission to give notice of a meeting to or the non receipt of the notice of a meeting by any person entitled to receive notice shall not invalidate the proceedings of that meeting.

PROCEEDINGS AT GENERAL MEETINGS

9. All business shall be deemed special that is transacted at an Extraordinary General Meeting and also that is transacted at an Annual General Meeting with the exception of the consideration of the accounts balance sheets and the reports of the Directors and Auditors and the appointments of and the fixing of the remuneration of the Auditors.

10. No business shall be transacted at any General Meeting unless a quorum of members is present at the time when the Meeting proceeds to business save as herein otherwise provided 50% of the members present in person shall be a quorum. If within half an hour of the time appointed for the Meeting a quorum is not present the Meeting if convened upon the requisition of members shall be dissolved in any other case it shall stand adjourned to the same day in the next week at the same time and place or to such other day and at such other time and place as the Directors may determine.

11. The Chairman if any of the Company shall preside as Chairman at every General Meeting of the Company or if there is no such Chairman or if he shall not be present within fifteen minutes after the time appointed for the holding of the Meeting or is unwilling to act the deputy Chairman shall preside and if he shall not be present the Secretary shall preside and if the Secretary shall not be present the Treasurer shall preside and if the Treasurer shall not be present the Directors present shall elect one of their number to be Chairman of the Meeting.

12. The Chairman may with the consent of any meeting at which quorum is present (and shall if so directed by the Meeting) adjourn the Meeting from time to time and from place to place but no business shall be transacted at any adjourned Meeting other than the business left unfinished at the Meeting from which the adjournment took place. When a meeting is adjourned for thirty days or more notice of the adjourned meeting shall be given as in the case of an original meeting. Save as aforesaid it shall not be necessary to give any notice of an adjournment or of the business to be transacted at an adjourned meeting.

13. At any General Meeting a resolution put to the vote of the Meeting shall be decided on a show of hands unless a poll is (before or on a declaration of the result of the show of hands) demanded:-

- a) by the Chairman; or
- b) by at least two members present in person or by proxy; or
- c) by any member or members present in person or by proxy and representing not less than one tenth of the total voting rights of all the members having the right to vote at the Meeting.

Unless a poll is so demanded a declaration by the Chairman that a resolution has on a show of hands been carried or carried unanimously or by a particular majority or lost and on entry to that effect in the book containing the Minutes of the proceedings of the Company shall be conclusive evidence of the fact without proof of the number or proportion of the votes recorded in favour of or against such resolution.

The demand for a poll may be withdrawn.

14. Except as provided in Article 20 if a poll is duly demanded it shall be taken in such manner as the Chairman directs and the result of the poll shall be deemed to be the resolution of the Meeting at which the poll is demanded.

15. In the case of an equality of votes whether on a show of hands or a poll the Chairman of the Meeting at which the show of hands takes place or which the poll is demanded shall be entitled to a second or casting vote.

16. A poll demanded on the election of a Chairman or on a question of adjournment shall be taken forthwith. A poll demanded on any other question shall be taken at such time as the Chairman of the Meeting directs and any business other than that upon which a poll has been demanded may be proceeded with pending the taking of the poll.

17. Subject to the provisions of the Act a resolution in writing signed by all the members for the time being entitled to receive notice of and to attend and vote at General Meetings (or being corporations by their duly authorised representatives) shall be as valid and effective as if the same had been passed at a General Meeting of the Company duly convened and held.

VOTES OF MEMBERS

18. Every Member shall have one vote.

19. On a poll votes may be given either personally or by proxy.

20. The instrument appointing a proxy shall be in writing under the hand of the appointer or of his attorney duly authorised in writing. A proxy must be a member of the Company.

21. The instrument appointing the proxy and the Power of Attorney or other authority if any under which it is signed or a notarially certified copy of that Power or authority shall be deposited at the registered office of the Company or at such other place as is specified for that purpose in the notice convening the Meeting not less than forty eight hours before the time for holding the Meeting or adjourned meeting at which the person named in the instrument proposes to vote or in the case of a poll not less than twenty four hours before the time appointed for the taking of the poll and in default the instrument of proxy shall not be treated as valid.

22. The instrument appointing a proxy shall be deemed to confer authority to demand or join in demanding a poll and is available from the Secretary.

23. A vote given in accordance with the terms of an instrument of proxy shall be valid notwithstanding a previous liquidation for dissolution of the principal or revocation of the proxy or of the authority under which the proxy was executed provided that no intimation in writing of such liquidation dissolution or revocation as aforesaid shall have been received by the Company at the office before the commencement of the Meeting or adjourned meeting at which the proxy is used.

DIRECTORS

24(a) All Committee Members of the Company shall be deemed to be a Director.

24(b) Directors must be Team Members.

25. The maximum and minimum numbers of Directors shall be determined by the Company in General Meeting but unless and until so fixed there shall be no maximum number and the minimum number of Directors shall be one

POWERS AND DUTIES DIRECTORS

26. The business of the Company shall be managed by the Directors who may pay all expenses incurred in promoting and registering the Company and may exercise all such powers of the Company as are not by the Act or these Articles required to be exercised by the Company in General Meeting but no regulation made by the Company in General Meeting shall invalidate any prior act of the Directors which would have been valid if that regulation had not been made

27. All cheques promissory notes drafts bills of exchange and other negotiable instruments and all receipts for monies paid to the Company shall be signed drawn accepted endorsed or otherwise executed as the case may be in such manner as the Directors from time to time by resolution determine.

28. The Directors shall cause Minutes to be made in books provided for the purpose:

- a) of all appointments of officers made to the Directors;
- b) of the names of the Directors present at each Meeting of the Directors and of any Committee of the directors;
- c) of all resolutions and proceedings at all meetings of the Company and of

the Directors and of Committees of the Directors.

DISQUALIFICATION OF DIRECTORS

29. The office of Director shall be vacated if the member:-
- a) becomes bankrupt or makes any arrangement or composition with his creditors generally; or
 - b) becomes prohibited from being a Director by reason of any order made under Sections 295 to 300 (inclusive) of the Act; or
 - c) becomes incapable by reason of mental disorder illness or injury of managing and administering his property and affairs; or
 - d) resigns his office by notice in writing to the Company.

30. A Director notwithstanding that he or any person connected with him has an interest or duty which is material and which conflicts or may conflict with the interests of the Company may vote in respect of any Contract transaction or arrangement and may be counted in the quorum present at any meeting.

31. No Director shall be required to retire or vacate his office or be ineligible for re-appointment as a Director nor shall any person be ineligible for appointment as a Director by reason of his having attained any particular age.

32. The Company may by ordinary resolution of which special notice has been given in accordance with Section 379 of the Act remove any Director before the expiration of his period of office notwithstanding anything in these Articles or in any Agreement between the Company and such Director.

PROCEEDINGS OF DIRECTORS

33. The Directors may meet together for the despatch of business adjourn and otherwise regulate their meetings as they think fit. Questions arising at any meeting shall be decided by a majority of votes. In the case of an equality of votes the Chairman shall have a second or casting vote. A Director may and the Secretary on the requisition of a member of the Directors shall at any time summon a meeting of the Directors.

34. The quorum necessary for the transaction of the business of the Directors may be fixed by the Directors and unless so fixed shall be at least 51% of the members for the time being of the Directors present in person.

35. The continuing Directors may act notwithstanding any vacancy in their body but if and so long as their number is reduced below the number fixed by all pursuant to the Articles of the Company as the necessary quorum of the numbers of the Directors the continuing members or Directors may act for the purpose of increasing the number of Directors to that number or of summoning a General Meeting of the Company but for no other purpose.

Name and address of subscriber:

PHILIP CHARLES VIBRANS

1 Ashfield Road

Davenport

Stockport

Cheshire

SK3 8UD

England

Witness to the above signature(s):

NEIL EDWARD WAKEFIELD

22 Stopford Street

Edgeley

Stockport

Cheshire

SK3 9HE

England

Dated: 15th May 1998



NatSKA.co.uk



Appendix O: Memorandum, Articles and Certificate of Association Continued



**CERTIFICATE OF INCORPORATION
OF A PRIVATE LIMITED COMPANY**

Company No. 3570657

The Registrar of Companies for England and Wales hereby certifies that
NatSKA Limited

is this day incorporated under the Companies Act 1985 as a private
company and that the company is limited.

Given at Companies House, Cardiff, the 27th May 1998

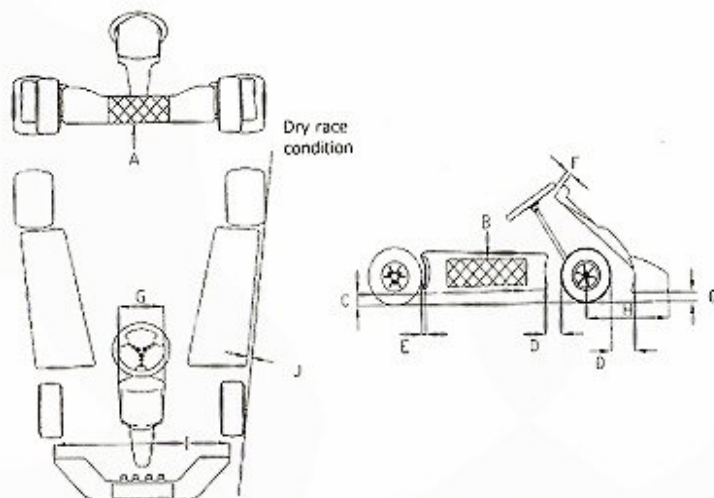
MRS E P OWEN

For the Registrar of Companies



C O M P A N I E S H O U S E

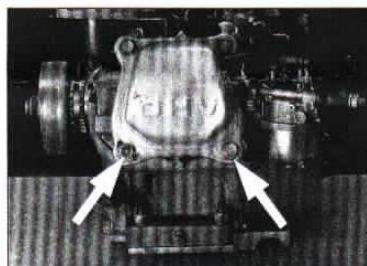
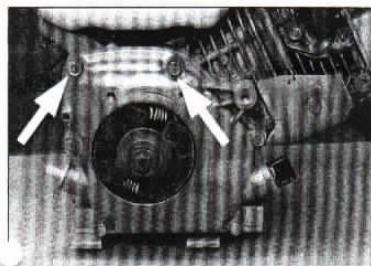
HC007A



Code Letter	Short Circuit	Cadet	Limit	Comments
A	300 X 80 (mm)	See Karl Race Yearbook	Minimum	Vertical surface $\pm 5^\circ$ in relation to theoretical vertical plane.
B	400 X 100 (mm)	See Karl Race Yearbook	Minimum	Vertical surface $\pm 5^\circ$ in relation to theoretical vertical plane.
C	25 mm	25 mm	Minimum	Driver on board
	60 mm	60 mm	Maximum	Driver on board
D	150 mm	150 mm	Maximum	
E	60 mm	60 mm	Maximum	
F	50 mm	50 mm	Minimum	
G	300 mm	300 mm	Maximum	
H	650 mm	450 mm	Maximum	
	800 mm	700 mm	Minimum	
I	1100 mm	1000 mm	Maximum	
J	40 mm	40 mm	Maximum	

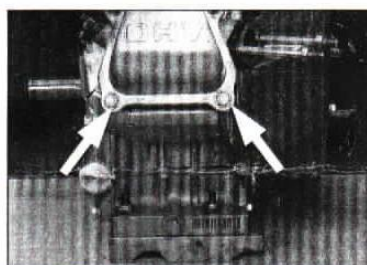
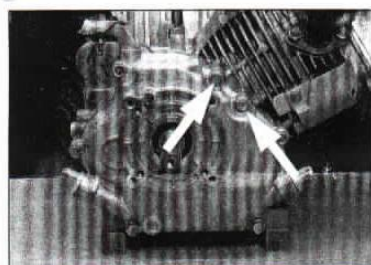
Figure N6

HONDA GX140 AND GX160



**BOLTS INDICATED BY ARROWS
TO BE PRE-DRILLED TO ALLOW
LOCK WIRE SEALING**

BRIGGS & STRATTON CADET AND JUNIOR STANDARD



**BOLTS INDICATED BY ARROWS
TO BE PRE-DRILLED TO ALLOW
LOCK WIRE SEALING**

Appendix R: Extracts from MSA Kart Race Yearbook 2007 for Formula Rotax Junior UK and Formula Rotax 125 Max

B1.0 Group: Junior, direct drive.

B1.1 Class: Not Applicable to NatSKA Class 15

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

B1.2 Introduction: Not Applicable to NatSKA Class 15

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 FR125 Max fiche plus extensions for the Junior including the cylinder and carburettor differences. The cylinder is to be the 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 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 reseal 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 the MSA seal intact and resealed 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 **for the FR125 Max unless otherwise stated**. 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, 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 rectification of damage. The use of thermal barrier coatings/ceramic coatings on or in the engine or exhaust system is not allowed.

Replacement connectors to repair the wiring loom are permitted. Repairs to the starter motor are also allowed.

B1.4.2 Carburettor: Dell'orto VHSB 34 QD or QS

All parts of the carburettor including the body are to be unmodified and run as supplied by Rotax. The carburettor must have VHSB 34 (cast in body) QD or QS (stamped on body). All parts must comply with the official fiche. The only adjustments allowed are the main jet, external air screw, throttle stop adjustment screw and needle position on the five grooves provided. Needle jet atomiser FN266. Choke jet 60. Idle jet 30. Idle jet emulsion tube 30. Needle K27 or K98 (Rotax Part No 261191). Float needle valve 150. Slide 40. Floats 5.2gr. Atomiser type 2. Alternative idle jet 60, idle jet emulsion tube 60, and 3.6gr floats may be used. Idle jets, idle jet emulsion tubes and floats may not be mixed and only used in one of the two following combinations:- Combination 1: Idle jet 30, idle jet emulsion tube 30, floats 5.2gr; Combination 2: Idle jet 60, idle jet emulsion tube 60, floats 3.6gr. The venturi must have 34 cast and 12.5 or 8.5 stamped on the top of the venturi. Throttle cable and adjusters are free. It is permitted to use a single length of vent tube looped across the two air vents of the carburettor with a hole or slot cut in the side of the vent tube at the top of the loop.

B1.4.3 Fuel Pump

Only Mikuni – Fuel Pump DF 44-210 Part No 994482 may be used. Fuel pump must be fitted to the bottom or side of the standard air box bracket. Only a single length of pulse tube from crankcase connector to fuel pump may be used. Only a single length of fuel line from fuel pump to carburettor may be used. It is permitted to use an in-line fuel filter as supplied by Rotax between the fuel tank and the fuel pump. An internal fuel tank filter is also permitted. No restrictors, fuel returns or additional reservoirs are permitted.

B1.4.4 Intake Silencer: Type 1 or Type 2 may be used.

Type 1 must be used as supplied by Rotax for the FR125 Max engine unmodified, except for the bottom half of the air box, where the lug support ribs on the longitudinal side may be removed to allow the fitting of the air box support bracket. It is also permitted for the airbox lower half (type 1 only) to have a single 8mm maximum diameter hole positioned in a central location using the area of the injection mould marks as guide.

Type 2 must be used unmodified as supplied by Rotax for the FR125 Max engine. Air box type 1 or type 2 must be used with its filter and all component parts in place. The two halves of the air box must be securely screwed together using 4 M6 screws. All 4 screws must be sufficiently tightened to securely clamp the two halves of the air box together.

- a) In dry race conditions the air box MUST be positioned with inlet trumpets to the bottom of the box. The air box must be securely fitted in a manner to prevent rotation.
- b) In wet conditions, i.e. only when declared a wet meeting by the Clerk of the Course, the air box may be fitted in any position.
- c) If the meeting is declared open: kart on wet tyres – position free; kart on dry tyres – fix as dry.
- d) It is permitted for the airbox lower half to have a single 8mm maximum diameter hole positioned in a central location using the area of the injection mould marks as guide.

B1.4.5 Exhaust System: Only TYPE B Part No 273072 exhaust may be used. The exhaust system and silencer may not be modified in any way except for the pop rivets securing the silencer end plate may be replaced with screws. The use of a jubilee clip to secure the end plate pop rivets or screws is allowed. It is permitted to paint the exhaust system with black paint and to replace the sound absorption material to retain its efficiency. The use of any other coating or plating is not allowed. It is permitted to make minor repairs by welding or braising to the exhaust system providing there are no alterations to the original dimensions.

B1.4.6 Radiator: The radiator must be fitted to the right hand side of the engine using standard hoses and connections as supplied by Rotax. Engines using the thermostat cooling system must use the system in its entirety which comprises the thermostat head cover, radiator, radiator cap, radiator hoses, steel crankcase water hose connecting tube and radiator bracket. It is permitted to use the thermostat cooling system with or without the thermostat in place. The use of alternative hose clips and screw fittings are permitted. Blanking the radiator is free providing it does not necessitate the modification of the original components other than simple attachment. Minor repairs to the radiator are allowed.

B1.4.7 Ignition Unit: DENSO digital battery ignition, variable timing and with no adjustment. Ignition coil must have "129000-" and "DENSO" moulded on the case. The ignition coil must have three pin connection. The ignition coil must be mounted by means of two original rubber mounting blocks or equivalent to the gearbox cover. In the case of chassis component interference with the original mounting position it is permitted to relocate the ignition coil by the use of an extension bracket. The extension bracket must be attached to the original gearbox cover mounting holes. The ignition coil must be mounted by means of two original rubber mounting blocks or equivalent. Spark plug cap must be marked with "NGK TB05EMA". Ignition switch can be either On-Off type, part number 265592, or Automatic fuse type, part number 265590. Any make of battery is permitted provided it is of the same specification as supplied by Rotax for the FR125 Max 12v/6.5Ah, 12v/7.2Ah or 12v/9Ah. FIAMM-GS type FG20651, FG20722, FGHL20722, FGH20902, YUASA YT7B-BS & ROTAX BATTERY FX7-12B recommended.

B1.4.8 Spark Plug: The only spark plugs permitted are as listed and must be unmodified with sealing washer in place. The preliminary list of spark plugs is as follows:-

Denso IW24, IW27, IW29, IW31

Champion QN84, QN86

NGK BR8 EG, BR9 EG, BR10 EG, B8 EG, B9 EG, B10 EG, B8 EGV, B9 EGV, B10 EGV, BR8 EIX, BR9 EIX, BR10 EIX

Other makes/types may be added to this list by J.A.G.; details will be published in official bulletin.

B1.5 Transmission: Direct from the engine to the rear axle via a single length of chain. The clutch supplied with the engine must be used with its standard components. The clutch must engage at a maximum engine speed of 3000 rpm. See N15.B1.B1.

B1.6 Brakes: Hydraulic disc brake operating on rear wheels only.

B1.7 Tyres: Not Applicable to NatSKA Class 15

B1.8 General: An ignition kill switch must be fitted and must be identified with a blue triangle to assist marshals in the event of an incident.

B1.8.1 Retail Price: Not Applicable to NatSKA Class 15.

B1.8.2 Weight: Not Applicable to NatSKA Class 15.

B1.8.3 Number Plates: Not Applicable to NatSKA Class 15.

B1.8.4 Age: Not Applicable to NatSKA Class 15.

B1.8.5 Non-technical items: The use of alternative fasteners, washers, hose clips, fuel and pulse line is allowed unless otherwise specified. The use of additional and alternative earth straps is allowed. The use of additional air box support brackets, radiator support brackets, coil mounting brackets, chain and clutch guards is allowed providing the fitting of these does not necessitate the modification of the original components.

B1.9 Data Logging: Data logging is permitted; data logging systems with or without memory may be used. It is only permitted to take readings of engine r.p.m., engine water temperature, speed of one wheel, an X/Y accelerometer, lap times and split lap times. The engine water temperature sensor may only be fitted in the position provided in the cylinder head cover for this attachment. The r.p.m. may only be recorded via a sensor on the HT lead to sense spark plug pulses. The HT lead must remain a single length from ignition coil to spark plug cap. The fitting of these sensors is only permitted providing that there is no modification to the original engine components.

C2.0 Group: Senior, direct drive.

C2.1 Class: Not Applicable to NatSKA Class 15.

C2.2 Introduction: Not Applicable to NatSKA Class 15.

C2.3 Chassis: Not Applicable to NatSKA Class 15.

C2.4 Engine: The only engine permitted in this class is the **Rotax FR125 MAX**. 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 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 reseal 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 the MSA seal intact and re-sealed with an official class seal before competing at the next race meeting.

C2.4.1 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 for the FR125 Max unless otherwise stated. Position and method of mounting the battery, wiring loom, 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 rectification of damage. The use of thermal barrier coatings/ceramic coatings on or in the engine or the exhaust system is not allowed. Replacement connectors to repair the wiring loom are permitted. Repairs to the starter motor are also allowed.

C2.4.2 Carburettor: Dell'orto VHSB 34 QD or QS

All parts of the carburettor including the body are to be unmodified and run as supplied by Rotax. The carburettor must have VHSB 34 (cast in body) QD or QS (stamped on body). All parts must comply with the official fiche. The only adjustments allowed are the main jet, external air screw, throttle stop adjustment screw and needle position on the five grooves provided. Needle jet atomiser FN266. Choke jet 60. Idle jet 30. Idle jet emulsion tube 30. Needle K27 or K98 (Rotax Part No 261191). Float needle valve 150. Slide 40. Floats 5.2gr. Atomiser type 2. Alternative idle jet 60, idle jet emulsion tube 60, and 3.6gr floats may be used. Idle jets, idle jet emulsion tubes and floats may not be mixed and only used in one of the two following combinations:- Combination 1: Idle jet 30, idle jet emulsion tube 30, floats 5.2gr; Combination 2: Idle jet 60, idle jet emulsion tube 60, floats 3.6gr The venturi must have 34 cast and 12.5 or 8.5 stamped on the top of the venturi. Throttle cable and adjusters are free. It is permitted to use a single length of vent tube across the two air vents of the carburettor with a hole or slot cut in the side of the vent tube at the top of the loop.

C2.4.3 Fuel Pump

Only Mikuni – Fuel Pump DF 44-210 Part No 994482 may be used. The fuel pump must be fitted to the bottom or side of the standard air box bracket. Only a single length of pulse tube from the crankcase connector to the fuel pump may be used. Only a single length of fuel line from fuel pump to carburettor may be used. It is permitted to use an in-line fuel filter as supplied by Rotax between the fuel tank and the fuel pump. An internal fuel tank filter is also permitted. No restrictors, fuel returns or additional reservoirs are permitted.

C2.4.4 Intake Silencer: Type 1 or Type 2 may be used.

Type 1 must be used as supplied by Rotax for the FR125 Max engine unmodified, except for the bottom half of the air box, where the lug support ribs on the longitudinal side may be removed to allow the fitting of the air box support bracket. It is also permitted for the airbox lower half (type 1 only) to have a single 8mm maximum diameter hole positioned in a central location using the area of the injection mould marks as guide.

Type 2 must be used unmodified as supplied by Rotax for the FR125 Max engine. Air box type 1 or type 2 must be used with its filter and all component parts in place. The two halves of the air box must be securely screwed together using 4 M6 screws.

All 4 screws must be sufficiently tightened to securely clamp the two halves of the air box together.

- a) In dry race conditions the air box MUST be positioned with inlet trumpets to the bottom of the box. The air box must be securely fitted in a manner to prevent rotation.
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- c) If the meeting is declared open: kart on wet tyres – position free; kart on dry tyres – fix as dry.
- d) It is permitted for the airbox lower half to have a single 8mm maximum diameter hole positioned in a central location using the area of the injection mould marks as guide.

C2.4.5 Exhaust System: Only TYPE B Part No. 273072 exhaust may be used.

The exhaust system and silencer may not be modified in any way except for the addition of brackets to allow easy fitting. The pop rivets securing the silencer end plate may be replaced with screws. The use of a jubilee clip to secure the end plate pop rivets or screws is allowed. These modifications are allowed providing there is no benefit in performance. It is permitted to paint the exhaust system with black paint. The use of any other coating or plating is not allowed. It is permitted to make minor repairs by welding or braising to the exhaust system providing there are no alterations to the original dimensions.

C2.4.6 Radiator: The radiator must be fitted to the right hand side of the engine using standard hoses and connections as supplied by Rotax. Engines using the thermostat cooling system must use the system in its entirety which comprises the thermostat head cover, radiator, radiator cap, radiator hoses, steel crankcase water hose connecting tube and radiator bracket. It is permitted to use the thermostat cooling system with or without the thermostat in place. The use of alternative hose clips and screw fittings are permitted. Blanking the radiator is free providing it does not necessitate the modification of the original components other than simple attachment. Minor repairs to the radiator are allowed.

C2.4.7 Ignition Unit: DENSO digital battery ignition, variable timing and with no adjustment. Ignition coil must have “129000-“ and “DENSO” moulded on the case. The ignition coil must have three pin connection. The ignition coil must be mounted by means of two original rubber mounting blocks or equivalent to the gearbox cover. In the case of chassis component interference with the original mounting position it is permitted to relocate the ignition coil by the use of an extension bracket. The extension bracket must be attached to the original gearbox cover mounting holes. The ignition coil must be mounted by means of two original rubber mounting blocks or equivalent. Spark plug cap must be marked with “NGK TB05EMA”. Ignition switch can be either On-Off type, part number 265592, or Automatic fuse type, part number 265590. Any make of battery is permitted provided it is of the same specification as supplied by Rotax for the FR125 Max 12v/6.5Ah, 12v/7.2Ah or 12v/9Ah. FIAMM-GS type FG20651, FG20722, FGHL20722, FGH20902, YUASA YT7B-BS & ROTAX BATTERY FX7-12B recommended.

C2.4.8 Spark Plug: The only spark plugs permitted are as listed and must be unmodified with sealing washer in place. The preliminary list of spark plugs is as follows:-

Denso IW24, IW27, IW31
Champion QN84, QN86

NGK BR8 EG, BR9 EG, BR10 EG, B8 EG, B9 EG, B10 EG, B8 EGV, B9 EGV, B10 EGV, BR8 EIX, BR9 EIX, BR10 EIX

Other makes/types may be added to this list by J.A.G.; details will be published in official bulletin.

C2.5 Transmission: Direct from the engine to the rear axle via a single length of chain. The clutch supplied with the engine must be used with its standard components. The clutch must engage at a maximum engine speed of 3000 rpm. See N15.3.3.

C2.6 Brakes: Hydraulic disc brake operating on rear wheels only.

C2.7 Tyres: Not Applicable to NatSKA Class 15.

C2.8 General: An ignition kill switch must be fitted and must be identified with a blue triangle to assist marshals in the event of an incident.

C2.8.1 Retail Price: Not Applicable to NatSKA Class 15.

C2.8.2 Weight: Not Applicable to NatSKA Class 15.

C2.8.3 Number Plates: Not Applicable to NatSKA Class 15.

C2.8.4 Non-technical items: The use of alternative fasteners, washers, hose clips, fuel and pulse line is allowed unless otherwise specified. The use of additional and alternative earth straps is allowed. The use of alternative air box support brackets, radiator support brackets, coil mounting brackets, chain and clutch guards is allowed providing the fitting of these does not necessitate the modification of the original components.

C2.8.5 Age: Not Applicable to NatSKA Class 15.

C2.9 Data Logging: Data logging is permitted; data logging systems with or without memory may be used. It is only permitted to take readings of engine r.p.m., engine water temperature, speed of one wheel, an X/Y accelerometer, lap times and split lap times. The engine water temperature sensor may only be fitted in the position provided in the cylinder head cover for this attachment. The r.p.m. may only be recorded via a sensor on the HT lead to sense spark plug pulses. The HT lead must remain a single length from ignition coil to spark plug cap. The fitting of these sensors is only permitted providing that there is no modification to the original engine components.

C2.10 Not Applicable to NatSKA Class 15.



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