

INTERNATIONAL KART FEDERATION

2021 COMPETITION REGULATIONS AND TECHNICAL MANUAL

READ THIS DISCLAIMER BEFORE PROCEEDING

The rules and/or regulations set forth herein are designed to provide for the orderly conduct of racing events and to establish minimum acceptable requirements for such events. These rules shall govern the condition of all events and by participating in these events, all participants are deemed to have complied with these rules. No express or implied warranty of safety shall result from publications of or compliance with these rules and/or regulations. They are intended as a guide for the conduct of the sport and are in no way a guarantee against property damage, injury or death to a participant, spectator or official.

The sport of karting has inherent risks. One who participates in the sport of karting does so with the assumption of those risks, including mechanical failures which may result in injury or damage.

Use of this Rule Book is with the express understanding that the responsibility for the condition and operation of a kart or any other kind of vehicle in competition is that of the owner and/or driver of the kart or other vehicle.

While IKF seeks to communicate its 50 years of experience to all sectors of the sport, to protect the outstanding safety record of karting, and to maintain the integrity of the sport, IKF takes no responsibility for the maintenance of, inspection of, nor individual responsibility for each owner/driver maintaining or operating their own karts.

This Rule Book seeks to enhance the sport of karting, with standardized mechanical components and overall safe operation practices. It is required that each individual use common sense, take personal responsibility for the maintenance, inspection, and operation of their kart for the safest and most enjoyable karting experience.

Your attempt to rely upon and/or comply with the Rule Book is with the express assumption of all risks of the sport of karting, and does not in any way provide a basis for attempting to hold IKF liable for any damage or injury.

Due to specific local conditions for sanctioned IKF Races, the Race Director shall be empowered to permit minor deviation from any of the rules and/or regulations herein, or impose any further restrictions that in his opinion do not alter the minimum acceptable requirements. No expressed or implied warranty of safety shall result from such alteration of rules and/or regulations. Any interpretation of a deviation from these rules and/or regulations is left to the discretion of the local track officials. Their decision is final.

—The IKF Board of Directors

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International Kart Federation Membership Cards

PREFIX

D - Director

L - Lifetime

R – Regular

F – Family

A - Advisory Committee

C – Coordinator

G - Governors

SUFFIX

N - Novice

Q - Qualified (RR)

A - Amateur

L - Novice (RR)

J - Junior

JK - Kid Kart

X - Expert

RED CARD: Qualified Road License. Suffix may be “Q” or “QX” (Qualified Expert). If under 18 DOB will appear on card.

BLUE CARD: Sprint / Speedway License. Over 18 years of age only.
Suffix may be “N” (Novice), “A” (Amateur) or “X” (Expert).

WHITE CARD: Sprint / Speedway License. Under 18 years of age only. Suffix may be “J” (Junior) or “JK” (Kid Kart).
Date of birth will appear on card.

YELLOW CARD: Novice Road Race License. Suffix may be “L” (Novice Road Race). If under 18 DOB will appear on card.

BLACK CARD: Lifetime Membership Prefix will be “L.”
Must renew every 5 years.

100

INTRODUCTION & GENERAL REGULATIONS

No pretense is made of having designed a fool-proof set of rules and regulations. Karting is a sport designed for the fun and enjoyment of the whole family. There have been attempts to test the rule by deviating from this purpose for which the basic sport is intended. The Spirit and Intent of the rule is going to be the standard by which karting will be guided. Event officials are authorized to decide if an equipment change or design is an attempt to "beat" the rules. They can and will disqualify an entry in violation of the Spirit and Intent of these rules. Any official or representative shall have the right to correct conditions not in compliance with the Spirit and Intent of these regulations.

The International Kart Federation (IKF) takes pride in its long record of achievement as a governing body for the sport of kart racing. In recognition of the need for controls over the sport, the International Kart Federation has published rules for competition since November 21, 1957. Throughout this time, the objectives of the Federation have been the same: to foster strong and fair competition; to provide reasonable rules for the various types of competition; to administer the competition program with impartiality, and to reduce the hazards associated with this sport.

Entrants, drivers and participants in general are required to be fully conversant with these regulations and any supplementary rules or instructions governing an event, and are, by reason of their entry therein, bound by such regulations, supplementary rules, or instructions.

It shall be the duty of every IKF member to conduct themselves, while representing the Federation, in a manner that shall not be prejudicial to the Federation, nor bring unnecessary criticism on the Federation.

The prime responsibility for the condition and operation of a kart or any other vehicle in competition rests with the owner/driver. The track operator's main responsibility is that of providing a suitable place to conduct events. IKF is the vital link between these two, producing Rules and Regulations of Competition, based on experience gained at racing events all over the world. IKF seeks to communicate this experience to all sectors of the sport, to protect the outstanding safety record of karting, and to maintain the integrity of the sport.

The purpose of this rule book is to provide a common denominator of standards which will benefit all those concerned. For this reason, adherence to the rules and regulations set forth in this book is fundamental to the welfare of everyone in the sport.

IKF SPRINT RACING

Sprint karts are characterized by their sit-up driving position. Sprint races may be conducted by either of two systems on the Regional level: three heats with motocross scoring or a Pre-final and final format. On the National level, the Pre-final/final format will be run. In both cases, qualifying will determine the starting order of the first race. For the motocross system, the winner is determined by combining the finishing positions for the three heat races. For the Pre-final/final system, the winner of the final is the overall winner. At contracted events, the distance will be pre-determined in accordance with the rules for the particular division. Track will be measured at the center of the racing surface. Sprint kart racing is an excellent starting point for beginners. It gives the competitor an opportunity to learn the basics of karting, at speeds somewhat slower than those found in Road Racing.

IKF ROAD RACING

Road Racing came into being when sprint karts began racing on long sport car tracks. It was found that by laying the driver down, out of the windstream, aerodynamics and top speed were greatly improved. As the length of the races increased, there became a need for large capacity, side mounted fuel tanks. Soon the road racing kart had its own distinctive look and purpose.

Depending on class, road races can be 45 minutes, 30 minutes, or two 20 minute heat races in length. They are staged by some of the finest motorsport complexes in the United States. Portland International Raceway, Infineon (Sears Point), Laguna Seca Raceway, Willow Springs Raceway, and Pacific Raceways (Seattle International Raceway) are only a few of the tracks a Road Racing karter can enjoy at a fraction of the cost incurred by the professional race driver.

IKF SPEEDWAY

Speedway karts are similar to those used in Sprint Racing. However, they may be offset since they only need to turn left. They may have a 'wedge' body that causes a downforce and allows the close Speedway racing. They are raced on a recommended one-fifth mile or less oval track. The track may be dirt or pavement. A Speedway race is usually broken down into two ten-lap heats and one twenty-lap feature. Races, track specifications, and a small number of classes make speedway racing one of the least expensive forms of karting. The crossed up dirt track style of speedway racing is one of the most thrilling forms of kart competition for both spectator and participant.

100.1 Types of Racing Events

100.1.1 Non-IKF Events, Outlaw Events, and Events under other sanctioning bodies: These events are not connected or affiliated with IKF and are not under any control of IKF. Use of IKF rules at these events does not constitute an IKF event and is strictly prohibited.

100.1.2 IKF Insured Events: These events are usually local "club" type events. The track must be IKF approved, must use IKF insurance, and must follow the IKF Competition Regulations and Technical Manual. Competitors do not need to be IKF members. Road Race Novice Permit holders may have their yellow Novice Permit signed toward the issuance of their IKF Qualified Road Racing License at IKF insured events.

100.1.3 IKF Regional Events: These events must be approved as Regional Events by the Regional Coordinator. The track must be IKF approved, must use IKF insurance, and must follow the IKF Competition Regulations and Technical Manual. The schedule of events are listed on the IKF website and the results count toward Regional Championship Points. All competitors must be IKF members.

100.1.3.1 Joint Road Race Series: Should any IKF Road Race club/track/promoter host another series or event in conjunction with a Regional event, all non-IKF class rules and technical information must be submitted to IKF for approval. All competitors and spectators at the event must be IKF insured, regardless of class entered.

All competitors competing in the IKF National or Regional classes must be IKF members.

100.1.4 IKF Rule Removed

100.1.5 IKF Grand National Events: These are the National Championship Events for each division of IKF racing. The events are awarded by the IKF Board of Directors about 15 months prior to the event. Each competitor must have competed in at least three IKF Regional Events during the time period since the previous Grand National in that division.

101 IKF Rule Removed

102 RULES AND POLICIES

102.1 Interpretation and Application of the Competition Regulations and Technical Manual Regulations, hereafter called the Rules:

102.1.1 The Rules shall not be given a strained or tortured interpretation and shall be applied in a logical manner, keeping in mind that they cannot specifically cover all possible situations.

The IKF Board of Directors reserves the right to modify, change, or overrule any portion of the Rulebook or the entire Rulebook, for any reason, by Super Majority vote by the Board of Directors. These changes may be effective immediately.

102.1.2 The words "must", "shall" and "will" (either positive i.e. "shall" or negative "shall not") are mandatory. The words "should" and "may" are permissive and imply the possibility of "may not".

102.1.3 The interpretation and application of the IKF Rules by the IKF Board of Directors shall be final and binding. In order to promote the sport of kart racing, to achieve prompt finality in competition results, and in consideration of the numerous benefits to them, all members, competitors, participants and officials, expressly agree that:

102.1.3.1 Grand National event determinations and rulings by IKF Appointed officials are final and binding. The determinations and rulings are not subject to arbitration, or litigation. No court action may be filed arising from the imposition of a ruling by IKF Appointed officials during a Grand National event.

102.1.3.2 IKF members, competitors, race participants, or IKF or other local officials shall not initiate or maintain any kind of arbitration or law suit of any kind against IKF, its agents, employees, officers, or anyone acting on behalf of IKF, in order to seek to reverse or modify determinations or rulings by IKF Appointed officials during a Grand National event, nor seek to recover damages, or any other kind of judicial relief, allegedly incurred as a result of such determination or ruling; and

102.1.3.3 For all IKF Regional events that are Non-Grand National events (Section 100.1.3 and 100.1.4), any performance related determination or ruling, except the on track rulings made by the Race Director regarding driver conduct or equipment safety while on track, are subject to protest. That protest shall be made in writing, by a legal entrant from the same class, citing rules or specifications being protested by page and rule number, delivered to the Race Director, or his designee, for the particular race involved within 30 minutes after official results have been posted or announced. A fee of \$100.00 must accompany each protest.

Failure to timely submit the protest or failing to submit it in writing, shall result in the denial of the appeal. That is: the determination or ruling made during the event shall remain final, and binding. There shall be no further right to protest or appeal, by way of arbitration or through any court proceeding.

102.1.3.4 For all protests of IKF Sanctioned event determinations or rulings, timely submitted to the proper official of the specific race involved, the Race Director shall make a decision based on information gathered and inform the person making the protest of his decision.

102.1.3.5 If the protest is denied, the competitor making the protest may, by paying a \$50 appeal fee to the Race Director, appeal the ruling to the IKF Board of Directors.

For all appeals, the Race Director shall forward a copy of the protest, his ruling, and the appeal fee to the IKF office for consideration by the Board of Directors, which will make a decision at the next Board meeting.

For appeals involving equipment, the Race Director shall impound any equipment that is the subject of the appeal, according to procedures listed in Section 508, and forward the equipment, copy of the

protest, and his ruling to the appropriate National Tech Committee member for review and decision as to legality.

The ruling of the National Tech Committee or Board on the appeal shall be final, and binding, not subject to further appeal by way of arbitration or litigation of any kind.

102.1.3.6 If an IKF member, competitor, race participant, or IKF or other local official initiates or maintains litigation in violation of this provision, that member, competitor or official agrees to indemnify and defend IKF in such arbitration or suit, each month IKF incurs costs and attorney's fees, and shall continue to timely reimburse IKF for all costs and attorney's fees throughout such arbitration or litigation, including travel expenses for all IKF employees, officers, directors, and officials involved, and a per diem rate for each day such IKF employee, officer, director or official is required to participate in any way in such arbitration or litigation at the rate of \$600/day, plus all attorneys' fees and costs.

102.1.4 Should there be a contradiction between a Section 100 rule or Procedure and a rule or procedure in a Division Section, that is Sections 200, 250, 300, 400, 450, 500, 600, 650, 675, 700-721, the rule in the Division Section shall predominate. Should there be a contradiction within a Section, the higher number rule shall predominate.

102.1.5 The rules contained in the current year edition of the Competition Regulations and Technical Manual, along with Updates added by the IKF Board since the publication of those rules and posted on the IKF Website, are the complete rules and regulations to be used in the conduct of IKF sanctioned and insured race events. No previous edition of the Competition Regulations and Technical Manual, nor any Updates enacted in prior years, have any standing in determining the correct conduct of any IKF sanctioned and insured event.

In the event of previous editions of the Technical Manuals referenced for technical specifications, the responsibility for having a copy of the applicable rules is the responsibility of the competitor. Previous editions or copies of the applicable rules are available at modest cost from the IKF Office. Failure to comply may result in disqualification.

102.2 Rule Change: Shall be defined as anything which would affect a participant's competitiveness in their class to the extent that they would not have a class in which to participate, would be non-competitive, or would have to make substantial changes in equipment to remain legally competitive in a given class.

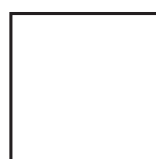
102.2.1 Rule Change Enactment: Rules go into effect 30 days after being posted on the IKF Web Site.

102.2.2 New Rule Books New Rule Books will go into effect January 1st of the designated year.

102.3 Policy Change: Shall be defined as anything that might affect a rule, but not in such a way as to make anyone non-competitive or require a participant to change their equipment substantially to race competitively and legally. A policy change may be implemented immediately.

102.4 Art/Diagram Disclaimer: Any photo, drawing, or illustration anywhere in these rules, Sections 100-800, is only a representation of the requirements. Written information and specifications accompanying the art are the definitive form of each rule.

For example:



← Radius minimum .030"
on all four corners

(The drawing does not
actually show the required
corner radius)

103 IKF Rule Removed

104 ELIGIBILITY

All National Members of the International Kart Federation must be 18 years of age or older. A minor (anyone under 18 years of age) cannot be a National Member. A minor can only be a Family member on the IKF Membership Application.

Only members with a current membership may compete in IKF Regional events. All entrants at an IKF sanctioned Regional event will be required to SHOW their IKF membership card or receipt for membership at registration. If the entrant has neither, he/she will be required to apply for membership, at the appropriate fees, prior to the race. If a credit or refund is requested by the entrant, only 90% of the membership fee will be credited or refunded.

104.1 Liability Waiver: All drivers shall sign a waiver and release of liability before participating in any IKF event. The entrant and/or driver, in submitting the entry form for any IKF event, agrees to hold IKF, together with its owners, heirs, assigns, officers, representatives, agents, employees and members, harmless from any and all liability. This includes, but not limited to: injury to persons, property, employees and/or reputation that may be sustained by said entrant or driver; from all claims of said injuries to parties listed above growing out of, or as a result of the event contemplated under the entry form; or caused by any construction or conditions of the course over which the event is held.

104.2 Minor Liability Waiver: It is mandatory that a Parent or Legal Guardian for any minor that will be in any restricted area to complete the "Parental Consent, Release and Waiver of Liability, Assumption of Risk, and Indemnity Agreement" before being allowed to participate in or attend an IKF event.

104.3 Accident Insurance: Accident insurance is provided for those participating in International Kart Federation events.

Those who purchase a valid IKF pit pass shall receive spectator bodily injury liability and property damage liability as specified in the current policy. Insurance coverage may vary based on the *underwriter's policy. Any deductible will be the responsibility of the bearer or holder.

All participants, ages 5 and up, must purchase an IKF insurance pass or a numbered arm/wrist band issued by the IKF office. This includes ALL drivers, pit crew, and any other interested persons allowed into the racing section/pit areas of the track. Exception: all volunteers, workers and officials conducting the event must sign the release and waiver and, upon marking the waiver form "worker", will be covered by insurance.

104.4 Accidents: Race officials and emergency medical personnel are the only persons authorized to be on the track after an accident has occurred. Exceptions to this are at the Race Director's discretion. If a minor is involved in an incident and appears injured, IKF officials will request a parent or legal guardian to be present.

Karts involved in an accident may be required to stop for inspection by the officials.

Medical personnel shall examine any driver who sustains an injury.

Accidents shall be investigated by the track officials only. No pit personnel are permitted on the track while the race is in progress.

Major damage resulting in a need to change kart chassis shall ONLY be undertaken with the approval of the Race Director.

104.5 Incident Reports: An IKF Incident Report must be completed by the Race Director or their representative, any time an injury occurs during the conduct of an event.

An IKF Incident Report must be submitted to the insurance company and the IKF Office within 24 hours after the event.

104.6 Driver Age: IKF has classes that are limited to drivers in given age groups. Minor Members are required to have a certified copy of their Birth Certificate on file in the IKF Office. This is mandatory. See Section 104.2.

104.6.1 Competition Age: IKF competition age is the highest age of the driver during the calendar year (January 1 through December 31).

104.6.2 Attained Age: IKF attained age is the age of the driver on the day of competition.

104.6.3 Class Ages: See Class listings in each Division for allowed ages in each class. Kid Karts and Masters classes are listed with Attained Ages. All other classes are listed with Competition Age.

104.6.4 Exceptions approved by SKUSA: A Parent or Legal Guardian of a Competitor, who are both current IKF Members in good standing, and has received an Age Waiver/Exception from SKUSA may submit to the IKF Office, in writing, a Request for an Exception Form to be reviewed by the IKF Board of Directors.

The Request must include the following on the Form:

- Parent / Competitors Contact Information including Email Address
- Copy of other Organization approval to be verified
- IKF Membership # and Expiration Date
- Driver Name and Relationship to Requestor
- Driver Date of Birth and Current Age
- Class / Classes wishing to participate in
- Drivers experience in Karting
- Reason for the Exception Request
- Any additional information to help the Board understand the Request
- \$50.00 Non-Refundable Application Fee

Upon receipt of all above information, the Request for Exception Form will be sent to the IKF Board of Directors for review.

A decision will be made within 10 days and returned to the Requestor.

104.7 Option Year: The IKF Option year is designed to give the Junior drivers flexibility of class due to variances in driver weight and driving ability. Drivers that become 8, 12 or 15 during the calendar year have the option to move to the next higher age class at any time during the year.

104.7.1 Drivers in their option year must drive in either the lower age class or higher age class. This applies to all events, and across all divisions.

104.7.2 If a driver races in the higher age class in any karting series or event, the driver cannot move back to the lower age class.

104.7.3 A driver may move from the lower age class to the higher age class during mid-year. If the driver moves up during the year, the driver moves up in all racing divisions (Sprint, Speedway, Road Race). If a driver moves up in mid-year, any points earned in the lower class do not move up.

104.7.4 A driver may not compete in both the lower age and the higher age class at the same event. See 104.7.1.

104.8 New Driver Requirements: All new drivers will be required to start at the back of the pack for their first three races (not heats.) New drivers must display a “Day Glow” orange number panel on their rear bumper for these first three races. This safety regulation includes all divisions and classes.

104.9 Pregnant Women: Pregnant women are not allowed to compete. This restriction applies to practice, family days, tests, qualifying and competition.

104.10 Driving Ability and Driver: All drivers shall demonstrate their driving ability to the satisfaction of the race officials during a mandatory practice period before being allowed to compete.

104.10.1 Substitute drivers are forbidden, except in Road Racing, see 104.16. If anyone is found to be driving for another entrant, with the intent to hide their identity so that another may take credit for their efforts, during heats, qualifying, Pre-final, final, semi-mains, or main events the following actions will be taken:

- a. The substitute driver will be ejected from the event. The equipment he/she is driving will be impounded for the duration of the event. If the substitute driver is an IKF member, he/she may be suspended for at least one year by action of the IKF Board of Directors.
- b. The registered driver will be ejected from the event. The registered driver may be suspended for at least one year by action of the IKF Board of Directors. The suspension will begin from the day of the infraction.
- c. Any race official reserves the right to request any single person or group of people to remove their helmets to verify the entrant at any time.

104.11 Appearance: All members competing in IKF events shall maintain a clean, neat appearance.

104.12 Official Entry:

104.12.1 The kart frame, not the driver, is the official entry in an IKF event. There shall be no substitution of the frame after it has passed pre-tech, without permission of the Race Director. Only one kart frame, per entrant, may be entered in each class.

104.12.2 Each entrant must be present at pre-race technical inspection with all equipment necessary to substantiate legal entry for all classes entered. If a chassis is presented with an engine which is legal in one class entered, but not another, the engines to be used in the additional classes must also be available for inspection at pre-race tech.

104.12.3 If an entrant enters a race without the intent to race, he is subject to penalties levied by the IKF Board of Directors, except as outlined in 104.12.4.

104.12.4 For all Regions: If a track runs a Regional race that does not offer all National classes, that track must list on the IKF website or on a website linked to the IKF website, the specific classes they will offer.

If a driver comes to the Regional race, and wishes to receive a punch for a National class which is not offered by that Region, he/she can sign the waivers, purchase a pit pass, pay 50% of the race entry fee, and, upon passing pre race tech inspection, receive a punch. The driver is not entitled to any track time.

104.12.5 No Grand National qualifying punch will be issued without legal entry as defined in 104.12.

104.12.6 If a driver enters a Regional race, but does not grid, the driver receives a punch and the track must pay the sanction fee for that competitor.

104.13 Entry Refunds: There shall be no entry fee refunds at sanctioned events after the entrant registers and has successfully completed pre-race tech inspection, except:

104.13.1 When a Regional race is cancelled due to weather, and pretech has not yet been completed on all entered karts, each entrant shall be entitled to a refund 75% of the amount that he paid to enter the race.

If a reschedule date is announced on the day of cancellation, each entrant may collect the refund specified above or may choose to apply his paid fees to the rescheduled race day. The race organizers must mark insurance wrist bands with the rescheduled date on the day of cancellation. These marked wristbands, when presented at registration, are to be honored on the rescheduled date.

104.13.2 At Grand National events, if a race is postponed due to weather, all pit passes and entry fees shall be honored for the rescheduled race. All participants that are unable to attend the rescheduled race shall, upon application to the race organizer, be refunded 75% of their entry fee that was incurred for the postponed race.

104.13.3 At Regional events, if a racer is unable to attend an event after pre-registering and pre-paying entry fees, he shall, upon application to the race organizer, be entitled to a refund of all fees paid, less \$10.00 for processing the refund. The application for refund must be made within 7 days of the event. The race organizer shall pay the refund within 30 days of notification.

104.14 Entry By Mail: No race credit shall be given a mail-in entrant who does not appear at the track ready to race.

104.15 Number of Class Entries: Only one entry per class shall be allowed in a given IKF-sanctioned event. No entrant, regardless of circumstances or conditions, shall be permitted to register a second entry in a given class in which they have been previously registered as an entrant.

104.16 Relief Drivers: Relief drivers are allowed in Road Racing only. The driver of record shall complete at least one lap in competition before a relief driver may assume that entry. Alternate or relief drivers who meet all class requirements shall be officially registered as a relief driver for that class. If a relief driver is used, all drivers shall meet minimum post-race weight requirements.

In the case of heat races, the driver of record must complete at least one lap in each heat race.

104.17 Requirements to Compete at Grand Nationals:

104.17.1 All drivers participating in an IKF event must show a current IKF membership card/road racing license at registration. A driver can renew his IKF membership at a Grand National event.

105 SAFETY

Safety is one of the prime considerations of IKF at all its sanctioned or affiliated events. Methods of operation, vehicle construction, track facilities and competition practices are under constant review to protect all participants and to reinforce the safety standards of the sport.

Kart racing has certain inherent risks. Each competitor assumes those risks when they participate in an event. While everyone involved including drivers, crewmembers, officials, promoters, and IKF have taken measures to reduce the risk of serious injury or death, the risk cannot be eliminated and will always be present at a high level. Although safety is everyone's concern, IKF cannot, and is not, responsible for all or even most aspects of the safety effort. That responsibility rests with the various participants in the event(s).

105.1 General Safety No crew member, bystander, or any other personnel are allowed on the racing surface at any time during the race. (Please refer to your division of racing for more specific information.)

105.1.1 Track Emergency Equipment: An emergency vehicle or ambulance, with a stretcher shall be on hand during every racing program. If a state-licensed ambulance service is not used, the emergency vehicle shall fully enclose the injured person and provide sufficient room for the person to be stretched outright in a prone position.

105.1.2 Track Emergency Personnel: A physician, paramedic or qualified attendant with an adequate first aid kit shall be present during all IKF racing events, and must be in communication with race control at all times during the event. Emergency personnel shall not be participating in the event as a driver.

105.1.3 Each entrant shall have an adequate first aid kit.

105.1.4 Fire Safety:

105.1.4.1 Entrant Fire Extinguisher: It is mandatory that each entry in the event have a minimum of one operable 1 1/2-pound dry powder fire extinguisher (rated for use on A, B & C type fires) accessible in their pit and on the starting grid at the start of each race and in the hot pit area. Carbon Dioxide type extinguishers are not an acceptable substitute for the dry powder type.

105.1.4.2 Track Fuel Handling Areas: Wherever fuel is handled, i.e. pump-around, fuel test area, fuel purchase area, etc., it is the responsibility of the Race Director, track officials/promoter to comply with local ordinances regarding fire safety.

105.1.5 Protective Barriers: Two hay bales or equivalent protection should be provided at all flag stations for the protection of Starter and Corner Marshals.

105.1.6 Driver Protective Clothing:

105.1.6.1 Head Gear: Full coverage (full face) helmets designed for competitive motorsports use are mandatory and must comply with one of the following:

Snell Foundation Specifications	Legal Until
CMS 2007 (youth helmet)	12/20/19
CMR 2007 (youth helmet)	12/20/19
M 2010	12/20/2021 Not approved for Champ Karts
SA/K 2010	12/20/2021
CM 2016	12/20/2026
K 2015	12/20/2026
M 2015	12/20/2026 Not approved for Champ Karts
SA 2015	12/20/2026

Note: All models of Snell 2000 and 2005 Helmets are no longer legal.

SFI Specifications	Legal Until
24.1/2010 (youth helmet)	12/20/2021
31.1/2010	12/20/2021
41.1/2010	12/20/2021 Not approved for Champ karts
24.1/2013 (youth helmet)	12/20/2024
31.1/2013	12/20/2024
41.1/2013	12/20/2024 Not approved for Champ karts

Note: All models of SFI specification helmets prior to 2010 are no longer legal.

Although the youth helmet standard does not specify a precise age range, the helmets are intended for children and, particularly, for young, pre-pubertal children. Adult drivers should select a helmet meeting one of the other standards.

Helmet must be in good condition and is subject to pre race technical inspection. It may also be inspected if it is damaged in an accident*. If the helmet shows any damage, IKF recommends that it be returned to the manufacturer for testing and recertification. Helmet must be secured with a strap. The driver is responsible for making sure that his or her helmet fits properly and is securely fastened before entering the racing surface. In the case of a minor, this is the parent or guardian's

responsibility. Failure to properly secure the helmet before entering the racing surface may result in a disqualification.

***Accident:** Accidents will be investigated and the involved karts may be required to stop for inspection by officials in charge. Race officials may also inspect driver helmet and other safety apparel for damage. The Race Director may impound damaged apparel.

Modification: Any addition of devices, whether aerodynamic or other, to helmets is prohibited unless such devices have been certified (BY SNELL or SFI) with the helmets. It is the driver's responsibility to provide the helmet manufacturer's literature describing any added devices to the Pre Tech inspectors if requested.

105.1.6.2 Gloves: Must be manufactured for racing and possessing racing related grip enhancement, as well as offering a degree of abrasion resistance.

105.1.6.3 Driver Clothing:

105.1.6.3.1 All open kart drivers shall wear: All open kart drivers shall wear: Jackets of heavyweight leather, heavyweight vinyl, ballistic nylon material or other abrasion resistant material and full-length pants to prevent or minimize abrasions or driving suits of one or two piece design constructed of heavyweight leather, heavyweight vinyl material or heavyweight abrasion resistant nylon material. CIK homologated karting suits are acceptable. Suits of Nomex only or Proban material are not acceptable. Fire resistant suits are not adequately abrasion resistant. No sweat pants.

105.1.6.3.2 Fire Resistant Suit Requirements: All drivers who are contained in a kart with seat belts must wear a full fire resistant suit with an SFI rating of 3.2 A1 or better. Undergarments of Nomex or equivalent material are recommended for drivers of all classes.

105.1.6.3.3 Footwear: Socks and High top shoes are required for all I.K.F. kart racing. High top shoes shall cover the anklebone and be laced, buckled or secured as designed.

105.1.6.3.4 Long Hair: No hair may be outside the helmet. A head sock or some other method must be used to restrain hair.

105.1.6.3.5 Neck Collars: All drivers in all Divisions must wear an unaltered collar-type neck brace designed for motorsports use when on the track. The Leatt-Brace Moto GPX, the Leatt-Brace Adventure, the Valhalla 360, EVS R4 and the EVS RC Evolution neck braces are allowed. Road racing Laydown style kart drivers are exempt from this requirement.

105.1.6.3.6 Chest Protection: All drivers in all Kid Kart, Junior 1, Rookie, and Cadet classes in all Divisions, are required to present for pre-race tech inspection, a chest protection device with a Specification 20.1/1 SFI Certification (ages up through 8) or Specification 20.1/2 SFI Certification (ages 9-12). These ages are guidelines for proper sizing.

This device must be worn whenever such drivers are on track in their kart. The Grid personnel are empowered to prevent a driver from entering the track without this device, just as they would a driver without a neck collar or gloves.

105.1.6.3.7 Safety Recommendations:

Rib Braces/Chest Protection: The use of rib braces/chest protectors are highly recommended for all sit-up type karts but NOT considered required. The lateral forces generated in kart racing are a serious concern, and all IKF competitors are urged to consider this protective device.

Ear Plugs: The use of ear plugs by participants, both drivers and pit crews is strongly recommended.

105.1.6.3.8 Video and Recording Equipment: Video or recording equipment of any kind including cameras, microphones, battery packs, wiring or cabling will not be allowed to be worn or attached on any part of the kart driver including helmets.

Exception is helmets that are pre-wired for radios with the unused connectors secured are allowed in all divisions, use of radios allowed in Road Race division - See Section 108.10 Radios.

105.2 Chassis Safety

105.2.1 Pre-Race Inspection - Also called Pre-Tech: All entrants shall present their kart, engine, helmet, jacket or suit, gloves and neck collar for inspection before driving onto the track at all IKF insured race events. No entrant shall enter the track until his equipment has been approved by the Pre Tech Inspectors and an appropriate marking, visible to the Grid Personnel, has been made on the kart. This applies to each day of multiple day events and also includes official event practice days, and morning practice sessions.

At all IKF events, the " IKF Pre-Race Technical Inspection Form," also called "Self-Tech," may be used as an option to going through the traditional Pre-Race Technical Inspection Procedure. If "Self-Tech" is chosen, the unaltered approved Form must be used. Form is available on the IKF website under "Forms."

If a chassis is presented with an engine which is legal in one class entered, but not another, the engines to be used in the additional classes shall also be available for inspection at pre-race tech, if requested.

Pre-Race Inspection is primarily for the purpose of checking for safety aspects of the kart, and approval at Pre-Race Inspection shall not guarantee legality at Post-Race Inspection and tear down. **All Pre-Tech items must be able to pass the same inspection after the race.**

Pre-Race Technical inspection shall include the following:

105.2.1.1 Suitability for competition: The basic design of the vehicle shall be suitable for high performance with emphasis on safety.

No projection from the vehicle that constitutes a hazard to other vehicles or drivers shall be permitted. Axles, axle nuts and safety fastening pins may not protrude past outside of wheel.

The opinion of the inspectors and the race officials shall be binding.

105.2.1.2 Appearance: The vehicle shall be neat and clean.

105.2.1.2.1: As a pre-tech item only, competitors are required to display an IKF sticker on a visible, forward facing surface of their kart at all Regional, National, and Grand National events. Promoters, Regional Coordinators and IKF Directors will have a supply of IKF stickers.

105.2.1.2.2: Competitors may be required to display identification of IKF National sponsors on a visible surface of their kart at all Regional, National, and Grand National events. Contractual conflict between a competitor's sponsors and the IKF National sponsor display will be resolved by the IKF President, the IKF Director in Charge or the Regional Coordinator. Stickers will be provided to competitors at registration.

105.2.1.3 Tires: Shall be new or good condition without visible flaws.

IKF reserves the right to establish spec tire regulations for all classes. IKF does not condone and discourages the use of chemicals to treat tires. IKF reserves the right to implement rules to control this practice.

Any participant that uses chemicals to treat tires at the track must have in their possession or access to, the MSDS or equal for such chemicals in case of an accident at the track.

105.2.1.4 Wheels: Void of any defects. Tire bleeders, tire relief valves or “pop offs” are not allowed. Wheel covers not allowed.

105.2.1.5 Wheel Bearings: Ground ball or roller type only. Split race bearings not allowed. Wheel bearings shall be properly adjusted so that there is no excessive wheel play.

105.2.1.6 Hubs:

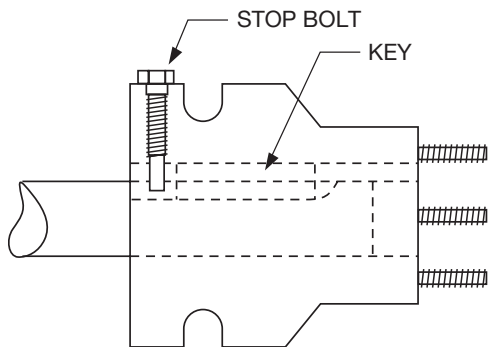
Front Hubs - Nuts securing front hubs shall be secured by safety wire, cotter key, circlip or snap ring.

Rear Hubs - All rear wheel hubs shall have a rear mounted thru-bolt or properly affixed stud as a means of mounting wheel rims. Wheel rims shall be mounted with an appropriate nut as a means of fastening the wheel to the hub.

For Speedway Division racing secondary retention of the rear hubs is required. For Sprint and Road Race Divisions, secondary retention of rear hubs is recommended.

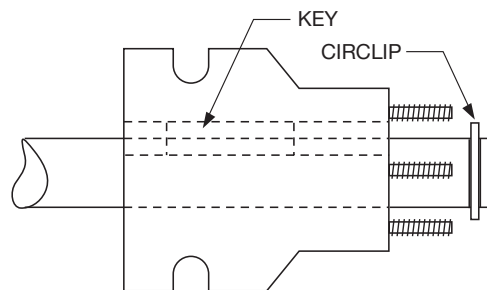
The four approved methods of secondary hub retention for rear slider type hubs are shown in diagrams below.

HUB RETENTION - METHOD 1



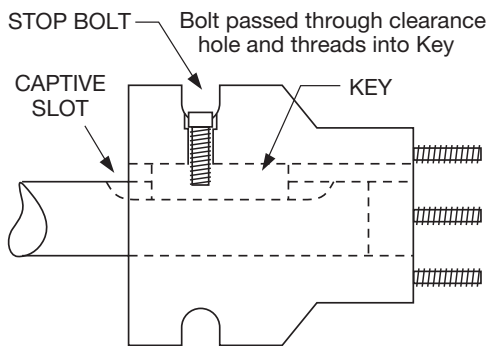
Drilling Holes in Axle is not a recommended method of Hub Retention

HUB RETENTION - METHOD 2



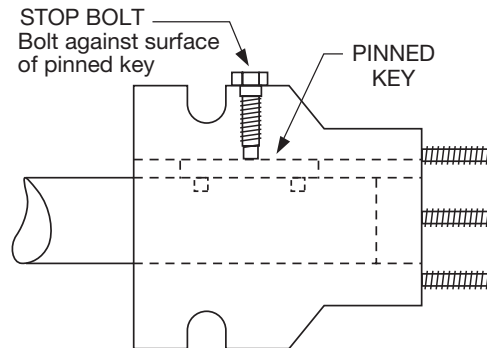
Drilling Holes in Axle is not a recommended method of Hub Retention

HUB RETENTION - METHOD 3



Drilling Holes in Axle is not a recommended method of Hub Retention

HUB RETENTION - METHOD 4



Drilling Holes in Axle is not a recommended method of Hub Retention

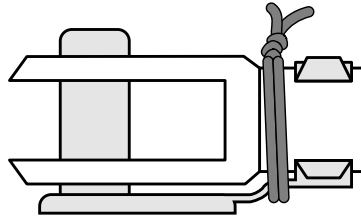
105.2.1.7 Brakes: Brake systems shall be checked for proper operation and stopping ability.

All brake lines shall be safely routed to prevent possible damage while kart is in motion. Hydraulic brake connections must be tight and free from any visible leaks. It is encouraged that braided brake lines be utilized which are more protective from abrasion and rubbing. Brake line fittings that are designed for such use are highly recommended.

Fastenings for all brake pedals, pedal to master cylinder linkages, brake caliper bolts, master cylinder bolts, and master cylinder roll pins shall be cotter pinned, safety wired, or secured by circlip or snap ring.

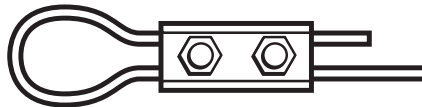
All-metal lock nuts, or bolts drilled and safety wired, are required to fasten brake disc to brake hub.

Snap pin for European style clevis must be safety secured as shown with safety wire, or locking nylon type strap. See diagram.



The use of castle type nuts is suggested. Bolts must be keyed in such a manner so as to prevent any movement of bolt or nut without key removal. (See your division of racing for specific information.)

Cable actuated brakes: Any cable used as an actuator in a brake system shall have a minimum diameter of .071". Cable actuated hydraulic systems shall have two separate such cables. Any non-factory applied cable end shall be blocked by a "flat type" cable clip. Bolts on cable clip shall be secured with locknuts or be double nutted.



105.2.1.8 Wheel Weights: Tape-on wheel balancing weights shall be securely fastened. Maximum weight of any one tape on weight to be 1 oz., covered with duct tape.

105.2.1.9 Throttle: In addition to an adequate carburetor return spring, Karts shall be equipped with a spring mechanism attached to the pedal assembly which shall return the throttle pedal to the idle or throttle off position when released.

105.2.1.10 Fuel Tanks: All tanks shall be securely affixed to kart.

105.2.1.11 Fuel Lines shall be safety wrapped at all connections.

105.2.1.12 Chain Oilers: Shall be securely fastened to kart. 8 oz. maximum capacity for one hour events, 4 oz. maximum capacity for 30 minute events, i.e. Sprint Sit-Up classes in Road Racing. Chain oilers are not allowed in Sprint, Sprint Shifter, Speedway or Speedway Pavement Divisions.

105.2.1.13 Chain Guard: Every kart must have a chain guard.

A chain guard is a mechanical device, usually metal, mounted forward and above the crankshaft of the kart motor that serves to deflect a failed chain, clutch, or belt toward the ground before it strikes the kart driver.

Some karts, additionally, require a chain cover: Kid Kart, Shifters, TaG classes and all 2-Cycle Section 200 karts.

A chain cover is a strip of metal or plastic that covers the chain and rear sprocket when viewed from above the kart.

105.2.1.14 Clutch: A wet type clutch shall be sealed to prevent leakage.

105.2.1.15 Steering: Shall be of a suitable design, in proper working order, with all bolted joints tightened. Fastenings for steering wheel, steering wheel hub, steering shaft, tie rods, and spindles shall be cotter pinned, safety wired, secured by circlip or snap ring. All fastenings shall be easily exposed for inspection.

105.2.1.16 Frame: Shall be of safe design, void of defects that would impair the safety of the vehicle. Particular attention should be given to all welds.

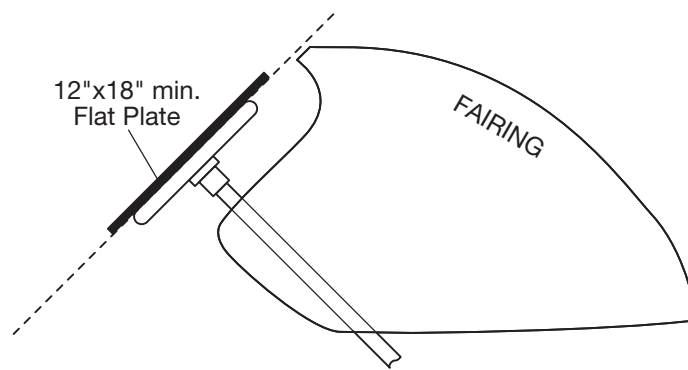
105.2.1.17 Bumpers: Shall meet specifications for specific division. Bumpers shall not constitute a hazard to other competitors.

105.2.1.18 Number Plates: Correct numbers must be properly installed for all on-track sessions, including practice and warmups. Failure to do so will result in penalties, including loss of track time.

Effective 01/01/2021, Numbers shall be black on a yellow background, at least 15 cm (5.9") tall and have a 2cm (.787") wide stroke represented with an Arial font. The competition number shall be bordered by a yellow background of 1 cm (.393") minimum. They must be in place prior to any official session, on both front and rear panels, as well as on both sides towards the rear of the bodywork. The driver is responsible for ensuring that the required numbers are always clearly visible to timekeepers and officials.

105.2.1.19 Bodywork: Must meet the IKF specifications for the given class. Must present no hazard to competitors.

105.2.1.20 Steering Wheel Fairing shall not extend rearward of a plane that is perpendicular to the steering shaft defined by the driver side grip surface of round or butterfly type steering wheels. Legality shall to be determined by laying a flat, rigid, plate at least 12"x18" in surface area against the driver side grip surface of steering wheel.



105.2.1.21 Ballast: All weight or ballast must be white including purpose built weight cans, but not including floor pan mounted fuel tanks used to contain ballast.

All ballast shall be securely bolted to the kart. Ballast shall not be carried on the driver's person. No weight shall be bolted to the underside of the kart.

Tape, hose clamps, tie wraps, wire or any fasteners, other than bolts, are not legal for fastening ballast to a kart.

Bar type ballast shall be bolted to the kart with a minimum of one 1/4" bolt through a hole in the bar. Large weights require multiple bolts.

Lead shot or other loose material used as ballast shall be sealed in a container and bolts shall be used to secure the container to the kart.

All bolts used to secure ballast shall be fastened to the kart with double nuts or a nut secured with a cotter pin or safety wire through a hole drilled in the bolt.

Where ballast is attached directly to the seat, adequate reinforcement in the form of large diameter washers or sheet metal reinforcements on the inside of the seat, shall be used.

Attachment of ballast is subject to post race inspection. Improperly secured ballast may lead to disqualification.

105.3 Roller Bumpers: Roller bumpers are prohibited.

105.4 Air Shifting: Any driver mounting a compressed air bottle to their kart as a power source for an air shifting device must comply with the following:

105.4.1 Inform the Pre-Tech Inspector.

105.4.2 Bottle must be mounted within the frame rails of the kart.

105.4.3 Bottle must be enclosed in a cage that shall contain the bottle in the event of a catastrophic failure of the bottle, regulator or relief valve.

105.4.4 Bottle must be visible to the Tech Inspector, a DOT stamp of approval on the bottle, relief valve, and regulator, and must only contain CO₂, nitrogen or air.

105.4.5 Bottle must be secured in the cage and the cage must be welded or bolted and safety wired to a frame component.

105.5 Safety Recommendations: The IKF Board of Directors strongly recommends the following for all IKF Karting Divisions and Classes:

105.5.1 Use of elastic stop nuts, Nylocks, (plastic locking inserts) and/or lock washers on all wheel retention bolts.

105.5.2 Safety wiring of brake shims in calipers that have removable slotted shims.

105.5.3 Use of chain and belt guards for axle clutches.

105.5.4 Use of safety wire on axle circlips is not recommended.

105.6 Safety Fastening: Any item that calls for the use of safety wire or cotter pin shall be drilled so that the safety wire or cotter pin can pass through the bolt or pin. It is not acceptable to just wrap wire around the bolt or pin.

Where a **Circlip** or **Snap Ring** is used as Safety Fastening, a properly fitted groove shall be machined in the bolt or pin to accept the circlip or snap ring. The outside diameter of the circlip or snap ring must be larger than the inside diameter of the nut retained. It is not acceptable to install a circlip or snap ring in the threads of a bolt without a machined groove.

Barry Clips are an approved replacement for cotter pins.

One-Use Fasteners/Nylocks: Any item that is required to use safety wire, cotter key, circlips or snap rings may, alternatively, be secured by a one-use Nylock fasteners.

Exceptions:

- 1) All-metal lock nuts, or bolts drilled and safety wired, are required to fasten brake disc to brake hub.
- 2) One-Use fasteners/Nylocks may not be used on previously drilled bolts without secondary retention as described above.
- 3) All bolts used to secure ballast shall be fastened to the kart with double nuts or a nut secured with a cotter pin or safety wire through a hole drilled in the bolt. (See Section 105.2.1.21)

105.7 Batteries, carried on board a kart for any purpose, must be gel cell or sealed AGM type. Wet cell batteries are not allowed.

105.8 Engine Safety

105.8.1 Clutches: The use of a wet-type clutch is permitted only if the unit does not leak.

105.8.2 Third Bearing Supports: A third bearing support or a guard to contain the clutch in the event of crankshaft breakage, is required on all 2-Cycle karts using an engine mounted clutch.

105.8.2.1 Construction of clutch guards must be of material equal to or greater in strength than .090 aluminum.

105.8.2.2 At least one support bolt on third bearing upright plate shall be drilled and secured with safety wire.

105.8.2.3 Factory supplied Comer K80 clutch guard is approved for the K80 only.

105.8.2.4 Factory supplied Comer C-51 clutch guard is approved for the C-51 only.

105.8.2.5 Factory supplied TaG clutches are exempt from the third bearing rule.

105.8.4 Exhaust Direction: On all karts the exhaust shall exit rearward of the driver.

105.9 Engine Starters: Starter must be of suitable construction and design to safely start the engine. "Duct" tape or any type of non-permanent bond is strongly recommended not be used to secure sockets or other adaptive devices to the end of the starter shaft.

105.10 Exposed Sprockets: An axle sprocket not fitted with a drive chain shall have a device to prevent tooth exposure from any angle or have the unused sprocket encircled with a chain.

106 PIT RULES

106.1 Definition: Definition: The Pit area, under IKF rules, consists of any area at the track in which karts are located. Only those participants having signed a waiver of liability and with a pit pass shall be allowed in the pit area.

All participants are charged with the responsibility to enforce this pit pass rule. Any driver who knowingly allows individuals who have not signed a waiver of liability and purchased a pit pass to be present in his pit area may be ejected from the event by the Race Director or his appointed Official.

106.2 Driving in Pits: There will be no driving or coasting of karts in the pit or paddock area at any IKF insured event.

106.3 Possession of Regulations: Each entrant shall have a copy of these regulations, together with a copy of any Special rules and regulations for the event available in his pit.

106.4 Number of People Permitted in Pits: The Pit Steward is at all times empowered to determine the number of persons per entry that may be permitted access to the pit area and to revoke permission as may have been granted any individual, for misbehavior, non-compliance with these competition regulations or disobedience of a race official's orders. Such revocation of privilege may lead to expulsion from the pit area or from the track.

106.5 Number of Vehicles in Pits: The Pit Steward is at all times empowered to limit the number of trailers, tow vehicles or kart transport vehicles per entry that are permitted to be present in the pit area.

106.6 Motorized Vehicles in the Pits: Only those motorized vehicles necessary to the operation of the event shall be operated in the pits.

Operation of personal vehicles such as golf karts, motorbikes, go peds, quads, or other personal transportation devices in the pits at IKF insured events is not allowed.

Exceptions shall be made for handicapped persons.

106.7 Drip Pan: It is suggested that each entrant use a drip pan to prevent spillage of any fluid, except plain water, upon the ground.

106.8 Fuel Disposal: Any entrant disposing of fuels or lubricants in the pit or track area by pouring or spilling such fuels or lubricants upon the ground is subject to expulsion from the event.

106.9 Fire Code: All participants shall abide by state and local fire codes.

106.10 Fire Safety: The use of open flames to treat or pre-heat tires is prohibited in the pit or grid area. An area away from fuel or other flammables must be designated for welding. No smoking is permitted on grid and in pump-around areas. No fuels, lubricants or other hazardous substances may be disposed of in the restricted/pit area except in containers specifically designated for such purpose. Failure to comply will subject individual to suspension of membership privileges.

107 HOT PIT RULES

107.1 Definition: The Hot Pits at any IKF insured event consist of any area where the karts may be operated under their own power. This shall include the area where karts are staged for entry to the track, that is the Grid area.

107.2 Access to Hot Pit areas: The hot pit area is reserved for the exclusive use of competing karts and their crews. The Race Director and Pit Steward have at all times the right to limit access to the Hot Pit areas to the drivers and sufficient crew members to service the kart.

107.3 Signaling: Unless a kart is actually in the pit, only one crew member shall be in front of the pit for signaling and only for the length of time needed to accomplish the actual signaling operation. No signaling will be allowed in Speedway racing.

107.4 Refueling: A kart in competition shall be refueled only in the “hot pit”. The motor must be stopped and the driver must exit the kart during refueling.

107.5 Warming of Tires: In Sprint and Speedway Divisions, all tires on the grid must be at ambient temperature. There will be NO warming of tires on the grid prior to qualifying or racing. Specifically, the back of the kart will not be raised and the tires spun on the track surface to heat them. The Race Director may disqualify a kart from qualifying or racing for violating this rule.

Warming of tires on the track will be permitted for Sprint, Sprint Shifter and Pavement Speedway racing. Kid Karts are not allowed to warm tires on the track. Kid Kart participants observed warming tires may be excluded from that portion of the event at the discretion of the Race Director.

107.6 Changing Tires: In 2 and 4-Cycle Speedway racing, tires may be changed on the grid. Tires changed on the grid must be at ambient temperature +/- 5 degrees. It is allowed to remove tires from a competing kart, immerse them in ambient temperature water, and install them on another kart on the grid. Tires may be removed from a kart in post-tech after notifying tech personnel.

107.7 Pitting: All drivers shall use extreme caution when driving in the hot pit area. Be alert for pedestrians and other karts. Drive at a reduced rate of speed.

Enter and exit the hot pit area at designated pit entrance and exit only.

When exiting the hot pit area during practice or a race, a driver shall yield the right of way to all other competitors on the track. All drivers shall stay out of the fast groove until their kart is up to racing speed and able to merge with traffic safely.

108 DRIVING PROCEDURES

108.1 Good Sportsmanship: It is the Spirit and Intent of these rules that all competitors drive exhibiting good sportsmanship; that is, every driver is expected to behave according to principles of fairness, observe all rules, show respect for others, proceed on track without touching or endangering the vehicles of fellow competitors and accept victory or defeat graciously.

However, inadvertent, occasional contact between karts on track is a reality of racing. The judgment of the point at which inadvertent contact becomes deliberate pushing, bumping, crowding, nerfing, blocking, etc. is solely at the discretion of the Race Director and his officials. The Race Director may penalize or disqualify any competitor, who, in his judgment, is not driving as a good sportsman. Penalties assessed by the Race Director while karts are on track are not protestable.

108.2 Practice: Rules, regulations and procedures for competition shall apply to all practice sessions. Extreme caution should be exercised during open practice sessions due to the mixed grouping of different classes of drivers and karts.

108.3 Starts: All rules governing starts, contained under race procedures, shall be enforced. Utmost caution should be observed during all starts. Remain calm and alert, as all karts will be running closely grouped. Avoid sudden changes in direction and if evasive action is necessary, check first to make sure your intended course is clear. Once the kart enters the track and the 90 second clock has expired for any race it may not leave the racing surface to enter the pits and return to the track for that same race unless directed by the Race Director.

108.4 Competition: Remain alert. Give consideration to fellow competitors in all areas of safety.

108.4.1 Adjustments of carburetors and other equipment should be done in straight-aways only. Road Race laydown drivers should sit up to let other competitors know they are running at a reduced speed. Use extreme caution while tuning on the track.

108.4.2 Overtaking: When two or more karts enter a corner simultaneously, that is, when the driver of each kart is aware of the other's presence, the lead inside kart has the right-of-way. All karts should maintain a constant line through the corner and avoid erratic changes in direction. All karts should leave a lane on the track, "racing room", for other karts while entering, apexing, or exiting a corner.

108.4.3 Cutting the course: Any driver leaving the course or cutting the apex of the corner attempting to pass another competitor is subject to penalty or disqualification at the discretion of the Race Director whose decision is not protestable.

108.4.4 Re-entering the track: A driver who has gone off the racing surface may re-enter the racetrack only if operating under his/her own power and only if he has received no outside assistance. A re-entering driver will enter the track as far off the racing line as possible allowing all competing karts sufficient room to avoid any possibility of contact with the re-entering kart. A driver must re-enter the track only at a point that will provide no advantage in time, distance or position relative to competing karts. Any penalty assessed for gaining advantage is at the discretion of the Race Director whose decision is not protestable.

108.4.5 Remain Aware: Any driver slipstreaming, drafting or following another kart should use extreme caution and should be prepared for evasive action should the lead kart suffer a mechanical failure.

108.4.6 Contact: Deliberate contact, bumping, nerfing, blocking, pushing, etc., will be grounds for disqualification. The decision of the Race Director is not protestable.

At IKF insured events, a positive effort should be made to prevent rough driving and when it does occur, to punish the offender.

108.5 Disabled karts:

108.5.1 In Sprint, Sprint Shifter, TaG and Road Race Divisions, no driver shall continue on track if they must get out of the kart for any reason except under a Red Flag or in a designated HOT PIT area.

108.5.2 In Speedway Division racing, under a full course yellow flag condition, a driver may get help from track personnel in restoring the kart to the racing surface or may exit the kart to restore the kart to the racing surface.

108.5.3 Any driver unable to continue because of dead engine (karts with onboard electric starting capability excepted), mechanical failure or lack of fuel, must move the kart well off the track into a safe location as soon as safe conditions permit. Do not leave kart adjacent to the track at any time. Await the conclusion of the race before attempting to move the kart back to the pit area.

108.5.4 Kart Retrieval Vehicles must await the conclusion of the practice, qualifying or race event and all karts must be stopped prior to entering the racing surface to retrieve disabled karts. Kart Retrieval Vehicles may enter the racing surface at the direction of the Race Director only. At all other times, Kart Retrieval Vehicles are to remain in pit areas behind protective barriers.

108.6 Signaling: Drivers shall raise one arm over their head to signal following drivers when slowing abnormally, applying excessive brake, pulling off course, failing to accelerate normally, entering a Road Racing scoring chicane, or warning other drivers of impending hazard.

Drivers shall raise both arms over their heads to signal following drivers that they have no control over their kart after spinning off course or stopping on course due to mechanical failure. Do not raise arms until the kart is safely stopped.

A driver, when being overtaken by a faster kart, shall attempt to signal the approaching kart, with one arm raised, indicating the safest side for passing.

108.7 Scratched Entries:

108.7.1 In Sprint and Pavement Speedway Racing, if an entry is scratched before the karts leave the grid, the grid shall be reformed by crossing over to make the grid correct by qualifying time. If an entry is scratched after the karts leave the grid, the grid shall be reformed by karts moving straight forward.

108.7.2 In Speedway Racing, whenever an entry is scratched, the grid shall be reformed by karts moving straight forward, maintaining their position in pole or outside line.

108.8 Post Race Weigh-In: Drivers shall be weighed with their karts immediately after any competition portion of any IKF event. Failure to make specified class weight, failure to weigh, addition of weight, carrying weight on the drivers body, or failure of a driver to identify himself when asked are grounds for disqualification from that portion of the event.

108.9 Post Race Inspection: At the end of competition, all karts and drivers shall proceed directly to the designated impound area. (See Section 500.)

108.10 Radios: No radios or other electronic communication devices may be carried on any kart or by any driver in Sprint, Sprint Shifter, Speedway or TaG Divisions unless approved by IKF. In Road Race Division only, radios will be allowed for all Senior classes; Junior classes are excluded from using radios.

108.11 Video: IKF Officials will not review any video taken by any driver, crew member or interested bystander of any practice or racing action at any IKF event. Video will not be accepted as part of any Protest or Grievance. Video will not be reviewed by the IKF Board of Directors.

109 FLAGS

Each IKF competitor is responsible for the knowledge of and adherence to the following flag signals (please refer to your division of racing for specific information):

109.1 Green Flag - Start: course is clear.

109.2 Yellow Flag - Caution: reduce speed immediately and maintain your position.

109.3 Red Flag - Stop: race is halted. A red flag is mandatory when any kart rolls over or any driver is ejected from his kart.

109.4 Black Flag - Stop next lap at pits for consultation. Drivers, who in the opinion of the Flagman or Race Director, clearly ignore the black flag signal and do not stop at the pits on the next lap after the signal has been given, will be penalized, in that no laps will be officially credited following the lap in which the signal was first given. The decision as to whether the black flag was ignored is not protestable.

109.5 Black/Orange Flag - Black with orange ball (Meatball flag) - Stop at pits next lap, you have a mechanical problem.

109.6 Blue with Orange Diagonal Stripe - The lapping driver is attempting to pass, give him consideration.

109.7 Blue: Faster competitor trying to overtake you, make room. This pertains to all classes, all divisions, including Road Race. See 210.9.3 and 210.8.3 for special Blue Flag conditions at Sprint races.

109.8 Yellow and Red Flags Waved: Restart. Road Racing drivers return to grid. Sprint and Speedway drivers reform pack for restart at a slow pace.

109.9 Yellow with Diagonal Red Stripes: For Road Racing, a debris flag. Watch for debris on track.

109.10 Checkered and Black Flags Waved: Finish under protest. Used to end the competition if suspicion of or reports of foul, rough or illegal driving, or unsportsmanlike conduct are present. It shall then be considered that the competition was finished under official protest by the Race Director or Starter. After checking with corner personnel and the race committee, the Race Director shall state findings or rulings to the entrant(s) involved if an infraction of the rules occurred.

109.11 White Flag - The leader has commenced his last lap.

109.12 Checkered Flag - You have completed the race when you receive the checkered flag at the finish line.

110 GENERAL RACE PROCEDURES

(Please refer to your division of racing for more specific information)

110.1 Insurance

110.1.1 Scope: Insurance purchased from IKF covers only events organized and conducted according to the Rules and Technical Specifications included in this Rulebook. Use of these Rules and Technical Specifications requires the purchase of a pit pass from IKF. No deviation involving participation age, chassis specifications, or safety regulations is permitted.

110.1.2 Local Procedures: Due to unforeseen local conditions identified by the Race Director, an IKF insured event may have special rules supplementing these regulations. Should IKF regulations conflict with the special rules of the event, the special local rules will take precedence by virtue of their specialized nature.

Local Procedures shall not permit any deviation from IKF rules affecting the safety of the event nor alter any entrants' competitiveness.

Any deviation from standard IKF race procedures under Local Procedures must be announced in advance of the event by posting on the IKF Website, direct mailing, program announcement, or posting at event registration.

110.2 Local Option Classes

110.2.1 Classes listed in the current Grand National schedule or the Section 850 Regional Class List may be raced at any event.

110.2.2 Should a track or an event wish to run a class not listed as a Current Grand National class or a Section 850 class, written permission must be obtained in advance from IKF. This written permission must be renewed each calendar year.

110.2.3 Local Option Class Guidelines: Opting not to follow the National Tire or weight guidelines does not require Local Option permission.

110.3 Sanction Fees: Sanction fees shall be paid to IKF for all IKF Regional Championship classes and any other classes run at an IKF Regional event within 72 hours of the scheduled event.

110.4 Number of Karts: The maximum number of karts permitted in any one race during an event shall be determined by track design, safety of competitors and ability of scorers to do a reliable job. Since this number varies from track to track, each Race Director shall use his judgment in determining a safe limit.

110.5 Starting Line: The starting line can be designated at any place on the track. The finish line shall be located at scoring area.

110.6 Junior Practice and Competition: Junior events should be held as separate and distinct races. However;

110.6.1 Juniors II's, aged 12-15, for the Sprint and Road Racing Divisions, will be allowed to practice and race on track with Senior classes when conditions are deemed acceptable by the Race Director. Junior II's as specified in this paragraph shall not compete against Senior Drivers. Each group shall be scored separately.

110.6.2 Junior I's, Rookies, or Cadet drivers will not be permitted to qualify, practice or race with any Senior classes. Junior II's and Junior I's may practice, qualify and race on the track together if conditions are deemed to be acceptable by the Race Director. The two groups shall not compete against each other. Each group shall be scored separately.

110.6.3 Kid Karts will not be permitted to break in motors, warm up, practice, qualify or race with any other class of karts on track at any time. Kid Karts shall have the track to themselves.

110.7 Grand National Event Delays: At all Grand National events, should there be a delay because of rain or some other unforeseeable circumstance, the event will be delayed by that amount of days (i.e., Tuesday's race would be on Wednesday, etc.).

110.8 At Grand National events, the finish line must be at an accessible and safe location. IKF should have designated officials situated so they can observe the finish of races. Finish shall be marked by a visible line.

110.9 Duffy Award Restriction: At Grand National events, classes with less than 5 entrants will not be run for a Duffy. Trophies will be procured and delivered to participants within 2 weeks of the Grand National. Note: If you expect to run a lightly participated class, check with the track holding the Grand National for the number of entries at the close of Pre-Registration.

110.10 Restarts/Scoring: All competitors please refer to your division of racing for specific information.

Competitors will be scored as they drop out of the race provided that they scale and meet any other post race requirements.

Competitors disqualified for flagrant driving misconduct during red flag situations will receive no points. If a red flag has been thrown, necessitating a restart, a kart that previously dropped out prior to the red flag cannot restart the race - effects all divisions.

110.11 Weight: The addition or removal of weight during the race, other than fuel is not allowed.

110.12 Water Drinking Before Scales: If authorized by the Race Director beforehand, drinking water from a clear plastic bottle (maximum 500ml) is allowed in the scale area before weighing. Any competitor that pours the water over their head or driving equipment may be penalized.

111 ENGINES

The basic engine standard for all competition classes is an internal combustion engine of the 2-Cycle type unless otherwise stated or specified. The basic engine for 4-Cycle classes is an internal combustion single cylinder engine.

111.1 Eligibility: Eligibility of all engines, except open classes, is based upon approval of the IKF National Board of Directors.

111.2 Supercharging: All supercharged (forced induction) engines shall be advanced to the next higher displacement class. 300cc class cannot be supercharged.

111.3 Water-Cooled Engines: In addition to the specifications for construction and classification of all karts, the following special rules and classifications shall be adhered to by all karts using water-cooled engines.

111.3.1 Classification: Legal in all open classes.

111.3.2 Construction: (1) No frame members shall be permitted as an integral part of the cooling system. (2) All parts of the circulatory system shall be placed in protected areas not normally susceptible to damage in case of an accident, etc.

111.3.3 Cooling System: (1) Water or water-based coolants only shall be permitted as cooling agents. No ethylene glycol coolants. – (2) A closed system shall be mandatory for water circulation and it is strongly suggested to use a catch can on any vent to prevent spillage of fluids on the racing surface which can be subject to disqualification with a Mechanical Black Flag - see 109.5.

111.4 Engine Management Systems: All computer assisted electrical engine management systems are illegal in all classes except FKE, ICE, and Open.

111.5 Engine Substitution: Competitors may elect to change an engine at any time. They may do so at the direction of the head tech official at said event. It must be removed from the kart in the tech impound area and must be held there until the completion of said event. If a competitor's finishing place warrants a tear down motor tech, then both motors must be teched as per head tech official direction. The intent of these rules is to repair engine damage, NOT to perform maintenance. The interpretation will be up to the Technical Inspector.

111.5.1 TaG and 2-Cycle Sprint Engines: Should demonstrated damage to an engine occur, a competitor may elect to substitute an engine, with a like engine (brand and model), with approval of the head tech official at said event. The burden of demonstrating damage rests with the competitor. If the competitor is unable to demonstrate damage, one additional engine (total of 2) MAY be approved and the competitor will start the next competition session at the back of the lineup.

112 GENERAL CHASSIS SPECIFICATIONS

(Please refer to your division of racing for more specific information.)

112.1 Minimum Weight: Race ready, dry; Single Classes: 85 lbs., Dual classes: 105 lbs., Kid Kart: 70 lbs.

112.2 Maximum Overall Kart Height: 26 in.(Exception, see rule 201.1 and 302.1.4)

112.3 Wheelbase: Maximum 50 in.; minimum 39.75 in. as measured from the axle wheel centers.

112.4 Tire Size: Maximum diameter 19.5 in., minimum diameter 9 in. Only pneumatic type tires shall be permitted.

112.5 Wheels: Shall be void of any defects. No kart shall have more than four wheels. Only wheels of 5 inches or 6 inches will be allowed to compete. 5 inch wheels can be no larger than 6 inches overall diameter. 6 inch wheels can be no larger than 7 inches overall diameter. This includes all exterior and interior wheel parts. This rule does not affect after market external "G" rings.

The moratorium placed on Lateral Support Wheels and Wheel Rings is in effect until further notice, pending input from the manufacturers.

112.6 Frame: Frame shall be of proven safe design with main frame members constructed of nominally round tubing, allowing for normal distortion and elongation near bends. Minimum diameter for main frame members is 1.0" and maximum diameter is 1.4".

Minimum tubing wall thickness of 1.0" diameter is .078". Minimum wall thickness at 1.125" and greater diameter is .060" Frame material shall be, at minimum, cold-rolled electric weld (ERW) steel tubing or material of at least equal strength.

Exception: Kid Kart frames shall be constructed of nominally round steel tubing with minimum dimensions of .980" diameter by .075" wall thickness.

No carbon fiber will be allowed as an integral part of the kart chassis. Carbon fiber is allowed only in floor pans, seats, bodywork, clutch and engine components.

112.7 Suspension: In all classes, all divisions, except Speedway Midgets, there shall be no active type suspension. Suspension shall include, but not be limited to, any pivot, elastic, or hinged joint which is allowed to pivot through the G forces imposed on the chassis while the kart is in motion. No hydraulic or pneumatic dampening. Passive

rubber or urethane seat supports or seat struts delineated with other rubber or urethane are not considered suspension.

112.8 Chassis Adjustments: In all 2 and 4-Cycle Sprint, Sprint Shifter and Road Race classes, any adjustments to the chassis while the kart is in motion is illegal. This does not include carburetor, exhaust, or brake adjustments, and shifting mechanisms. In 2-Cycle, 4-Cycle, and Pavement Speedway one mechanically adjusted front spindle is allowed.

112.9 Driver's Compartment: The driver's compartment shall be equipped with side rails, side panels or similarly effective lateral support. All parts of the driver shall be limited to the confines of the width and length of the kart. Adequate bumper protection shall be incorporated within the overall maximum length. Driver's feet shall not extend beyond bumper when pedals are fully depressed.

112.10 Seat Belts: Prohibited except in FKE, Section 305.8, Speedway Midgets, Section 410.3.1 and Champ Karts, Section 420.15.1.

112.11 Floor Pans: No void large enough for any part of the driver's body to inadvertently pass through, shall be permitted.

112.12 Seat Struts: The point where the seat strut attaches to the seat should be adequately reinforced or protected to prevent the strut from piercing the seat and causing the driver injury on impact.

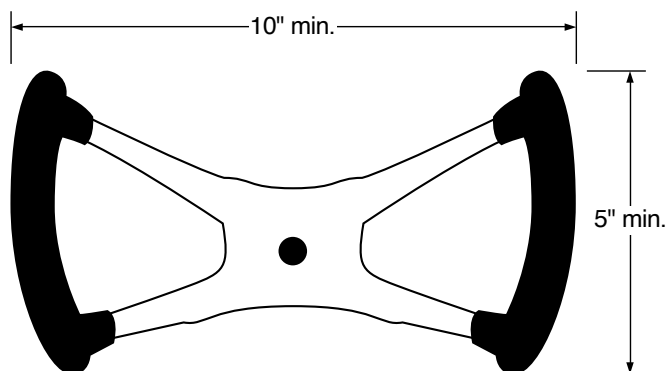
112.13 Throttle: Karts shall be equipped with foot operated throttle incorporating a return spring which closes the throttle when pedal is released. The foot operation requirements may be waived for physically challenged drivers.

112.14 Brakes: (Please refer to your division of racing for more specific information.) All karts shall have pedal operated brakes, operating in such a manner as to brake both rear wheels equally and adequately. No scrub-type brakes permitted. Dual brakes are recommended for karts entered in classes over 100cc's. Dual brakes consist of two individual braking systems on separate brake discs or drums.

Exception: Front wheel brakes are not allowed in 4-Cycle Sprint racing unless a class specifically requires front brakes.

All Bolts and pins securing or operating the brake system from the pedal to the caliper must be cotter pinned or safety wired. All bolts that hold non-captive brake pucks shall be safety wired so that the bolt cannot unscrew, allowing the brake puck to fall out. The foot operation requirements may be waived for physically challenged drivers.

112.15 Minimum steering wheel, i.e. Butterfly type: 10" minimum diameter, with a minimum of four spokes, and having a minimum 10" grip length, being no less than 5" grip length on each side. All Divisions. (See following diagram.)



112.16 Steering Specifications: The steering system shall be direct acting and of suitable design for maximum safety. Rack and Pinion type systems are approved. Steering designs using a pitman arm must be constructed so arm may not rotate over center and cause reverse steering. All collars and other devices used to retain the steering column shall be secured to prevent possible loss of the collar.

All bolts used in the steering shall be of aircraft standard quality (grade 5 or better) and shall be 3/16 in. minimum diameter. This does not pertain to king pins or wheel spindles.

All steering assembly bolts and nuts, including spindles and king pins, shall be safety wired or cotter keyed.

All rod ends shall have universal type swivel joints and jam nuts.

It is recommended that female rods ends or female tie rods have inspection holes drilled in them using the following procedures: Measure the rod end, male or female, thread length. Divide that length in half, then measure that distance from the end of the female tie rod or the female rod end. At that point, drill 1/16" inspection hole through. When the tie rods are assembled, the inspection hole will be covered by the rod end or tie rod.

112.16.1 Solid Steering Shaft: The steering shaft shall be solid steel. Steering wheel must be metallic. Steering wheel hub must be metallic. Minimum shaft diameter shall be 5/8". Shaft must be equal to or greater in strength than cold rolled steel. The steering wheel hub shall be attached to the shaft by a tapered and keyed or serrated surface, and shall be secured to the shaft by a nut. The nut shall be either safety wired or cotter keyed to prevent loss. A bolt passing through the steering hub and steering shaft to hold the hub to the shaft is illegal. It is not permissible to weld the hub to the shaft or the steering wheel to the hub. Recommended shaft taper 5 to 10 degrees, with the taper starting at the full 5/8 in. diameter. The center hole in the steering wheel must be smaller in diameter than the diameter of the solid steering shaft. A washer may be placed between the steering wheel and the center nut and a washer between the steering wheel and the steering shaft, to prevent the steering wheel from moving up and down the solid steering shaft in case of hub failure.

112.16.2 Hollow Steering Shaft: .700 minimum O.D. steel tubing with a minimum wall thickness of .0625 in. 5/16" minimum diameter fastener at lower end. No drilling or cutting into shaft is allowed except for the purpose of mounting the hub. Steering wheel hub (one piece, no welding) must be metallic and secured with a minimum diameter 6mm through bolts. If the steering wheel has a center hole, it may not be large enough to allow the shaft to protrude. Hub shall have a minimum O.D. of 1.125 in., flange shall have a minimum O.D. of 2.250 in. and a minimum flange thickness of .250 in. Shaft must protrude into hub a minimum of 1.250 in. Steering wheel must be metallic.

112.16.3 Quick Release Mechanism: The use of a Schroeder type quick release steering hub will be allowed in all classes.

112.17 Fuel System

112.17.1 Protection: Sprint and Speedway fuel tanks shall be confined within the main frame rails. Any fuel tank, which is the highest portion of the kart, shall be protected by a roll bar. The rollbar shall not exceed 26 in. in height and shall be suitable strength and design to prevent the tank cap from having contact with the ground in the event of an upset.

Exception: Fuel tank must be carried on the motor in Kid Kart or Briggs & Stratton Stock flathead classes.

112.17.2 Pressurization: No pressurized fuel tank(s) permitted.

112.17.3 Fuel Caps: All flip type fuel caps shall be safety fastened during an event.

112.17.4 Restrictions: Hydrazine is banned as either a base fuel or an additive, regardless of the amount used.

No Open Fuel, all divisions, all classes. Gas, Methanol, and Oil only, or any combination thereof in formerly "Open Fuel" classes. Only Acetone may be added to facilitate blending of gas and methanol, and only in quantities necessary to achieve blending. Large amounts not permissible.

112.18 Selective Gearbox: No transmission, gearbox or other device which permits a change of gear or sprocket ratios while the vehicle is in motion, is permitted except in Shift Kart Classes.

112.19 Ground Effects: Ground effects/skirts are banned from all IKF classes. No skirts or aerodynamic sealing devices may extend below the primary or secondary chassis on all classes in IKF Kart Racing. (The intent of this rule is to eliminate ground effects from racing karts. Attempts to circumvent this rule by any means shall be deemed illegal.)

112.20 Differentials, Front or Four Wheel Drive or Rear Wheel Steer:

112.20.1 The IKF Board has placed a moratorium on the use of differentials or any differential type of rear axle or any type system that permits the rear wheels to turn independently of each other, until such time as they are proven safe for use in competition. Effects all divisions of IKF karting.

112.20.2 Front wheel drive, four wheel drive, rear wheel steer, and four wheel steer have been banned in all classes, all divisions.

113 OFFICIALS

The Race Director and Starter/Flagman shall be current IKF members at all IKF insured events. All Officials must be familiar with all rules and regulations that apply to their duties.

113.1 Officials' Powers: The designated officials of any IKF event shall have and exercise, the power of rule enforcement and race supervision, as found in the Competition Regulations, during the entirety of any event. Officials reserve the right to prevent any person from participating in any IKF event.

Race Officials may correct a reversible error, e.g., line up, scoring, tech inspection, that they discover or that is brought to their attention by non Officials. The Race Officials may not re-run a race to correct an error.

113.2 Race Director's Duties: (See Section 114.4) The Race Director is in complete charge of the event. The Race Director is in direct charge of all Officials.

No event shall commence without the appointment of a Race Director.

The Race Director shall be that official having complete charge of the karts while on the track. The Race Director may warn or disqualify, through signals to the Starter, any driver who, in his opinion, alone or in consultation with others, is in violation of the rules or whose kart is or has become unsafe to operate. The decision of the Race Director to warn or disqualify any driver is not protestable.

It is the Race Director's option to shorten any races before the karts leave the grid.

The Race Director may form a Race Committee, consisting of the Race Director, Starter, or their designated representatives, to uphold all rules and regulations pertaining to driver's licenses, to observe participant driving habits, to supervise all drivers entered in an IKF sanctioned event, and to submit a written report to the IKF National Board of Directors on infractions of the rules and unsafe or unsportsmanlike conduct on the part of any driver.

The Race Director shall ensure that Race Results are submitted to the IKF office no later than 10 days after the specific event and that a copy of the race results shall be sent to the Regional Coordinator no later than 10 days after the specific event.

113.3 Starter's Duties: (Please refer to your division of racing for more specific information.) The Starter shall be that official having complete charge of the flags. The Starter shall follow instructions from the Race Director. The Starter's flag signals are to be obeyed without exception.

The Starter and Race Director shall conduct a mandatory meeting for all drivers prior to the start of the event to explain the flags, their use, and any special conditions specific to the event.

113.4 Chief Scorer's Duties: (Please refer to your division of racing for more specific information.) The Chief Scorer shall be that official in charge of timing and/or scoring. The Chief Scorer shall keep the Starter informed of positions, laps completed, etc. (See Section 114.4)

Each entrant's kart shall be assigned an identifying number, which will be carried at all times during the event. The number shall be as specified for each division. The entrant shall accept the assigned number and affix these numbers to his kart in a manner acceptable to the Chief Scorer.

113.4.1 The Chief Scorer shall ensure, when transponders are used for timing and scoring, that the last lap, i.e. the finish lap, shall be scored by visual means by multiple unbiased individuals. The first kart crossing the finish line will be deemed the winner, not the first transponder.

113.4.2 The Chief Scorer shall ensure that all results are marked with the time that they are distributed.

113.5 Turn Marshal's or Flagger's Duties: Turn Marshals/Flaggers shall be strategically located around the course to assist the Race Director and Starter in the orderly conduct of the event.

113.5.1 All flag personnel (including Turn Marshals) must be the attained age of sixteen (16).

113.5.2 The flag personnel shall use the yellow flag when necessary to signal drivers as to accidents, debris, fluid or other hazards on their portion of the track.

113.5.3 Flag personnel may assist drivers in clearing stalled or damaged karts from unsafe positions as long as they can do so with no risk of injury to themselves or risk to oncoming karts.

113.5.4 Flag personnel shall observe drivers and report any unsafe or unsportsmanlike driving to the Race Director and Starter.

113.6 Pit Steward's Duties: The Pit Steward shall be that official(s) having charge of the pit area. The Pit Steward shall keep all unauthorized personnel out of the area, assign the pit spaces, maintain orderly conduct in the pit area and report any irregularities or rule infractions to the Race Director.

113.7 Technical Inspector Duties: (Please refer to Section 500 for more specific information.) The Technical Inspector shall be that official(s) having charge of the post race inspection.

The Technical Inspector shall designate an area, the impound area, where karts and drivers will be checked for minimum class weight, maximum kart size, body work specifics, engine legality, exhaust system legality, legal attachment of weights, fuel legality, etc. Post race scale and tech areas must be cordoned off from persons other than the competitor.

Entrants are responsible to the Technical Inspector while in the impound area and are subject to disqualification if they leave without the Technical Inspector's approval.

113.7.1 The IKF Board members wish to remind all tech inspectors that it is their responsibility to check the engine(s) only for the legality of the engine in respect to the tech manual and not to add or delete from it. Likewise, it is the competitors' responsibility to assure themselves that the engine is legal in respect to the same tech manual.

114 PENALTIES

114.1 Participant Conduct

A participant is anyone, official, driver, crew member, or interested bystander who has signed a release and purchased an insurance pass to be in a controlled area, or who is attending any IKF event.

114.1.1 Physical Violence: All participants shall conduct themselves in an orderly manner. Physical violence, or threat of physical violence, to any individual (official, driver, crew member, interested bystander, or other) at any IKF event will subject the offender to immediate ejection from the event site, and possible probation or suspension of membership by action of the IKF Board of Directors.

114.1.2 Verbal abuse: Verbal abuse, or threats, directed at any individual (official, driver, crew member, interested bystander, or other) at any IKF event will subject the offender to immediate ejection from the event site, and possible probation or suspension of membership by action of the IKF Board of Directors.

114.1.3 Crews: Drivers are responsible for the control and conduct of their pit crew members. Unacceptable actions of crew members at any IKF event will subject the driver to immediate ejection from the event site, and possible probation or suspension of membership by action of the IKF Board of Directors.

114.1.4 Prohibited substances: All participants entering the controlled area at an IKF event shall be sober and not under the influence of any substance that may impair their ability to participate in a safe and orderly manner. It is the responsibility of the participant to withdraw from competition if they are taking medication that may display side effects that would impair their ability to safely participate. If, in the judgment of the officials in charge, an individual is under the influence of alcohol or any controlled substance during the period of an event, that individual may have his participation restricted or be ejected from the controlled area immediately.

After the racing is completed and the track is closed for the day, local laws governing the use of alcohol shall apply. Consumption of alcohol is not allowed in the Tech area until Post race Tech is complete.

114.1.5 Social Media: Occasional differences of opinion may arise regarding IKF rules and regulations, decisions by event officials, or event policies. However, communication and discussion of these differences must be handled directly between the IKF, and their official and the parties involved. Publishing and discussing these differences on social media sites (such as Facebook or Twitter) may result in disciplinary action including loss of ability to participate in IKF events.

114.1.6 Threat of Legal Action: Any competitor, parent, legal guardian, or general participant of an event that threatens or takes legal action via an attorney against IKF or any of its members, board members, officers, event participants, will be ejected from the event and suspended from further participation in IKF sanctioned events.

114.2 IKF is a private organization. IKF reserves the right to deny the issuance of membership, or to revoke any membership previously issued, for any reason or no reason, except that it will not deny or revoke a membership on the basis of race, creed, color, sex, or national origin.

114.3 Definitions: The following definitions should be used as guidelines for describing driver and pit crew behavior

114.3.1 Careless: departing from the standard of a reasonably prudent competent driver and/or personal conduct.

114.3.2 Reckless: performing an act or omission which creates an obvious and serious risk to others without due consideration of the consequences.

114.3.3 Dangerous: performing an act, or omission which creates an obvious and serious risk to others and with deliberate disregard of the consequences. (See 114.4.6)

114.4 Penalty Powers of the Race Director: The Race Director may impose any of the following penalties for driver or crew member infractions. Penalties are not necessarily progressive, that is, any penalty may be assessed for a first offense if considered serious enough by the Race Director.

114.4.1 Dock one or more finishing positions.

114.4.2 Dock finishing position one lap.

114.4.3 Disqualification from heat with black flag, while kart is on track, or at scale.

114.4.4 Disqualification for the day or the event in the case of a multi day event. Event disqualification shall not be retroactive to a previous day.

114.4.5 Written recommendation to the IKF Board requesting further action in addition to one of the above penalties.

114.5 Consequences of Disqualification:

114.5.1 Any driver who is disqualified from Qualifying, Heat Race or Pre-Final shall lose all race points and awards for prior portions of the event and may start his next subsequent portion of the event at the rear of his class unless disqualified from the entire event by the Race Director.

114.5.2 Any driver disqualified from a Main or Final shall lose any possible points and awards for the class from which he was disqualified.

114.5.3 Any driver disqualified from Qualifying, Heat Race, Pre-Final or Final, for any items not previously inspected in Tech, shall lose the Fast Time Award.

114.5.4 Disqualification will not result in the loss of the class participant punch for the event, provided the kart and driver have made a valid entry and passed pre-race inspection prior to the start of the race.

114.5.5 Any driver whose kart is rejected from the event at pre-race technical inspection or who intentionally presents the kart for re-check without specific corrections made to the satisfaction of the pre-race Technical Inspector, shall be disqualified from the event and no participant punch shall be given.

114.5.6 Disqualification Due to Illegal Fuel: All entrants are allowed one (1) courtesy fuel check before an event for each class entered.

Illegal fuel found in qualifying or heats places that competitor at the back of his class lineup for subsequent portions of the event. Illegal fuel found at the end of the final race is a disqualification from that class for the day.

Flagrant or repeated use of illegal fuel will result in suspension of one year or more.

114.5.7 See Sections 200 through 450 for scoring Regional Championship points.

114.6 Penalty Powers of the Board of Directors: The IKF Board of Directors, upon receiving a request for action from a Race Director and review of all evidence, may assess any of the following penalties upon any participant at any IKF insured event:

114.6.1 Warning: A warning letter will be sent to the participant informing him that he has been reported in violation of a rule and that he is being watched closely for further violations.

114.6.2 Probation: A participant may be placed on probation for a period of up to one year, commencing the date of the reported violation. Probations will be recorded in the Minutes of the IKF Board meetings and will be reported on the IKF Website.

114.6.3 Suspension: The power of suspension from IKF or revocation of IKF driver's license shall rest solely with the IKF Board of Directors. A participant may be placed on suspension for a period of time as set forth by the Board of Directors, commencing the date of the violation. Suspensions shall be recorded in the Minutes of the IKF Board meetings and will be reported on the IKF Website. A letter specifying the term of suspension will be sent to the Regional Coordinator and IKF State Governor in the area where the suspended participant races. Participants suspended from IKF shall not be allowed to purchase IKF insurance, be present in restricted areas requiring IKF insurance, take part in IKF meetings, vote in IKF elections, hold Committee or Coordinator appointments. At the end of the suspension period, the participant shall be readmitted to active participation. Suspended participants holding IKF appointments will not automatically resume those appointments. If a suspended participant is a Road Racing driver, they must revert to a Novice license.

114.7 Miscellaneous Violations Subject to Suspension:

114.7.1 Any IKF driver who falsifies his age to compete illegally is subject to suspension.

114.7.2 Any IKF driver who modifies his engine with the intent to compete illegally in his class or with the intent to defraud officials or other competitors by such modifications or actions, is subject to suspension from the date of infraction and loss of points and/or awards upon review of all evidence by the Board of Directors.

114.7.3 Any member who runs at an IKF-sanctioned event without being the driver of record or a valid relief driver may be suspended.

114.7.4 Any IKF member who drives a kart on the public street or assists persons in driving a kart on the street is subject to suspension.

114.7.5 Non-Payment (Bad Checks, etc.): Any participant tendering any debt instruments (checks, credit cards, etc.) for the payment of entry fees, memberships, or other fees, that is not honored within 30 of notification by the IKF office shall be suspended by the IKF Board and will remain suspended for 6 months after the restitution is made.

Collections will be enforced to the full extent of the law.

115 IKF EXPERT DRIVER

115.1 Expert Driver Criteria:

115.1.1 You are an Expert only in the division of karting where you have won two or more IKF Grand National Class Championships.

115.1.2 Pro races, regardless of purse do not apply to determination criteria for IKF expert status.

115.1.3 Restrictions that accompany Expert status apply at any event which begins after January 1 of the year following the earning of Expert status.

115.1.4 Road Race Only: Road Race Expert Drivers may run all Road Race classes.

115.1.5 Expert Division: IKF Experts are only expert in the Division in which they earned the Expert status.

115.2 Number Panel Color: Expert number panel color for Sprint and Road Race is Red, Platinum or Silver and is reserved for IKF Experts listed in the 115.4 and 116 Sections of these rules. Official IKF issued Expert number panels with the notations across the bottom of the panel are exempt from all plain number panel provisions.

Expert number panel color for Speedway Division Experts is Gold or Yellow.

115.2.1: Any competitor in the Kid Kart division who has won two IKF Grand National wins in the Sprint Division may run platinum, silver or red plates until they move out of the Kid Kart Division.

115.3 Junior/Expert Status: Junior National wins do not count towards Expert status. Any Junior who has won two IKF Grand Nationals in any Division may run platinum, silver or red plates in Sprint and Road Race events, gold or yellow plates in Speedway events until they move into Senior classes.

115.4 IKF Experts: New additions shown in Bold Face type (Note: IKF Sprint, Road Race and Speedway Experts may enter the Grand National in their Expert Division without participating in three Regional events. These Experts will not be required to pay a waiver fee.)

115.4.1 Current Experts in Road Race: Chris Abbas, Philip Arscott, Bernie Baldus, Ray Bobo, Jean Brown, Clint Curry, Jeremy Drew, Rus Dyer, Chuck Gafrarer, Bill Gulick, Chris Hegar, Cole Hegar, Rob Hegar, Ryan Hegar, Don Holmboe, Rick Holmboe, Scott Holmboe, Anthony Honeywell, Lynn Haddock, Terry Hegar, Terry Ives, Andy Kiker, Terry Krushwitz, Ric Lindsay, Jason Lorang, Ryen Miller, Murphy O'Brien, Todd Olson, D.J. Ortiz, Vince Puleo, Terre Rothweiler, Mike Schorn, Bill Shields, Aaron Stanford, Dayna Ward, Jim White, Anthony Williams.

115.4.2 Current Experts in 2-Cycle Sprint: Kolby Araki, Jim Arbuckle, Grayson Browne, Tyler Coffman, Dick Connors, Jeremy Drew, Phil Giebler, Lynn Haddock, Matt Johnson, Nic LeDuc, Lloyd Mack, Mike McAlister, Jess Peterson, Matt Peterson, Vince Puleo, Brandon Reed, Lake Speed, Terry Traeder, Michael Valiante, Jesus Vasquez, Garrett Wright.

115.4.3 Current Experts in 4-Cycle Sprint: Tyler Agan, Scott Barlee, Alan Cathey, Roger Cathey, Larry Fisher, Chuck Gafrarer, Burt Gasaway, Bryan Green, Lynn Haddock, Matt Kattanek, Terry Lawrence, Tim Lawrence, Brett Lucas, Lloyd Mack, Johnathan Miller, Mike Schorn, Alex Schutte, Mona Sturgeon.

115.4.4 Current Experts in 2-Cycle Speedway: Jimmy Abell, Zach Axlen, Robert Bennett, Cameron Childs, Mike Clausen, Jeremy Clearwater, Jeremiah Davis, Austin Ferrell, Jamie Ferrell, Bryan Good, Lynn Haddock, Kyle Heitz, Jeremy Hills, Jerry Janssen, Jason Lindgren, Bryan Nevins Jr., Bill Rieken, Steve Smith, Tom Spanel, Brad Stevens, Eric Vanderploeg, Chad Waller, and Ralph W. Woodard.

115.4.5 Current Experts in 4-Cycle Speedway: Jerod Ballhagen, Mike Ballhagen, Robert Bennett, Eddie Brose, Jamie Gerlach, Lynn Haddock, Jonathan Hanson, Justin Hanson, Kyle Heitz, Tayber Haremza, Joe Hilger, Zach Humphries, Kiefer Kalin, Cameron Koopman, Jordan Krug, Brentt Mork, Kevin Mulder, Bryan Nevins Jr., Skylar Prochaska, Tom Rayl, Casey Skyberg, David Snyder, Tom Spanel, Jason Utter, Doug Vogel, Chad Waller, Dane Williams, Ralph Woodard.

115.4.6 Current Experts in Speedway Midget: Jimmy Abell, Nathan Anderson, AJ Failor, Steven Failor, Jason Ferguson, Jamie Ferrell, Robert Utter.

115.4.7 Current Experts in Speedway Pavement: Lynn Haddock, Tom Rayl, Eric Vanderploeg.

115.4.8 Current Experts in Sprint Shifter: (none)

116 IKF HALL OF FAME EXPERTS

The following list is of persons who are not current IKF members and who have not raced in IKF races for five years. These persons are now, and shall remain Experts should they return to IKF racing.

IKF Hall of Fame Experts may enter the Grand National in their Expert Division without participating in three Regional events, upon renewing their IKF membership. These Experts will not be required to pay a waiver fee.

116.1 Road Race: Jimmy Adams, Jim Akkerman, Bob Allman, Dominic Andreotti, Craig Andrews, Gregg Baldus, John Bender, Pete Berlt, Beale Bernson, Peter Bloathner, Donald Bootes, Dave Bradley, Jerry Bowsman, Justin Bresee, Rhonda Mims-Brown, Tim Buckley, Tyler Bureau, Tony Butuso, Todd Cameron, Fred Chuck, Tim Clancey, David Clark, Mark Clevenger, Dave Clift, Todd Cooney, Kelley Coons, Brad Davis, Coy Dayton, Emerson Dismore, Mark Dismore, Darryl Domes, Ron Emmick, Mike Ensign, Bob Faller, Boyd Ferry, Mark Foster, Bob Garber, Jr., John Green, Glenn Goodlett, Scott Grenier, Firouz Haghighi, Dennis Hall, Phil Harris, Gary Hartman, Kathey Hartman, Lee Hatch, Doug Henline, Tom Holt, Joe Hovorka, Ed Hundley, Jackie Hunt, Shad Huntley, Bob Hyman, George Ito, Ken Johnson, Phillip Johnson, Mike Jones, John Kindhart, J.C. Kester, Tom Kistler, Joe Kitterman, Chris Knight, David Koomjan, Scott Knutze, Larry Kurpiewski, Garry LaPoint, Peter Lane, Eddie Lawson, Duff Livingstone, Collin Lynn, Bob Mackey, Mike Manning, Michael Mantel, Barry Marshall, Gene Martin, Michael McAndrews, Waylon McCulloch, Don McDonald, Tony McGee, Doug Milliken, Jim Modoff, Mike Moya, Peter Muller, Jeff Nelson, Michael Neujahr, Tom Niels, Bill Novotny, Willie Nunez, Steve O'Hara, Sheldon Orr, Anthony "AJ" Ortega, Scott Overbey, Phil Pfau, Chuck Pittenger, Paul Plank, Russell Pool, Scott Pruett, Rick Rayburn, Gene Renegard, Buddy Rice, David Richey, Scott Rister, Sam Rodrigues, Mick Rupp, Jim Russell, Jr., Terry Russell, Scott Salyer, Scott Saunders, Brian Schaeffer, Stacy Seguine, Donald Shalla, Bobby Shiffert, Troy Shooter, Ron Skeen, Mike Spear, Jr., Mike Speed, David Start, Butch Stewart, Don Surwall, Bruce Swanhuysen, John Teflos, Brian Thomas, Dave Thomas, Jason Van Fossen, Rich Van Fossen, Todd Vandermolen, Mike Van Kralingen, Ron Wahlman, Buddy Wallen, Chuck West III, Jim Wester, Rick Williams, Jim Whitehead, Rod Whorton, LeRoy Wilkerson, Ron White, Sam Winkler, Todd Zeitler.

116.2 2-Cycle Sprint: Kyle Adkins, Tony Adkins, Bob Allman, Bill Arbuckle, Alex Barron, Todd Barron, Mike Botelho, Jr., Dave Bradley, Rocky Buff, Ken Bunden, Jeff Brown, Jim Bono, John Bush, Austin Cameron, Brad Campbell, John Carfello, Phillip Carlson, Richard Carson, Richard Cassle, Jilene Chivell, Kevin Christensen, Bill Cleavlin, Howard Combee, Ronnie Davis, Bob Dempsey, Jake DeRoads, Mathew "Boomer" DeRoads, Dan Deyoung, Mark Dismore, Michael Doty Jr., Gary Emmick, Ron Emmick, Dale Fischlien, Roy Fleming, Robbie Flock, Chuck Florian, Rick Gifford, Chris Giumarra, Scott Goodyear, Joey Hand, Frank Harbin, Joshua Harris, Gary Hartman, Kathey Hartman, Richie Hearn, Dan Hodapp, Tom Hunter Jr., Travis Irving, George Ito, Steve Johnson, Nicholas Johnston, Bobby Kelley, Charlie Kimball, Bob Kindoll, Dave Knapp, Jason LaPoint, Bill LaRock, Joey Licata Jr., Doug Lierle, Robert Logan, Kyle Longmore, Ralph Mariano, David Mayhew, Mack McCormack, Neil McCoy, Matt Melby, Ernie McGlove, Glen McKinnon, Craig Meintzer, Pete Michel, Mike Miserendino, Ken Montgomery, Robert Mott, Cole Nelson, Jeff Nelson, Tom Niels, Sam Odem, Jr., Joey Odenthal, Bobby Oergel, Phil Pfau, Brian Phillipsen, Chuck Piornack, Chuck Pittenger, Chuck Power, Bob Pruett Jr., Scott Pruett, Kyle Rassuchine, Ron Reding, Jerrill Rice, Randy Righettoni, Gabriella Robles, Sam Rodrigues, Michael Rolison, Eric Schweinberg, Scott Sellergren, Jeff Shafer, Chris Shannon, Mark Shepard, Wendell Shipman, Kyle Shriver, Gary M. Smith, Clayton Snow, Tod Spaude, Danny Stewart, Richard Summers, Johnny Sutton, Adam Thompson, Andy Thompson, Chad Turner, Joe Vera, Jim Walters, Eddie Wallace, Chuck Williamson, Keith Williamson, Harlan Willis, Ethan Wilson, Fred Witmore, Ken Yagi, Jim Yamane, Landon Yee, Marc Zartarian.

116.3 4-Cycle Sprint: Travis Anderson, Mike Birdsell, Robin Bradshaw, Blake Bukamier, George Buhr, Kurt Burris, Glen Butler, Richard Carson, Joel Chavez, Mike Clements, Tim Clark, Tom Clark, Tal Crosser, Michael Doty Jr., Doug Ferri, Gerry Glen, Rich Hearn, Mike Hood, Jeff Jewell, Jason Jons, Dan Lauer, Steve Markham, Mack McCormack, Thomas Merrill, Chip Mooneyham, C.J. Mooneyham, Kelsey Nash, Sheila Bukamier-Nash, Seth Nash, Tristen O'Rear, John D. Patterson Jr., Phil Pfau, Matthew Riggs, Gabriella Robles, Enik Sanders, Chris Scribner, Chris Siegle, Adam Silveira, Bryan Stephanson, Rod Stewart, Rick Sturgeon, Charles Toler, David Turk, John Turk Jr., Dickey Wilson.

116.4 2-Cycle Speedway: Larry Ball, Chris Blattler, Scott Brody, Chris Buller, Ralph Burris, Jr., B.J. Carter, Jimmy Carter, Todd Cooney, Adam Davis, Tommy Davis III, Mike DeWiese, Dale Durbin, Brandon Erwin, Scott Evans, Corey Forsyth, Jason Gibb, Rick Gladson, Gregg Jones, Ron Jones, Mark Loghren, Bill Macedo, Mike Manning, Johnny Menniga, Brad Moriarty, Tony Moro, Bill Nellis, Jeff Nelson, Phil Pfau, Chuck Pittenger, Eric Pollard, Shannon Pospisil, Denny Rice, Eddie Robertson, Ryan Reeves, Craig Lee Ross, Jay Schares, Kris Schweer, Jeff Sunderland, Garrett Swiggart, Paul Taschler, Josh Walker, Lee Walker Jr.

116.5 4-Cycle Speedway: Gene Becker, Chris Buller, Kevin David, Andrew Dove, Scott Festavan, A.J. Foyt IV, Troy Garner, Tuffy Hudson, Jody Jolly, Michael Kelley, Jody Krug, Jim Maroon, Aaron Marrant, Randy McInville, Rhonda McInville, Gonzo McVey, Dave Miller, Josh Most, Matt Norgaard, Dee Paschal, Troy Paulus, Phil Pfau, Shannon Pospisil, Enik Sanders, Steve Sands, Jay Schares, Chad Selk, J. Brad Sellers, Mark Smith, Stevie Stephenson, Garrett Swiggart, Stan Tripp, Jr., Stan Tripp III, David Turk, John Turk Jr., Marlin Voss, Josh Walker, Pete Walton.

116.6 Speedway Midget: Justin Giannetto, Jayce Jenkins, Brian O'Donnell, Mark Van Haften, Wendy Van Haften.

116.7 Speedway Pavement: Jordan Ashelin, Blake Haughland, Skip McCord, Josh Most, Nick Perkins, Jason Petty, Curtis Ruth, Jay Schares, Scott Weir.

116.8 Sprint Shifter: A.J. Allmendinger, Brian Bartolero, Eric Bartolero, Tim Carter, Travis Duhn, Ron Emmick, Billy Goshen, Brian Keck, Neil McCoy, Scott Speed, Anthony Valerio, Ron White, Mike Wright.

SPRINT

Sprint karts are characterized by their sit-up driving position. Sprint racing is an excellent starting point for competitive go-karting. With a wide range of classes available for the novice to expert, there is a class for everyone. Races are conducted by either of two systems on the Regional level: three heats with motocross scoring or a pre-final and final format. On the National level, the pre-final/final format is preferred. The race distance is pre-determined in accordance with the rules. Sprint racing gives the competitor an opportunity to learn the basics of karting, at speeds somewhat slower than those found in Road Racing but with all the excitement you can stand.

200

2&4 CYCLE SPRINT RACING REGULATIONS

Unless otherwise stated, 2-Cycle includes TAG Engines

NOTE: FOR ADDITIONAL INFORMATION, PLEASE REFER TO:

<i>Event officials are authorized to decide if an equipment change or design is an attempt to “beat” the rules. They can and will disqualify an entry in violation of the Spirit and Intent of these rules. Any official or representative shall have the right to correct conditions not in compliance with the Spirit and Intent of these regulations.</i>	SAFETY RACE PROCEDURES CHASSIS SPECIFICATIONS PRE-RACE TECH. INSPECTION POST-RACE TECH. INSPECTION PROTESTS (114.6) APPEALS	SECTION 105 SECTION 110 SECTION 112 SECTION 503 SECTION 504 SECTION 507 SECTION 508
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200.1 IKF 2 & 4 CYCLE SPRINT TIRE GROUPS for grand nationals

The intent of our Sprint tire program is to provide stability, cost control and equality of competition for our members during the approval period. Refer to the IKF website for current tire approvals. No method of altering the tire is acceptable. This includes trimming, shaving or any chemical treatment. The IKF reserves the right to implement any test to determine conformance with this rule.

The Spec Tire for 2018 is the Evinco line of tires, see the Group table below and specific class rules for tire compound and size specifications for individual classes.

Group 1: Evinco Blue - Front & Rear 4.60/10.0-5

All Kid Kart classes 2-Cycle and 4-Cycle

All Junior 1/Cadet classes 2-Cycle and 4-Cycle

Group 2: Evinco Blue - Front: 4.60/10.0-5, Rear: 6.0-11.0-5

All Junior 2 - 4-Cycle

All Senior - 4-Cycle

Group 3: Evinco Red - Front: 4.60/10.0-5, Rear: 7.1-11.0-5

All Junior 2 - 2-Cycle

All Senior - 2-Cycle

200.2 Sprint Racing Tires:

200.2.1 Sprint: All competitors in Sprint, 2 and 4-Cycle classes, must qualify and finish all three (3) heats, or final/Pre-final, on the same set of tires. Tires will be marked after qualifying.

It will be left to the Race Director or Chief of Tech to allow one-for-one replacement of a tire that is damaged by road hazard or accident. The replacement tire must be replaced by/with a tire of similar wear and condition (used).

200.2.2 Sprint Racing/Rain Tires: If rain conditions exist, the Race Directors may, at their discretion, waive the “qualify and race” tire rule in Sprint events.

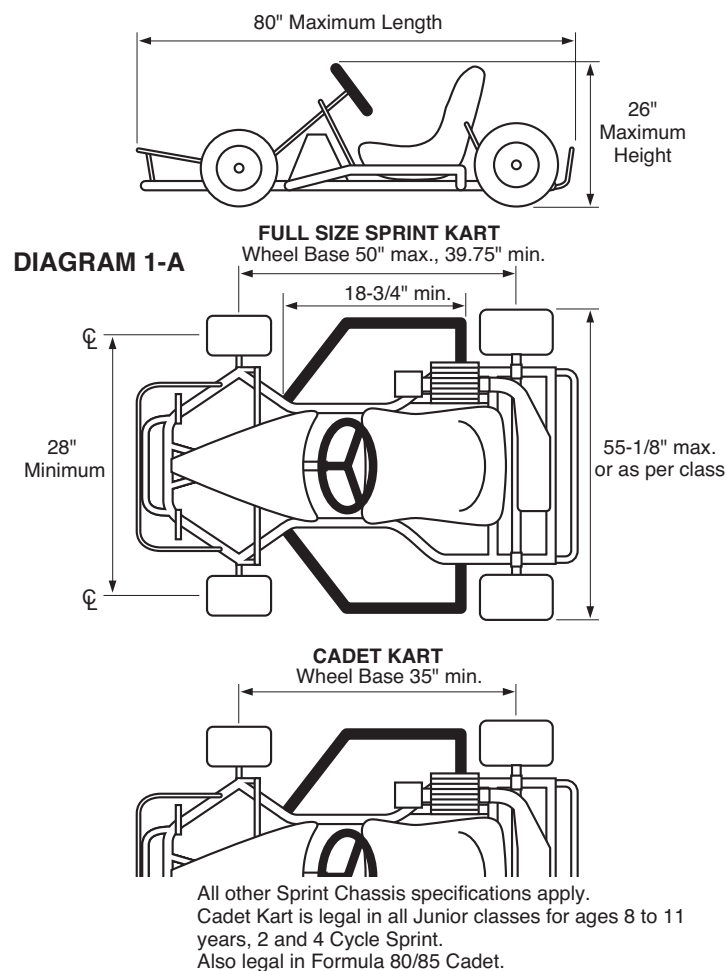
This decision may be made at any time during the course of an event and is to be used to assure safe completion of event. Any such announcement of this change will be made to all competitors at the event at which time they may have the option to use any commercially produced rain tires or their choice of legal dry tires. Hand grooved dry tires are not allowed.

If a competitor elects to use a dry tire at any time during a declared rain race, the dry tires will be marked at the scales after that heat and will be the only set of dry tires to be used by that competitor in that class.

If conditions are changing, a competitor may choose to alternate between rain tires and dry tires. Only one set of rain tires may be used, marked after their first competition use.

201 CHASSIS SPECIFICATIONS

(Please refer to Section 105 and 112 General Chassis Regulations for more information)



201.1 Maximum Overall Kart Height: 26 in. Does not include air filter.

201.2 Maximum Overall Kart Length: 80 in. including bodywork.

201.3 Kart Width:

201.3.1 Maximum overall kart width: 55.125 in. for 2-cycle and 4-cycle sprint karts.

Exception: for Junior I 2-cycle and 4-cycle classes (207-1, 2, 3, 4 and classes 209-1, 2, 3) maximum overall kart width will be 50".

For kid kart see Section 208.3 Kid Kart specifications.

201.3.2 Minimum Tread Width: 28 in., measured from the centerline of right tire to the centerline of left tire.

201.3.3 Axles: In all Junior and Senior classes, the maximum diameter allowed is 50 mm or 1.9688".

In all classes where Cadet chassis are allowed, the maximum diameter allowed is 40 mm or 1.574"

201.4 Brakes: See Section 112.14. It is recommended that all karts be equipped with a secondary brake operating linkage consisting of a properly secured cable of 1.8 mm minimum diameter.

201.4.1 Exceptions:

201.4.1.1 Front wheel brakes are not allowed in any 2 Cycle sprint class, unless the class rules specifically require them.

201.4.1.2 Front wheel brakes are not allowed in any 4 Cycle sprint class, unless the class rules specifically require them.

201.5 Front Bumper

201.5.1 The front bumper must have at least two steel components. The upper bar will be steel and have a minimum diameter of .630" with the lower steel bar having a minimum diameter of .700". Bars will be connected with steel uprights or plastic connectors. The bumper must accommodate the fixation of the required nose cone. Pushback Bumper System is optional at this time. Front bumper will be fixed to the chassis/frame at 4 points. Front bumper height at the top of the upper bar will be 7.75" minimum and 9.875" maximum as measured from the ground as raced with the driver seated in the kart.

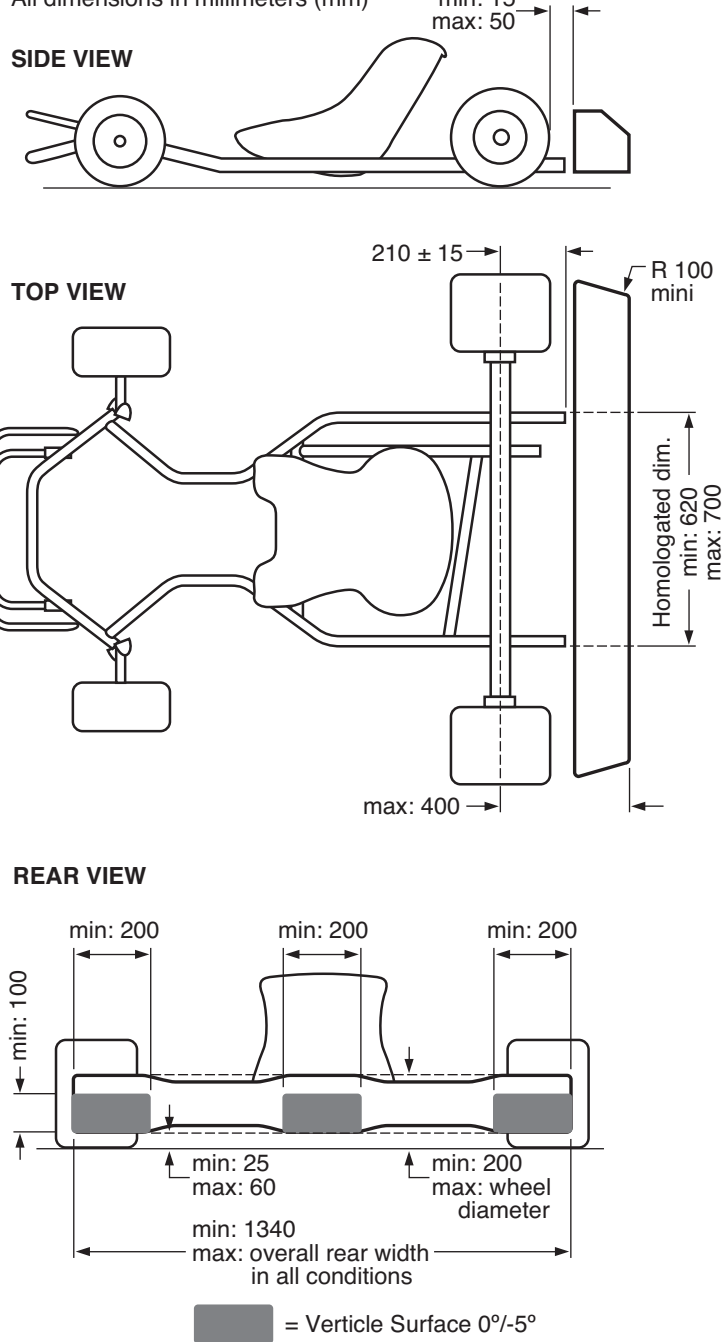
Push Back Bumper is allowed as optional.

201.6 Rear Bumper:

NOTE: All karts must be equipped with a rear bumper to protect the driver and kart from rear impact and to keep a following kart from reaching the rear tires. The bumper may be either CIK style plastic "rear wheel protection" or steel tube of a double bar design.

REAR BUMPER - CIK STYLE

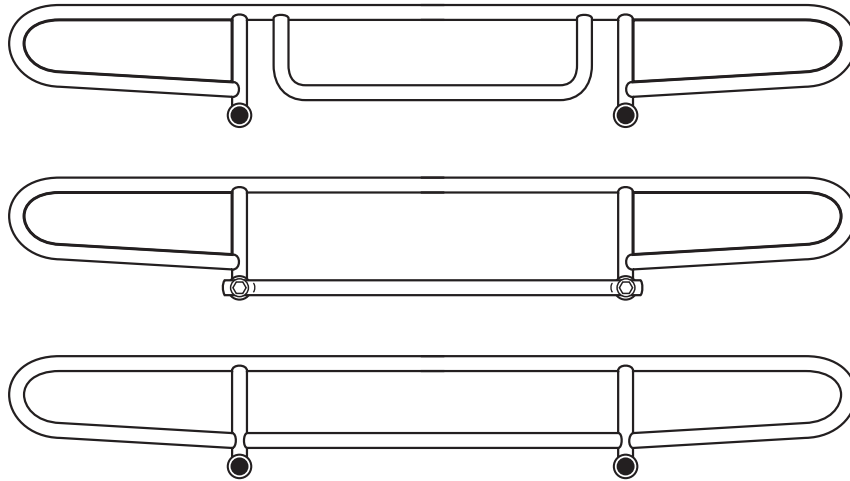
All dimensions in millimeters (mm)



The bumper shall extend to at least the center of the rear tires. The ends of the bumper shall not extend beyond the outside of the rear tires, except in a declared rain race. See 200.2.2

201.6.1 The rear bumper may be either CIK style plastic or welded steel tubing loop, of double bar design, including lower cross bar (201.6.3). Welded on “elephant ear” extensions are permissible. No flexible components are allowed.

Minimum diameter of steel tubing must be .625” with a minimum .065” wall thickness. The basic design must conform to the following drawing: (Note the requirement for the lower bar in Section 201.6.3).



If steel tubing utilized, the rear protection shall extend to at least the center of the rear tires. The ends of any rear protection may not extend beyond the outside of the rear tire/wheel assembly with the following except during a declared rain race or if 600 rear tires are utilized, the rear bumper may extend beyond the rear wheels by a maximum of 1” on each side. If CIK style utilized, retention cables or straps may be used. However, they may not compromise the original design or Homologation of the bumper and mounting hardware.

201.6.2 There will be a bar between 5” and 12” from the ground. The maximum width will be no wider than the outer edge of the rear tires (55.125”). The minimum width will not be less than the lateral width of the two main frame rails. All measurements will be with the driver seated in the kart as raced.

201.6.3 The lower cross bar height as measured from the ground to the center of the bar is 4” maximum. The minimum height of the lower bar will be no lower than the bottom of the frame rail as measured from the ground.

201.7 Nerf Bars: (see Diagram 1A)

201.7.1 CIK homologated nerf bars with homologation number imprinted are allowed as manufactured. For non-homologated nerf bars, the overall length of the side nerf bar or side pod shall be a minimum of 18.75” measured from the back side of the nerf bar closest to the rear tire and the rear of the kart in a straight line to where it attaches to the kart at the front. These dimensions apply to the cord length of CIK style side pod even if nerf bars mounting point dimensions measured without the pods are less than 24”.

201.7.2 Double rail nerfs are suggested but not mandatory.

201.7.3 Main nerf bar members shall not be less than 3/4” by .065-10% wall thickness steel tubing if a single bar is used. If double bars are used, minimum diameter is .630”.

201.8 4-Cycle Sprint Bodywork: All 4 Cycle sprint karts must use bodywork as specified in 201.9. Rear bumper may extend beyond the rear wheels by a maximum of 1” on each side.

201.9 2-Cycle Sprint Bodywork: All 2 Cycle Sprint karts must have CIK homologated bodywork, or other conforming approved bodywork including: nose piece, side pods, driver fairing and rear wheel protection. 201.9 applies to all classes using full size chassis. For Cadet chassis bodywork, see Section 201.10. No modifications allowed except for a hole in RH side pod to accommodate a starter.

201.9.1 Nose Piece (required):

201.9.1.1 Nose must be molded with CIK homologation stamp/seal and homologation number.

201.9.1.2 Other noses allowed are: Scribner Plastics 5010, 6010, CRG Phantom Bodywork.

201.9.1.3 Nose cones may be attached with CIK spring release clips or may be rigidly affixed to the kart. Nose pieces may NOT be fastened to the bumper or chassis with any device that will interfere with the operation of the factory homologated hardware.

201.9.2 Side Pods (required):

201.9.2.1 Side pods must be molded with CIK homologation stamp/seal and homologation number.

201.9.2.2 Other side pods allowed are: Scribner Plastics 5030, 6030.

201.9.3 Driver Fairing (required):

201.9.3.1 Driver fairing must be molded with CIK homologation stamp/seal and homologation number.

201.9.3.2 Other driver fairings allowed are: Scribner Plastics 5020, 6020.

201.9.4 Rear Wheel Protection (required):

201.9.4.1 Rear wheel protection must be molded with CIK homologation stamp/seal and homologation number.

201.9.4.2 Other rear wheel protection allowed are: Scribner Plastics 6050.

201.9.4.3 Steel tube of a double bar design is allowed, see Section 201.6

201.9.5 If any bodywork becomes dislodged while kart is on the track, the kart/driver will be shown a Meatball flag, 109.5, (black with orange ball) and must immediately exit the track to the pits. Driver will be scored as a mechanical DNF for that segment of the event and he may repair his kart and continue in later segments without additional penalty. Failure to heed the mechanical black flag will result in the kart/driver being shown the Black Flag, 109.4, with associated penalties.

201.10 Cadet Bodywork: Nose, two side pods and driver fairing are required.

201.10.1 FIK style bodywork is allowed on cadet karts. It must retain the same general shape and appearance as diagram 201.9.6 and may be smaller, but no larger than listed dimensions. Bodywork must be run as manufactured, except a hole may be made in the side pod for starting motor.

201.10.2 Cadet nose: The nose must not extend wider than the front tires.

201.10.3 Driver fairing: No part of the driver fairing may be higher off the ground than the highest point on the steering wheel. Maximum width of upper portion of driver fairing is 260 mm or 10 - 1/4".

201.10.4 If nose, side pod or driver fairing becomes dislodged while kart is on the track, the kart/driver will be shown a Meatball flag, 109.5, (black with orange ball) and must immediately

exit the track to the pits. Driver will be scored as a mechanical DNF for that segment of the event and he may repair his kart and continue in later segments without additional penalty. Failure to heed the mechanical black flag will result in the kart/driver being shown the Black Flag, 109.4, with associated penalties.

201.11 In the event that any of the bodywork defined in Sec. 201 is dislodged or missing during a competition session, the competitor will be shown the Black flag or the Black/Orange (Meatball) flag. The competitor is disqualified at that time (but retaining the position as of the time of the DQ) and shall exit the track and proceed with post race technical inspection.

201.11.1 If track officials are unable to display the Black or Black/Orange flag because of the time or position of the incident, a Black and Checkered flag may be shown at the end of the session.

201.11.2 Failure to display a flag does not relieve the competitor of the requirement to have the proper bodywork intact at post race technical inspection.

201.11.3 In the event that the black flag is not displayed on the last lap the penalty will be 2 finishing positions.

202 CLUTCHES AND DRIVE SYSTEMS

202.1 Axle Clutches are not allowed in any 2-Cycle National Championship class.

202.2 Axle clutches are not allowed in any 4-Cycle National Championship class.

202.3 Engine Clutches

202.3.1 Engine clutches are required in all 2 Cycle National Championship classes. Clutches are to be as supplied by engine manufacturer

202.3.2 Engine clutches are required in all 4-Cycle National Championship classes. Refer to Briggs rules.

202.4 Chains and Drive Systems:

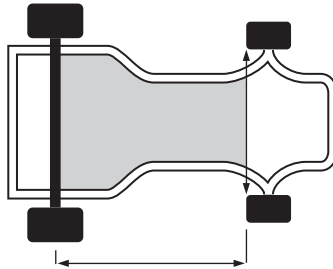
202.4.1 2-Cycle Sprint: #215, #219 and #35 chain, axle sprockets and drive sprockets are the only drive systems allowed.

202.4.2 4-Cycle Sprint: #219 and #35 chain, axle sprockets and drive sprockets are the only drive systems allowed.

203 AERODYNAMIC REGULATIONS FOR SPRINT AND SPRINT TYPE CHASSIS

203.1 Spoilers & Wings: Not permitted.

203.2 Belly Pans:



203.2.1 If a belly pan is used, it must be fully confined within the main frame rails (when viewed from directly above.)

203.2.2 If a belly pan is used, it must be flat and parallel to the ground from a line drawn across the rear edge of the front tires to the rear axle. Any such belly pan may not extend beyond the line of the rear axle.

203.3 Auxiliary Devices:

In Sprints only, any auxiliary devices “side pods”, “side panels” if used, must not act to constitute an extension of the belly pan in any way. Does not include safety edge.

204 FUEL SYSTEM

204.1 Fuel Tank: Must be securely mounted between the frame rails. Exception: Fuel tank must be carried on the motor in Kid Kart or Briggs & Stratton Stock flathead classes.

Maximum capacity is 3 gallons.

Fuel tank must supply the motor only at atmospheric pressure.

204.2 Fuel Lines: must be secured at each end to ensure continuity of system. Fuel lines must not be longer than necessary to safely deliver fuel to the motor.

204.3 Leaking Fuel: - Use of a catch can on the fuel tank vent is strongly recommended to prevent spillage of fluids on the racing surface which can be subject to disqualification with a Mechanical Black Flag – see 109.5.

205 CHAIN OILER

THE USE OF ANY TYPE CHAIN OILER IS NOT PERMITTED

206 NUMBER PANELS AND TRANSPONDERS

206.1 Numbers: All competition karts must be equipped with four number placements meeting the following specifications:

206.1.1 Size and Color: Number panel or panel area must be a minimum of 7.00" high and 7.00" wide. Panel area must be plain white or yellow.

For IKF Experts listed in Sec 115 and 116, the panels may be platinum or silver and may contain the IKF issued banner across the bottom.

IKF Duffy winners and IKF Regional Champions may display the IKF issued banner on their number panels.

Numbers must be plain block style black on the correct color background panel. Numbers must be a minimum of 5" high and proportional in width. No shadowing, outlining, pin striping etc. is allowed on the numbers.

206.1.2 Location:

206.1.2.1 Front - The required front number panel may be mounted forward of the front wheels, within the maximum overall height, width and length specifications as established for sprint karts, or front number panel may be mounted in front of the steering wheel and above the steering shaft.

206.1.2.2 Side - Side number panels must be carried between the front and rear wheels, on both sides of the kart.

206.1.2.3 Rear - Rear number must be visible when viewed by a competitor from behind. Rear number panels must be fastened so that they do not "sail" while the kart is in motion.

206.1.3 Mounting: Number panel must be bolted, or riveted, or tie wrapped to a non-movable structure i.e. nerf bar, bumpers, stationary bracket. Contact paper may be fixed to a non-movable structure, i.e. driver fairing, side pod, side panel, or nose.

206.1.4 New Competitors: All new competitors shall display an orange number panel with a black "X" affixed on the rear of their kart in addition to regular number panels. Black "X" shall be displayed for the first 3 race days and competitor shall start at the rear of all heats and finals for his first 3 race days. Orange number panel must remain in place for the first 12 months of karting competition.

206.1.5 General: All numbers must be visible with driver in place. All numbers must remain legible throughout an event. Karts starting any portion of an event with illegible numbers risk not being scored. All karters must cooperate with track officials to maintain legible numbers.

206.2 Transponders

Must be mounted in correct location in every official on-track session, including timed practice. Transponder shall be mounted per CIK positioning: on back of seat at a height of 25cm +/- 5cm. Incorrect mounting may result in a penalty.

Use of transponders does not negate the requirement for legible numbers.

207 2-CYCLE SPRINT NATIONAL CHAMPIONSHIP CLASSES

Regional classes listed in Sect. 850.

At 2 Cycle Grand Nationals all classes will run on Gas/Oil mixture approved by IKF 2 Cycle Tech Committee Chairman.

CLASS	ENGINE TYPE	SLIDE/RESTRICTOR	WEIGHT	FUEL	AGE GROUP
KID KART	C51	Per 208.2.16 and 208.2.17	160	Gas/Oil	5-8
CADET	Micro Rok	16mm Exhaust Manifold	230	Gas/Oil	7-10
CADET	Micro Swift	Exh Manifold # A85365	225	Gas/Oil	7-10
CADET	Mini Swift		245	Gas/Oil	9-13
CADET	Mini Rok	26mm Exhaust Manifold	245	Gas/Oil	8-11
CADET	X125T	Intake 19mm/Exhaust 22mm	265	Gas/Oil	8-12
JUNIOR	X30 Junior	26mm Exhaust Manifold	320	Gas/Oil	12-15
JUNIOR	IAME KA100	22mm Exhaust Manifold	330	Gas/Oil	11-15
JUNIOR	Junior Rok	25mm Exhaust Restrictor	330	Gas/Oil	12-15
JUNIOR	X125T	30mm Exhaust Restrictor	320	Gas/Oil	12-15
SENIOR	X30 Senior		365	Gas/Oil	15+
SENIOR	IAME KA100		360	Gas/Oil	14+
SENIOR	Senior Rok		360	Gas/Oil	15+
SENIOR	X125T		370	Gas/Oil	15+
MASTERS	X30 Master		405	Gas/Oil	30+
MASTERS	KA100 Masters		380	Gas/Oil	30+
MASTERS	Master Rok		380	Gas/Oil	30+
MASTERS	X125T		400	Gas/Oil	30+

NOTE - Engine specifications for ROK, Swift, IAME and X125 engines – see Section 675 and applicable PDF Specifications on the IKF website under “Rule Updates.”

NOTE - Refer to Sec 104.6 for age policy and refer to 104.7 for IKF Option Year Policy.
Competitor cannot compete in Junior I and Junior II at the same time.

208 KID KART CLASS REGULATIONS

208.1 KID KART

The primary purpose of the Kid Kart class is to teach and improve the driving skills, understanding of event procedures, and sportsmanship of beginning racers, aged 5 to 7, and their parents or guardians.

Age requirements for the class are attained age 5 years old thru competition age 8. See Section 104.6 for clarification.

All applicable IKF standards for safety, helmet specifications, mandatory pre tech race procedure, qualifying, racing, scoring and post race tech will apply to this class. There will be no deviation of safety or control from the IKF rule book.

A driver and parent/guardian meeting must be held by the Race Director, or his specified Kid Kart Director, before each event to explain all race procedures to all participants. This meeting should be held apart from the normal driver meeting to allow participants to ask questions in a group of their peers only.

Kid Kart laps are at the discretion of the Race Director, no qualifying session, heat, Pre-final or final may exceed 8 miles.

Application to run Kid Kart Class: Kid Kart is offered in IKF as a Local Option class and, as such, is subject to the same application procedure as all other Local Option classes. The club, track or promoter must request approval to offer this class as a Local Option, each year.

Kid Kart may be offered as a Training Event where, if awards are given, all participants receive awards of equal value and accomplishment level. Engine technical regulations from Sections 622.50, 622.51 or both may be used.

A Track or Region may apply, through IKF Local Option procedures, to run Kid Kart as a competitive class. If approved, the class shall be formatted to fit into the Track/Regional schedule with consideration given to the age of the racers when determining race length. For competitive Kid Kart racing, engine technical regulations from Section 622.51, C51 engine only, must be used.

208.2 Kid Kart Specifications

208.2.1 Wheelbase: minimum 29", maximum 31-1/2".

208.2.2 Width: Front, maximum 40" as measured to outside of rim/tire (no minimum). Rear, minimum 39", maximum 42" as measured to outside of rim/tire.

208.2.3 No "offset" karts.

208.2.4 Seat may not be offset beyond outside edge of left frame rail.

208.2.5 Bumpers:

208.2.5.1 Rear Bumper: Continuous loop shape with vertical or angled bracing, angled away from driver, connecting upper and lower loop rails is required. Bumper may not extend laterally beyond the outside edge of rear tires. Maximum width is 42". Upper rail of loop must be higher than the top of the rear axle.

208.2.5.2 Front Bumper: Material to be steel. 16 mm or .630" minimum diameter.

208.2.6 Steering Wheel: Maximum height to highest point of steering wheel is 20".

208.2.7 Seat: Minimum height to top center of seat back is 12".

208.2.8 Bodywork:

208.2.8.1 Side Pods of FIK style and material or double rail nerf bars are required. If a side pod becomes detached while on the track, the driver will be black flagged.

208.2.8.2 Nose Cone of FIK style and material is required. The nose cone may not be wider than outside of front tires. If a nose cone becomes detached while on the track, the driver will be black flagged.

208.2.8.3 Driver Fairing of FIK style and material is optional. Maximum width of panel is 9". No part of the panel may be higher than the top of the steering wheel.

208.2.9 Chain/Gearing: 219 chain, 10 tooth driver, 89 tooth axle sprocket. Chain cover must completely cover chain when viewed from above.

208.2.10 Tires: This is a local option class, regions may determine brand and compound. Front size 4:50-5; Rear maximum 5:50-5. Rear tire circumference maximum 33-3/4". Maximum tire pressure not to exceed 20 psi hot.

208.2.11 Weight: Suggested weight 135 lbs. to 160 lbs. Local ruling dependent upon physical size of class participants.

208.2.12 Secondary retraction spring on carburetor and/or on throttle foot pedal required for safety.

208.2.13 No engine monitoring or data acquisition instrumentation allowed in this class, during the race day, including practice, unless the class is being run as a competitive class.

208.2.14 IKF Safety Tech procedure and regulations apply.

208.2.15 As of 1-1-2005, engines with cast iron cylinder liners are not allowed.

208.2.16 Engine technical specifications for Training events are contained in Section 622.50 and 622.51, C50 and C51 engines. Also refer to the IKF website for Honda GXH50 specifications.

208.2.17 For competitive Kid Kart events, engine technical regulations from Section 622.51, C51 engines only, must be used. Also refer to the IKF website for Honda GXH50 specifications.

209 4-CYCLE SPRINT NATIONAL CHAMPIONSHIP CLASSES

Regional classes listed in Section 850.

CLASS	ENGINE TYPE	SLIDE/RESTRICTOR	WEIGHT	FUEL	AGE GROUP
KID KART	GXH50	As supplied	160	Gas	5-8
CADET**	LO206	Blue Slide .520	240	Gas	7-13
CADET**	LO206 Heavy	Blue Slide .520	260	Gas	7-13
CADET**	Animal Heavy	.309/ ref. 700.3.7.5	260	Gas	7-13
JUNIOR**	LO206	Yellow/Gold Slide .570	310	Gas	12-15
JUNIOR**	LO206 Heavy	Yellow/Gold Slide .570	330	Gas	12-15
JUNIOR**	Animal	Stock Black Slide	330	Gas	12-15
JUNIOR**	World Formula	Stock WF Slide	330	Gas	12-15
SENIOR	LO206	Stock Black Slide	360	Gas	15+
SENIOR	LO206 Heavy	Stock Black Slide	380	Gas	15+
SENIOR	World Formula	Stock WF Slide	365	Gas	15+
SENIOR	World Formula Heavy	Stock WF Slide	390	Gas	15+
SENIOR	Animal Heavy	Stock Black Slide	390	Gas	15+
MASTERS	LO206	Stock Black Slide	390	Gas	35+
MASTERS	Animal Heavy	Stock Black Slide	390	Gas	35+
MASTERS	World Formula Heavy	Stock WF Slide	390	Gas	35+

**Class structure, slides, weights etc. may be Modified for Regional's or Series Events with prior IKF Board Approval.

NOTE: Engine clutches required in all 4-Cycle classes.

NOTE - Refer to Sec 104.6 for age policy and refer to 104.7 for IKF Option Year Policy. Competitor cannot compete in Junior I and Junior II at the same time.

210 SPRINT RACE PROCEDURES

Please refer to Section 110, General Race Procedures and 211, Sprint Race Format and Scoring, for more information.

Any major deviation from IKF Race Procedures must be approved by IKF in advance.

NOTE: The practice of running engines at high rpm's for extended periods will no longer be allowed in pits, pre-grid or grid areas.

1. When in the pre-grid area, no running is allowed.
2. When in grid areas, the engines may only be run on the ground not on the stands.
3. At events where fuel is supplied a minimum amount of low RPM running will be allowed to ensure that fuel has reached the carburetor. This will only be allowed when under the direct supervision of a designated race official.

210.1 Combining of Sprint Classes: Will be at local option and the decision to combine classes rests solely with the Race Director, event officials or organizers.

210.1.1 At the close of registration, if there are no conflicts of entries due to the combining of any two classes, it will then be permissible to combine classes.

210.1.2 The decision to combine classes on a given day, must be made prior to the start of any races on that day.

210.1.3 Credit for Combined Sprint Classes: At club/regional sprint events where classes are combined on a local option basis to form one race group due to a small number of entries, the entrant can gain participation credit for the one class in which they enter and compete.

210.1.4 There shall be no combining of Sprint classes at Grand National events.

210.2 Second Entries: All paperwork and grid sheets for second entries will be handled exactly the same as normal entries.

210.3 Standard Sprint Qualifying Procedures: To be used at Sprint Grand Nationals. Karts will be equipped with transponders for at least one practice session and the lap times recorded. The qualifying order will be from the fastest kart in practice to the slowest kart in practice. If a kart does not record a time in practice, it will qualify after all the karts that have recorded times. If the ability to use timed practice does not exist, or there is a failure of the timing system in practice, the order of qualifying shall be determined by a random draw.

210.3.1 Two timed qualifying laps shall be the standard procedure. The fastest lap will be the qualifying time. If there is a tie in qualifying time, the second fastest times will be used to break the tie. If there is still a tie, the draw number will be used to break the tie.

210.3.2 All karts must be ready for qualifying in their proper sequence. Any kart not ready in its sequence will not be allowed to qualify and will start the first heat, or Pre-final, at the rear.

210.3.3 If any class is rained out while qualifying, the entire class shall re-qualify.

210.3.4 Any kart that is in its proper sequence on the grid but is (A) unable to leave the grid, (B) breaks while on its first lap of qualifying, or (C) does not take a green flag, will be allowed only one attempt at one lap to qualify at the end of its qualifying class, or at the end of the next qualifying class if it was one of the last karts to qualify. Tires must be within 5° of ambient temperature. Any kart falling under A, B or C, that is rained out of its qualifying lap shall not be cause for the re-qualifying of its class and shall be placed at the rear of the class for the first heat or Pre-final, ahead of karts not in proper sequence for qualifying and any who signed in late.

210.3.5 Karts will be released from the grid at a minimum of 10 second intervals.

210.4 Alternative Sprint Qualifying Procedures; not to be used at the Grand Nationals:

210.4.1 Where the timing system permits, karts may run more than two laps, e.g., a specified number of laps or multiple laps within a specified time. The fastest lap run by each kart will be the qualifying time for that kart. Provisions of 210.3.2 thru 210.3.5 apply.

210.4.2 Karts may be qualified by draw.

210.4.3 As a local option, a portion of the grid, determined either by timed laps or draw, may be inverted.

210.5 Scratched Entries: In the event of a scratched entry the space shall be filled: 1) if on track, by moving directly forward 2) if in pits, by crossing over to make the starting order correct by lap times.

210.6 Pre-Grid: All karts must be in their starting positions on the grid one class prior to their class. If there is a scratch on the grid, the line up shall be adjusted by a kart moving up one position (crossing over) to the next highest position. The Race Director shall determine the pole lane before the event starts.

210.7 Warm-Up, Pace Laps, Starts and Restarts: The Starter/Flagman shall start the race and do all the flagging at the starting line.

210.7.1 Start-Up Clock: As karts enter the track, the start-up clock will commence to run. After 90 seconds there will be no starts, pushbacks or restarts allowed from the grid area. The track access will be closed at the end of the start-up clock period or on the display of the green flag and will remain closed until the race is completed.

Formula Y and karts with on-board electric starters, may restart on the track.

210.7.2 If, at any time after entering the track, a kart cannot continue under its own power, the driver shall park his kart as far off the racing surface as possible and move himself to a safe position off the track.

210.7.3 Pace Laps: At the completion of 90 seconds, or when ALL of the competitors are running and able to start the race, whichever occurs first, the starter shall signify a pace lap, or lineup lap with a crossed yellow and green flag. All competitors shall drive to their appropriate starting positions and maintain a reasonable pace speed as determined by the pole kart.

210.7.3.1 With Flagman's approval, the pole kart shall set the pace speed. If a driver is unable to maintain his position, due to mechanical problems or drops out, the balance of the field will move straight ahead.

210.7.3.2 Drivers must maintain their positions until green flag drops.

210.7.4 Starts: If any class does not receive the green flag within two consecutive laps due to the failure of the front karts to maintain a proper pace speed and alignment, the offending kart or karts will be penalized and moved to the second row. The second row kart or karts will then move up to the first row and have two chances to take the green flag. The front row will not be penalized for the actions of the karts behind them.

210.7.4.1 If any driver flagrantly or repeatedly improves his position, or refuses to line up properly, the Race Director or Starter may put the driver to the rear of the lineup.

210.7.4.2 The judgment of the starter is not protestable.

210.7.5 Moment of Starting: Each driver shall be shown the starting flag as he passes the starting line.

The race shall begin when:

- A. the green flag is displayed; karts may change their positions when the green flag is shown, or
- B. at the Race Director's option, the start may be controlled by the use of up to 3 cones placed on the center line of the track, short of the starting line, to keep the two rows of karts separated. Karts may not change position until after crossing the starting line.

210.7.6 Restarts: If, after the green flag is shown, the starter decides that a restart is necessary due to a false start, poor start, or multi kart crash, he shall signal a restart with a yellow and red restart flag or yellow and red crossed flags. Karts shall, at a reduced pace, reform to their original starting positions. The Race Director may impose penalties on the kart or karts that necessitated a restart. The decision to restart, or not restart, a race is not protestable.

210.8 During the Race:

210.8.1 Black Flags

210.8.1.1 Display of Black Flags.

Black flags will be displayed whenever the Race Director decides that a kart must exit the track. A waved black flag will be shown to the karter and the kart number will be displayed on a pit board that has black numbers a minimum of 6 inches tall, and proportionally wide, on a white background a minimum of 11 inches by 11 inches. The display board will be demonstrated at the Driver's Meeting.

Should the black flag and pit board need to be displayed at a location other than the starter's stand, it will be announced at the Driver's Meeting.

210.8.1.2 Black Flag with Orange Ball (Mechanical Black Flag)

The Race Director or Starter may order a driver to stop at the pits if, in his, non-protestable opinion, a condition on the kart exists which could create a safety hazard to the driver or to other competitors. This decision may be based on, but is not limited to: mechanical conditions, leaking fluids, inoperative exhaust system, bodywork or safety equipment missing from the driver or kart. A driver receiving a mechanical black flag shall receive his appropriate finish position.

FAILURE TO OBEY THE FLAG is a flagrant violation and driver is subject to exclusion from the event and suspension from IKF upon the action of the Board of Directors.

210.8.1.3 Black Flag

By displaying a waved black flag, the Flagman or Race Director may order any driver at any time to stop at the pits.

A driver may be ordered to the pits, if, in the opinion of the Flagman or Race Director, the driver has violated the rules or is driving in a reckless, improper or unsportsmanlike manner.

The Flagman or Race Director's decision to order or not to order a driver to stop at the pits is not protestable.

The Race Director or Starter may warn a driver for a minor violation of these rules by displaying a rolled up black flag.

A warning, in the form of a rolled up black flag, is not necessary before removal from the track with a waved black flag.

FAILURE TO OBEY A BLACK FLAG is a flagrant violation and driver is subject to exclusion from the event and suspension from IKF upon the action of the Board of Directors.

210.8.1.4 Consequences of Black Flags

Drivers who receive the black flag will no longer be scored.

A driver receiving the Black Flag for driving misconduct in qualifying, a heat or Pre-final will receive no points for the heat or Pre-final or earn grid positions in heats.

At the Race Director's discretion, a driver and/or his crew may be excluded from further participation in the event for a flagrant infraction by either the driver or his pit crew.

210.8.3 Blue Flag

A blue flag will be shown to a driver or drivers when they are in danger of being lapped by faster traffic. When a driver is being lapped, he will give the right of way to the faster traffic and will point (if possible) to the side of his kart on which he wants the faster traffic to pass.

210.8.3.1 Grand National Blue Flag: In the Pre-final or Final, drivers given the blue flag must take a safe position, then exit the track at the first opportunity. Implementation of this form of the blue flag rule at the Local or Regional level is optional.

210.8.4 Yellow Flag

A yellow flag displayed by a corner worker signifies caution at this section of the track, no passing allowed, be prepared to stop, use utmost caution until past this section.

A yellow flag displayed by the Starter signifies the complete race course is under a yellow flag condition: no passing, slow down, be prepared to stop, do not resume racing until the Starter displays a green flag.

210.8.5 Crossed White and Green Flags (Optional)

A crossed white and green flag signifies the half way point of a heat or race. This signal is a courtesy to the drivers and may or may not be used.

210.8.6 Red Flag

210.8.6.1 The red flag shall be displayed when, in the opinion of the Race Director or Starter, an unsafe condition exists on the track. A red flag is mandatory when any kart rolls over or any driver is ejected from his kart. An injured driver necessitating medical attention shall automatically require a red flag.

210.8.6.2 The red flag shall only be displayed by the Starter. When a red flag is displayed, all drivers shall stop in a safe manner, raising a hand and stopping as soon as possible, watching ahead for the cause of the red flag.

210.8.6.3 If a red flag is thrown before all karts running have been scored at the completion of one lap, a restart shall be required using the original grid lineup. If all karts running have been scored at least once, the last completed lap scored shall be the lineup for the restart. This restart shall be in a single file. Karts shall have 90 seconds to start. The line up order shall be determined by the official scoring sheet.

210.8.6.4 All karts involved in any incident requiring a red flag will be safety checked by the tech committee, or its designee, before being allowed back on the track.

210.8.6.5 During red flag conditions:

210.8.6.5.1 No Work Is Permitted On The Karts.

210.8.6.5.2 Procedure A: All karts will be stopped and held on the track. When the incident has been cleared, the karts are allowed to restart and will be re-aligned and started. Karts shall have 90 seconds to restart and the 90 second rule applies.

210.8.6.5.3 Procedure B: All karts will be removed from the track and held in a secure area until such time as the Race Director chooses to restart the class. When the karts are ordered to re-align and given the order to start, the karts shall have 90 seconds to restart and the 90 second rule applies.

210.8.6.6 Karts not allowed to restart following a red flag:

210.8.6.6.1 Karts causing the accident, as determined by the Race Director, during or subsequent to the last officially scored lap shall not be allowed to restart. The decision of the Race Director whether a kart caused the incident is not protestable.

210.8.6.6.2 The Race Director may, prior to the restart, black flag a participant who will be subject to the conditions of the black flag.

210.8.6.6.3 If the red flag has been displayed, necessitating a restart, a kart that dropped out prior to the red flag incident cannot restart the race.

210.8.6.7 Restarts following a red flag shall be single file.

210.8.6.8 Scoring following a red flag:

210.8.6.8.1 In the event a race is red flagged, it may be called complete if 60% of the scheduled laps have been completed.

210.8.6.8.2 The finish order shall be as of the last completed lap scored subject to 210.8.6.6.2.

210.8.6.8.3 If a red flag is displayed during the last lap of the race, the race will be terminated. The finish order will be the last complete lap scored prior to the red flag.

210.8.6.8.4 The Race Director may decide that the kart or karts necessitating a red flag on the last official lap may be penalized and moved to the end of the scoring order, or disqualified, for that heat or race.

210.8.6.8.5 Following a red flag, karts causing the red flag and not allowed to restart, will receive points for that heat, Pre- Final or Final where they dropped out. If a driver is injured and unable to scale, 210.8.6.8.5 allows that he is not disqualified, but will be scored for that heat, Pre-final or final where he drops out.

210.8.7 White Flag

A white flag may be displayed signifying the beginning of the last lap. This is a courtesy to the racers and may or may not be displayed. Display of the white flag does not automatically make the next lap the end of the race.

210.8.8 Checkered Flag

The checkered flag signifies the end of the race regardless of the actual number of laps completed. You have completed the race when you receive the checkered flag at the finish line.

210.8.9 Checkered and Black Flags

Finish under protest.

Used to end the competition if suspicion of, or reports of, foul, rough or illegal driving, or unsportsmanlike conduct are present. It means that the competition was finished under official protest by the Race Director or Starter. After checking with corner personnel and the Race Committee, the Race Director shall state findings or rulings to the entrant(s) involved and adjust finishing positions accordingly.

210.9 Determination of race: The Starter shall determine when a race is officially over and how long a competitor has to take the checkered flag, once it has been displayed.

211 SPRINT RACE FORMAT AND SCORING

211.1 Number of Karts Allowed:

A maximum of 34 karts will start any Heat, Pre-Final, or Final.

If there are in excess of 34 entries in a class, the first 28 qualifiers go directly to the first Heat or Pre-Final. The remaining karts (up to 34) will run a Consolation race of the same distance as a Heat or the Pre-Final.

The top six finishers in the Consolation race will be added to the rear of the first Heat or the Pre-Final grid. If there are more than 62 entries in a class (28 + 34), additional Consolation races will be run in the same manner.

211.2 Tech at the conclusion of any on track activity:

211.2.1 At the conclusion of qualifying, heats, pre final, final, or main all karts must meet minimum class weight, and pass fuel tech, tire tech, engine tech, bodywork tech, driver safety gear tech, chassis safety tech, etc., as deemed appropriate by tech personnel.

211.3 Determination of finish order:

211.3.1 After karts have passed thru post tech, the finish order of any competitive segment of the event will be:

- a. Karts finishing
- b. DNF - Did Not Finish - Karts which left the grid and did not finish the segment, including Mechanical Black Flags which are scored as leaving the track as they receive the Mechanical Black Flag.
- c. DNG -Did Not Grid - Karts which passed pre race tech but did not appear on starting grid. If multiple karts DNG, they will be ranked, amongst themselves, by their assigned order on the grid.
- d. Karts DQ'd in Post Tech, e.g., underweight, non spec fuel, non spec tires, non spec motors etc. If multiple karts are DQ'd, they will be ranked, amongst themselves in the order in which they finished on the track.
- e. Karts DQ'd for driving misconduct. If multiple karts are DQ'd for driving misconduct, they will be ranked amongst themselves by the order in which they received the DQ.
- f. If a participant is DQ'd in tech, everyone finishing behind the participant DQ'd will move up in the order of the final finish.

211.4 2-Cycle Sprint Grand Nationals Race Format - optional at other levels.

211.4.1 Qualifying order is determined by practice times, see Sec 210.3 - 210.3.5. Two Lap qualifying will determine starting position for Pre-Final. Fast qualifier will be on pole. Pre-Final finish positions will determine the starting positions in the Final. Winner of the Final is the overall winner.

211.4.2 Race Distances:

Senior race distances shall be eight miles, minimum, for Pre-Final; fifteen miles, minimum, for Final.

Junior race distances shall be six mile, minimum, for Pre-Final; twelve miles, minimum for Final.

All races to be a convenient multiple of the track length, i.e., a full lap.

211.5 4-Cycle Sprint Grand Nationals Race Format - Optional at other levels.

211.5.1 Pea pick for qualifying order. Two lap qualifying will determine starting position for Pre-Final. Fast qualifier will be on pole. Pre-Final finish positions will determine the starting positions in the Final. Winner of the Final is the overall winner.

211.5.2 Race Distances:

Senior race distances: Pre final: 8 -12 miles, Final: 10 -14 miles.

Junior race distances: Pre final: 6-8 miles. Final: 10 - 12 miles.

All races to be a convenient multiple of the track length, i.e., a full lap.

211.6 Optional Motocross Format for Local or Regional racing

211.6.1 Drivers will draw to determine qualifying order. After qualifying, the grid for the first heat will be filled by qualifying order. If more than 34 karts have qualified, please refer to 211.1 for Consolation Race procedure.

211.6.2 The event consists of three heats. The order in which the karts finish the first heat determines their starting position on the second heat. Finish position of the second heat determines starting position for the third heat. Total points earned in all three heats is the winner.

211.6.3 IKF Motocross Heat Point System:

If a race is terminated before the completion of all three heats, finishing positions are awarded points from first to last positions as follows:

One Heat Completed In All Classes:

1st	1200	6th	285	11th	66
2nd	900	7th	213	12th	51
3rd	675	8th	159	13th	39
4th	507	9th	120	14th	27
5th	381	10th	90	15th-20th	3

This is the same as tripling the standard motocross heat points.

Two Heats Completed In All Classes:

1st	600	6th	142 1/2	11th	33
2nd	450	7th	106 1/2	12th	25 1/2
3rd	337 1/2	8th	79 1/2	13th	19 1/2
4th	253 1/2	9th	60	14th	13 1/2
5th	190 1/2	10th	45 1/2	15th-20th	1 1/2

**Three Heats Completed In All Classes:
(Standard Motocross Point Scoring)**

1st	400	6th	95	11th	22
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2nd	300	7th	71	12th	17
3rd	225	8th	53	13th	13
4th	169	9th	40	4th	9
5th	127	10th	30	15th-20th	1

If some classes finish all three heats while others finish only two, those that finish three heats shall have points determined by the regular motocross formula. Those finishing two heats shall have points determined by the formula shown under the two heat system.

211.6.4 Ties: To break a tie within a class, the fastest qualifying time determines the winner. If a tie still exists, the second qualifying lap determines the winner. If there is no qualifying or a tie still exists, low draw number wins.

211.6.5 Post race tech: At the finish of each qualifying session, heat, each kart and driver must pass minimum class weight standards. Failure to pass minimum weight shall result in last place points for that heat only.

211.6.6 Motor Tech: If a participant is DQ'd in motor tech following the third heat, his final finishing position will be determined as specified in Sec 211.3.

211.7 Optional "NorCal" Race Format - not for use at Grand Nationals

211.7.1 Draw for qualifying order, qualify, assign points to qualifying results according to the following procedure: First = 0 points, Second = 2 points, Third = 3 points, Fourth=4 points, etc

211.7.2 Race a heat using starting order determined by qualifying with inversion of a portion of the qualifying order. Karts must pass post race tech.

211.7.3 Determine order of finish of heat:

- a. **Karts finishing**
- b. **DNF** - Karts not finishing, Including karts that left the grid and did not take the green, and Mechanical Black Flags.
- c. **DNG** - Karts that passed Pre-race tech but did not appear on the grid.
- d. **DQ'd in Post Race Tech**, including, e.g., underweight, non spec fuel, non spec tires etc.
- e. **DQ'd for driving misconduct.**

211.7.4 Assign points to heat results according to the following procedure: First = 0 points, Second = 2 points, Third = 3 points, Fourth=4 points, etc. Drivers DQ'd for driving misconduct will receive last place points, plus 1 point.

211.7.4.1 Resolving ties: Ties will be decided in favor of the driver with the better qualifying time except, drivers DQ'd for misconduct will place behind a driver not receiving a DQ.

211.7.5 Grid for Final/Main race is set by lowest point total from qualifying and heat, lowest total starting first. Ties will be decided in favor of the best heat finish.

211.7.6 After post race tech the winner of Final/Main is the overall winner. Order of finish is determined as specified in 211.3.1.

211.8 Awarding of Regional Championship Points for Sprint Division-See Section 800

211.8.1 Regional Championship Points will be awarded according to the overall finish order as determined below:

- a. **Karts finishing**

- b. DNF - Did Not Finish** - Karts which left the grid and did not finish the segment, including Mechanical Black Flags which are scored as leaving the track as they receive the Mechanical Black Flag.
- c. Karts that took a green flag** at any time during an event.
- d. Karts DQ'd in Post Tech**, e.g., underweight, non spec fuel, non spec tires, non spec motors etc. If multiple karts are DQ'd, they will be ranked, amongst themselves in the order in which they finished on the track.
- e. Karts DQ'd for driving misconduct.** If multiple karts are DQ'd for driving misconduct, they will be ranked amongst themselves by the order in which they received the DQ.

211.8.2 Karts that passed pre race tech, but never received a green flag in any segment of the event, will receive a punch, but no Regional Championship points.

212 2-CYCLE SPRINT GRAND NATIONAL SCHEDULE

To be announced. Watch IKF website for updates.

212.1 Schedule of classes may be changed only with prior IKF Board approval.

212.2 No Other Class(es) shall be run during the official Grand National event except as approved by the IKF Board of Directors.

212.3 At Grand National events, classes with less than 5 entrants will not run for a Duffy. See 110.9.

212.4 Official Schedule: To be announced.

213 4-CYCLE SPRINT GRAND NATIONAL SCHEDULE

To be announced. Watch IKF website for updates.

213.1 Schedule of classes may be changed only with prior IKF Board approval.

213.2 No Other Class(es) shall be run during the official Grand National event except as approved by the IKF Board of Directors.

213.3 At Grand National events, classes with less than 5 entrants will not be run for a Duffy. See 110.9.

213.4 Official Schedule: To be announced

SHIFTER

Take a high-performance 125cc motocross engine off the bike or a purpose-built shifter engine for karting, bolt it on to a sprint chassis, and hold on! Arguably one of the fastest segments of karting, shifter karts are as fun to drive as they are to watch. Shifter karts compete on sprint tracks and are quite at home on the wide open road courses. A sprint chassis designed for high-performance shifter kart racing features 4-wheel disc brakes and radiator for the water-cooled engines. Classes have also been developed for 80cc and 250cc powerplants.

250

SPRINT SHIFTER DIVISION

NOTE: THESE RULES APPLY TO SPRINT APPLICATIONS, SEE SECTION 300 FOR ROAD RACE RULES.

NOTE: FOR ADDITIONAL INFORMATION, PLEASE REFER TO:

<i>Event officials are authorized to decide if an equipment change or design is an attempt to "beat" the rules. They can and will disqualify an entry in violation of the Spirit and Intent of these rules. Any official or representative shall have the right to correct conditions not in compliance with the Spirit and Intent of these regulations.</i>	SAFETY RACE PROCEDURES CHASSIS SPECIFICATIONS PRE-RACE TECH. INSPECTION POST-RACE TECH. INSPECTION PROTESTS (114.6) APPEALS	SECTION 105 SECTION 110 SECTION 112 SECTION 503 SECTION 504 SECTION 507 SECTION 508
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251 SPRINT SHIFTER NATIONAL CHAMPIONSHIP CLASSES

NATIONAL CLASSES	WEIGHT	AGE	TIRES
1. Formula CR80/85 Cadet	270	10-12	Evinco Red
2. Formula 80/85 Junior	320	12-15	Evinco Red
3. Formula 80/85 Limited	360	16 up	Evinco Red
4. Formula 80/85 Sr.	360	16 up	Evinco Red
5. Formula 125	385	16 up	Evinco Red
6. Intercontinental C (ICC) (KZ)	375	16 up	Evinco Red

NOTE - DRIVER AGES:

IKF Competition Age 10 – 12 Cadet

IKF Competition Age 12 (Option Year) Driver has the option to stay in Cadet or move up to Junior

IKF Competition Age 13 - 15 Junior

IKF Competition Age 16 (Option Year) Driver has the option to stay in Junior or move to senior classes

IKF Competition Age 17 Senior classes

Refer to Sec. 104.6 for IKF age policy.

252 CLASS SPECIFICATIONS

252.1 General Specifications all Classes except where noted:

252.1.1 Chassis is a Sprint kart as defined in Sec 201 and following. See also Sec 203, 204, and 205. Exception to 201 rules: 84" maximum length allowed.

252.1.2 Numbers/Transponders: See Sec 206

252.1.3 Minimum seat inclination of 50 degrees from horizontal.

252.1.4 See class specifications, below, for specific brake rules for each class. No carbon/carbon systems or carbon-fiber discs allowed. Carbon pads are allowed.

252.1.5 Air boxes are required only when dictated by local conditions. See Section 651.9.

252.1.6 Catch containers are required for carburetor and radiator overflows.

252.1.7 Cooling systems may use only water or water based coolants.

252.1.8 A cover over the rear chain sprocket is mandatory.

252.1.9 No axle or external water pumps allowed except as specified in the 650 Section.

252.1.10 For all classes with a stinger type silencer with a protruding tube at the outlet: if tube does not already have a rolled edge or some other means of covering sharp edges, a 2" diameter washer, with a minimum thickness of .065" must be attached to the outlet of the protruding tube.

252.2 FORMULA CR 80/85 CADET

252.2.1 Chassis: All cadet chassis rules, per Sec 200, apply with 52" maximum width allowed. If wheelbase is greater than 39.75", that is, a full size chassis, maximum width allowed is 55.125"

252.2.2 Brakes: Front wheel brakes are not allowed.

252.2.3 Bodywork: For Cadet Chassis see Sec 201.10. Full size bodywork not allowed on Cadet chassis. For full size chassis, see Sec 201.9.

252.2.4 Tires/Wheels/Axles: 5" rim diameter only. Refer to Sec 251 for approved tire compound for dry conditions, 4.50" front and 6.0" rear. Refer to Sec 251 for approved tire for wet conditions with tire size open. Axles to be maximum diameter of 40 mm or 1.5625", must be steel and inserts are not allowed.

252.2.5 Engine per 652.

252.3 FORMULA 80/85, JUNIOR AND SENIOR

252.3.1 Chassis: All IKF legal sprint chassis, see Sec 201 - 201.7, with the maximum overall length of 84 inches.

252.3.2 Brakes: Front wheel brakes are NOT ALLOWED in any 80 /85 cc shifter classes in Sprint Shifter Division. See Road Race rules for Road Race brake requirements.

252.3.3 Bodywork: Required, per Sec 201.9.

252.3.4 Tires/Wheels: 5" Rim max. diameter. Refer to Sec 251 for approved tire compound for dry conditions, 4.50 front, 7.10 rear. Refer to Sec 251 for approved tire for wet conditions with tire size open.

252.3.5 Engine: See Sec 653

252.7 FORMULA 125

252.7.1 Chassis: All IKF legal sprint chassis, see Sec 201 - 201.7, with maximum overall length of 84 inches.

252.7.2 Bodywork: Required, per Sec 201.9.

252.7.3 Brakes: Functional four wheel braking with two independent master cylinders are mandatory.

252.7.4 Tires/Wheels:

252.7.4.1 Formula 125: 5" Rim maximum diameter. Refer to Sec 251 for approved tire compound for dry conditions, 4.50 front, 7.10 rear. Refer to Sec 251 for approved tire for wet conditions with tire size open.

252.7.5 Engine: See Sec. 654.

252.8 INTERCONTINENTAL C (ICC) KZ

252.8.1 Chassis: All IKF legal sprint chassis, see Sec 201- 201.7, with maximum overall length of 84".

252.8.2 Bodywork: Required, per Sec 201.9.

252.8.3 Brakes: Functional four wheel braking with two independent master cylinders are mandatory.

252.8.4 Tires/Wheels: 5" rim maximum diameter. 4.50" front and 7.10" rear. Refer to Sec 251.

252.8.5 Engine: See Sec 655

253 ENGINE SUBSTITUTION:

A competitor may elect to change an engine at any time. They may do so at the direction of the head tech official at said event. It must be removed from the kart in the tech impound area and must be held there until the completion of said event. If a competitor's finishing place warrants a tear down motor tech, then both motors must be teched as per head tech official direction.

254 SHIFTER KART STARTING PROCEDURES

254.1 Starting Procedure: Race Director will explain starting procedure at driver meeting prior to qualifying.

254.2 Warm-up Laps: All Shifter Karts will receive two complete warm-up laps. If a driver falls out during the warm-ups laps, then the remaining drivers grid-up in their original positions, leaving a position open for the driver who dropped out.

254.3 Starts: F1 style standing starts shall be employed, with a minimum one kart length between karts from front to rear and a maximum aisle width of four feet between karts as established by "Grid" lines on the track. The grid may also be staggered by rows.

A kart out of position or not on the grid properly may be penalized up to one lap.

If a driver stalls on the grid, then he or she must raise both arms over head so as to warn other drivers that their kart is disabled. After the start they then must remove kart to safe location off racing surface.

254.4 Creeping: If a driver rolls (creeps) before the green flag drops, a penalty may ensue. The driver must allow the improperly passed drivers to regain their position during the first lap. Failure to do so will result in a black flag.

255 GRAND NATIONAL RACE FORMAT

255.1 The Grand National Event will consist of a Qualifying Session, the Pre-final, and the Final. Qualifying times will determine the grid for the Pre-final. Pre-final finishing order will determine the grid for the Final. The winner of the Final is the winner of the event.

255.2 Grand National Race Distances:

Qualifying	2 laps
Pre-final	10 laps, minimum 6 miles
Final	20 laps, minimum 12 miles

255.3 Number of karts: A typical sprint track will handle up to 32 karts. If the number of entries in a particular class exceeds 32 karts, then there must be a Consolation Race to determine the remaining positions for the Pre-final. The top 28 drivers will advance to the Pre-final, with the remaining drivers racing in the Consolation race.

The Consolation Race will consist of 10 laps OR a minimum of 6 miles. The first four finishers from the Consolation Race will advance to the Pre-final races.

If an event exceeds fifty drivers then the Race Director will determine a suitable race format. Example: A,B,C,D flights. The starting lineup for the Pre-final will be per the qualifying results. The Final will start per the finish of the Pre-final. The winner of the Final is the overall winner.

256 GRAND NATIONAL FUEL:

Fuel and oil mixture must be approved by the IKF 2 Cycle Tech Committee Chairman. Fuel mixture must be announced 30 days prior to Grand National Event.

257 IKF SPRINT SHIFTER LICENSE PROGRAM

Shifter Licenses are no longer required.

258 SPRINT SHIFTER DIVISION GRAND NATIONAL SCHEDULE

To be announced

258.1 Schedule of classes may be changed only with prior IKF Board approval.

258.2 No Other Class(es) shall be run during the official Grand National event except as approved by the IKF Board of Directors.

258.2.1 Approved local option classes: To be announced

258.3 At Grand National events, classes with less than 5 entries will not run for a Duffy. See 110.9.

258.4 OFFICIAL SCHEDULE: To be announced

ROAD RACE

Road Racing came into being when sprint karts began racing on long sports car tracks. It was found that by laying the driver down, out of the windstream, aerodynamics and top speed were greatly improved. As the length of the races increased, there became a need for large capacity, side mounted fuel tanks. Soon the road racing kart had its own distinctive look and purpose. However, in recent years, sprint and sprint crossover classes have been added to improve participation and to give sprint competitors an opportunity to run on the “big” tracks. The sprint road race classes generally run races from 20 to 30 minutes in length. Road races for the enduro or “laydown” karts are usually one hour in length.

They are staged by some of the finest motorsport complexes in the United States. Portland International Raceway, Sears Point, Laguna Seca Raceway, Willow Springs Raceway, and Seattle International Raceway are only a few of the tracks a Road Racing karter can enjoy at a fraction of the cost incurred by the professional race driver.

300

ROAD RACING

NOTE: FOR ADDITIONAL INFORMATION, PLEASE REFER TO:

<i>Event officials are authorized to decide if an equipment change or design is an attempt to “beat” the rules. They can and will disqualify an entry in violation of the Spirit and Intent of these rules. Any official or representative shall have the right to correct conditions not in compliance with the Spirit and Intent of these regulations.</i>	SAFETY	SECTION 105
	RACE PROCEDURES	SECTION 110
	CHASSIS SPECIFICATIONS	SECTION 112
	PRE-RACE TECH. INSPECTION	SECTION 503
	POST-RACE TECH. INSPECTION	SECTION 504
	PROTESTS (114.6)	SECTION 507
	APPEALS	SECTION 508

- The responsibility of meeting all IKF specifications rests with the driver.
- The eligibility of all karts to compete will be determined by their meeting the requirements as set forth in this Section.
- For information pertaining to FKE equipment, refer to Section 305 Formula Kart Experimental.

301 ROAD RACE GRAND NATIONAL CHAMPIONSHIP CLASSES

NOTE: The driver ages listed are "Competition Age" unless noted otherwise. Refer to Sec. 104.6 for IKF age policy.

CLASS	ENGINE TYPE/RESTRICTIONS	WEIGHT	FUEL	AGE GROUP
LAYDOWN ENDURO CLASSES - See Section 302				
1. FKE 1 - 100cc Open	FKE 1 - 100cc Open	370	Open	16+
	80/85cc Gearbox	400		
	100cc Clutch Enduro	360		
	100cc Clutch Sprint See Sec. 306.3			
2. FKE 2 - 125/150 Open	150cc Open Motors	400	Open	16+
	Open/FKE II 125cc Gearbox Motors	400		
	100cc Open Motors	380		
	80/85cc Open Gearbox Motors	370		
	TAG Enduro	400		
	TAG Enduro, Superstock Bodywork	380		
	TAG Enduro, CIK Sprint	360		
	250cc 4 Cycle	400		
All FKE 1 classes per FKE 1 rules				
3. FKE 3 - Unlimited	250cc Twin Gearbox	475	Gas/Oil	16+
	250cc Single Cylinder Gearbox	450		
	KTM 300	450		
	2-100cc Open Motors	400		
	2-150cc Open Motors	425		
	RZ/RD 350 Yamaha	475		
	400cc Big Bore Kit	465		
	4-Cycle engines Single Cylinder/Twin Cylinder 500cc Max	460		
	All FKE 1 and FKE 2 classes per FKE 1 and FKE 2 rules respectively			

NOTE: There is a 20 lb. weight reduction for the use of a Sprint chassis in specified Enduro (laydown) classes. Top of seat back must be a minimum of 14" above the ground.

NOTE: Open Fuel: Only Acetone may be added to facilitate blending of gas and methanol with oil, and only in quantities necessary to achieve blending. Large amounts not permissible.

NOTE: See Special Bodywork Rule 302.11.14

NOTE: KT100S Yamaha Engines See Sec. 617.21.

CLASS	ENGINE TYPE/RESTRICTIONS	WEIGHT	FUEL	AGE GROUP
SUPERKART CLASSES - See Section 304				
4. Superkart 125cc Gearbox	Single Cylinder 125cc gearbox, per Sec. 654 and 655	465	Gas/Oil	16+
5. Superkart Intercontinental E	Single Cylinder 250cc max., per Sec. 304.3 4-Cycle engines, see 302.11.2	465	Gas/Oil Gas	16+
6. Superkart Super ICE	Single Cylinder 250cc gearbox, bore and stroke not to exceed 250cc, otherwise, non-tech per 304.4 including single cylinder 4-Cycle 450cc	465	Gas/Oil	16+
7. Superkart Formula E (FE TWIN)	twin cylinder 250cc gearbox per sec. 304.5 including twin cylinder 4-Cycle 450cc	465	Gas/Oil	16+
SPRINT CLASSES - See Section 306				
8. Super Stock CR125 (99 only)	'99 Honda CR125 Kit Engine, Sec. 657	400	Gas/Oil	16+
9. Super Stock Sprint CR125	'99 Honda CR125 Kit Engine, Sec. 657, and 2000-2002 cylinders allowed, SKUSA branded exhaust and 2 Piece RLV R4H allowed, CIK Bodywork only	385	Gas/Oil	16+
10. Formula 125	Approved motocross engine, ICC engines per Sec. 655. Competitor must bring a copy of his engine manual to tech inspection.	385	Gas/Oil	16+
11. Yamaha Limited Heavy	Yamaha KT100S. See Sec. 306.9.2	360	Gas/Oil	16+
12. TAG Heavy	Leopard Motori Seven (digital ignition) PRD PRD 2008 Rotax Vortex Rok TT X30 X125T All motors per IKF Tech, Sec 675. No modifications allowed. Sit-Up kart. Bodywork per Sect. 201.9 only. Front brakes allowed. Competitor must supply tech inspector with proper factory specification sheets for engine.	400 415 400 400 400 415 405 405	Max. 98 Octane Gas/Oil	16+
13. World Formula Heavy	Briggs World Formula per Sec. 717. 5" diameter wheels only	390	Gas/Oil	16+
14. Formula 80 Senior	See 306.9.5	360	Gas/Oil	16+
15. Junior TAG	See 275.5.2 for weights. Engine: Per OEM specifications published on IKF website, and manufacturers fische - Junior 2 restrictions required - all versions allowed in Road Race division	330	Gas/Oil	13-15
16. Junior 4 Cycle	Briggs LO206 Briggs World Formula	310 330	Gas/Oil	13-15

NOTE - Clubs and Promoters are allowed to run additional classes in their programs that are the same as the National classes. These would be referred to as Mirror classes, and can be designated with a "II" after the National Class name. Mirror classes can have weight adjustments for Light and Heavy if needed. Classes conforming to these restrictions do not require further approval.

NOTE - DRIVER AGES:

IKF Competition Age 13 - 15 Junior classes

IKF Competition Age 16 (Option Year) Driver has the option to stay in Junior or move to senior classes

IKF Competition Age 17 Senior classes except Unlimited/FKE3, Superkart Formula E, Superkart Super ICE and Superkart ICE

Attained age 18 for Unlimited/FKE3, Superkart Formula E, Superkart Super ICE and Superkart ICE

Refer to Sec. 104.6 for IKF age policy

302 ENDURO/LAYDOWN CHASSIS RULES

This Section applies only to classes listed in ENDURO/LAYDOWN Section of 301, unless specifically referenced elsewhere.

All Chassis Safety specifications from 105.2 apply to all karts.

All General Chassis Specifications from 112 apply to all karts.

302.1 Dimensions:

302.1.1 Maximum Overall Kart Length: 97" 100 cc; over 100 cc: 110".

302.1.2 Maximum Overall Kart Width: 48" for enduro/laydown chassis

302.1.3 Minimum Track width: 30" front and rear measured from the centerline of the right tire to centerline of the left tire. All classes.

302.1.4 Maximum Height: 26", Exception: Maximum height is 34" in Unlimited Class in headrest area only. The seat may have a headrest support area which may not be used as an aerodynamic device.

302.2 Bumpers: All karts shall be equipped with front protection in the form of a bumper to provide foot and ankle protection for the driver. When pedals are fully depressed, no part of foot may extend past front bumper.

302.3 Side Protection: All karts will have side protection in place between the front and rear wheels. Enduro/laydown karts with plastic side fuel tanks must be protected by nerf bars.

302.4 Chain guards: See 105.2.1.12. Additionally, chain or belt guards are recommended for axle clutches, but not required.

302.5 Brakes: (see Sections 105.2.1.7 and 112.14)

Dual brakes are strongly recommended in all Road Race classes. Dual brakes are mandatory in all classes above 100 cc displacement unless class rules prohibit front brakes.

Dual brake systems may be comprised of two independent rear brake systems, or independent front and rear brake systems.

Where dual brakes are mandatory, the following rules apply: The system will include one brake pedal, a connecting brake rod of minimum .250" diameter, two master cylinders or one master cylinder with two pistons and a single reservoir, and a bias system between the two master cylinder pistons. One master cylinder piston can

only supply one rear caliper. The other piston must supply the second rear caliper or the front calipers. Each system must be fully operational if the other system fails.

302.6 Clutches: The use of clutches is mandatory in all classes. The use of a wet-type clutch is permitted only if the unit is sealed to prevent leaks. Any device which allows a centrifugal clutch to be non-mechanically adjusted by the driver while the kart is in motion, is illegal in Road Race classes. Axle mounted clutches are allowed in all Enduro /Laydown classes.

302.7 Wings/Spoilers/Bodywork: See also Section 302.7.14 for specific class rules.

302.7.1 Driver Fairing: (Nassau panel) over steering column - 14" maximum width. Minimum 6" clearance between Nassau panel and bodywork in footwell and leg area. Driver's legs and feet must be visible when viewed directly from above with pedals in the relaxed position. 2" minimum clearance between steering wheel and Nassau panel.

302.7.2 Flexible (rubber type) skirting allowed for front nose only, in front of front wheel centerline.

302.7.3 Maximum height: 26".

302.7.4 Bodywork must incorporate present bumper rule.

302.7.5 Must have a complete open cockpit including arms, legs, feet, etc. In Road Race, minimum width in driver's compartment of 15", measured from steering wheel to the driver's shoulders, in driving position. No full body shell or cover. There must be a minimum 6" clearance between the steering wheel, footwell and all other bodywork to allow the driver to exit the kart. The use of a Schroeder type quick release steering hub will allow a minimum 2" clearance between steering wheel and bodywork in steering wheel area only. 6" rule still applies in all other areas.

302.7.6 No sharp corners.

302.7.7 May not be adjustable while kart is in motion.

302.7.8 All bodywork, including wings, fairings, nose cones, etc., must be securely fastened to kart frame.

302.7.9 Number Panel:

302.7.9.1 Size: A 7"x7" minimum rectangular panel as long as the panel (rear) or surface (side) is flat. The front surface is not required to be flat.

302.7.9.2 Location: The front number shall be mounted forward of the front wheels, within the maximum overall height, width, and length specifications as established for Road Racing karts. The number shall be applied directly to the nose on a white or yellow background (platinum or silver if Expert). The number can be moved to the right or left of center if requested by the chief scorer and announced at the drivers meeting.

The side numbers shall be between the front and rear wheels, directly behind the front wheel for uniform scoring, on a minimum of 7"x7" flat white surface (yellow if Expert). Numbers are mounted on each side at a Road Race event.

The rear number panel shall be attached solidly in a straight up and down position, a maximum of four 1/2 inch mounting holes in a solid 7"x7" minimum, panel. All of the number panel shall be visible from the rear.

All Classes: Number panel to be bolted or riveted to a non-movable position, i.e. nerf bar, bumpers, stationary bracket. Only exception is when contact paper is used on a fixed non-movable area, i.e. side tank, side pod, side panel, or front nose.

302.7.9.3 Number: There will be four numbers required on all karts at the grid. All numbers must be a minimum of 5" high and readable with the driver in place.

302.7.9.4 Color: All Road Racing entries are required to display four (4) white or yellow number surfaces. The rear surface must be a number panel. Numbers must be plain black.

IKF Experts, listed in Sec 115 and 116, shall display four platinum or silver number surfaces. The panels may display the IKF issued banner across the bottom. The rear must be a number panel. Numbers must be plain black.

IKF Duffy winners and IKF Regional Champions may display the IKF issued banner on their number panels.

The number and background color may be changed by the Chief Scorer at Regional events due to more than one class on the track at the same time.

302.7.9.5 Juniors and New Competitors: All Juniors and New Competitors will be required to display an orange panel on the rear of their karts, in addition to the regular number panels. This will indicate to any approaching driver a new competitor or junior driver is in front of them.

302.7.10 Tires may not be enclosed. Front spoiler may cover top of front tires. Wheel covers are allowed. Must be of non-metallic material, i.e. contact paper, plastic; no sharp edges.

302.7.11 No "skirts" or vertical aerodynamic sealing devices are allowed to extend below the main frame rails. This does not include front nose.

302.7.13 It is permissible to add fenders which cover the top of the rear tires of a road racing kart. The fenders may not project from the kart causing a hazard to fellow competitors.

302.7.14 Special Bodywork Rule for 125cc-150cc Open, and Unlimited/FKE III:

302.11.14.1 Bubble-shield must be non-metallic material, i.e. plastic, fiberglass.

302.11.14.2 If complete bodywork above driver or bubble-shield is used, the body or shield shall be connected to the body by no more than 4 quick release clips, nylon tie wraps, or similar devices. No bolts, wing nuts, or similar solid fasteners.

When the shield or body is removed, no remaining bodywork shall cover any part of the driver as he/she is seated in the normal position, as viewed from above.

Body or shield shall be no higher than the top of the steering wheel or butterfly and shall have 2" clearance to same steering components.

Body or shield shall not cover the feet or ankles.

302.8 Floor pans: Full floor pans are allowed in all classes, The floor pan can extend back to the rear cross member of the main frame, but not past frame rail. Rear bumper is not part of main frame rail. Belly pan may curl up to meet frame rail. Floor pan may not be higher than rear axle.

302.9 Chain Oiler: Chain oil reservoir capacity shall not exceed eight (8) oz. maximum capacity for 45 minute events.

302.10 Fuel and Lubrication System Protection: Any fuel or chain oiler tank, which is the highest portion of the kart, shall be protected by a roll bar. The roll bar shall not exceed 26" in height and shall be of suitable strength and design to prevent the tank or cap from having contact with the ground in the event of an upset.

302.11 Special Rules For Certain Enduro/Laydown Classes

302.11.1 TaG Enduro Rules

302.11.1.1 Engine: IKF TAG approved engines. See Sec. 675 in the 2007 IKF Rule Book with the addition of the Mortori Seven, with Digital Ignition, as specified in Sec. 675 in the 2008 IKF Rule Book. To enable safer adjustments of the carburetor, a second notch may be cut in the bottom of the intake channel on the case to allow 180 degree rotation of the carburetor on Sonik engines. The notch must replicate the notch in the top of the case and have a maximum width of 0.230" and depth of 0.850". Case must be clearly marked with an "R" permanently engraved into the front.

302.11.1.2 Fuel: Unleaded gas, max 98 octane, mixed with oil for 2 cycles.

302.11.1.3 Tires: Open

302.11.1.4 Clutch: Engine clutch or axle clutch allowed. If engine clutch is used, any clutch drum option, factory or fabricated, including belt drive is acceptable in this class, provided the internal components of the approved TAG clutch are retained. If axle clutch is used, the crankshaft must remain unmodified and all components of the on-board starter system must remain stock.

302.11.1.5 Starter/Charging System/Battery:

- a. At Pre-Tech, engine must have all starter system components intact and working properly. Engine must turn over with the on board starting system.
- b. If a starting system component fails during the race day, auxiliary starters may be used with no penalty.
- c. At Post-tech it is required that all starting components be in place and connected as per OEM specifications.
- d. Any competitor using auxiliary starting on the grid during qualifying or racing may be subject to additional tech to verify legitimate component failure at the discretion of the Race Director.
- e. At all times, charging system components must be in place, connected, and functional per OEM specifications.
- f. Battery must be sealed or dry cell and be securely mounted. See 105.7.

302.11.1.6 Air Box: On laydown chassis only, airbox/air filter rules are open. On Sprint Chassis the airbox must be as supplied from the manufacturer with motor, or a CIK air box with maximum of two 22mm tubes may be used.

302.11.1.7 Radiator(s): Size and placement open.

302.11.1.8 Exhaust: OEM supplied exhaust system: Any method of redirection the exhaust system to suit the needs of an enduro/laydown chassis is allowed, so long as the total length of the header, pipe, u-bend and/or silencer are within +/- .250" of the factory specs for the engine being used. Any attempt to alter the size or angles of the exhaust cones is prohibited.

For one piece "ICC Style" exhaust systems (i.e. Vortex Rok, Rotax Max etc.) modifications of the pipe may only be made within the first six inches from the header flange and cannot exceed +/- .250" of supplied pipe length for mounting on enduro chassis only.

On Rotax FR-125 exhaust pipes, the 180 degree bend between the expansion chamber and silencer may be rotated to facilitate putting on a laydown kart.

For 3 piece "Header/Flex/Pipe Style" exhaust systems (i.e. Parilla Leopard, Sonik, Italsistem, etc.) modifications to the pipe may only be made within the first six inches of the diverging section of

the pipe and cannot exceed +/- .250" of OEM pipe length for mounting on enduro/laydown chassis only. Header must use the same internal shape and diameters of OEM header.

Exhaust components may be painted to resist rust. No plating or ceramic coating allowed.

302.11.1.9 Enduro/Laydown Chassis: Per Section 302. Dual brakes are mandatory and may be comprised of two independent rear brake systems, or independent front and rear brakes.

302.11.1.10 Sprint Chassis, CIK Style Bodywork: Per IKF TaG Light rules. Front brakes optional.

302.11.1.11 Sprint Chassis, Full Bodywork: Per Section 303 Super Stock rules – with maximum kart width of 55-1/8 inches. Front brakes optional but highly recommended.

302.11.2 UNLIMITED/FKE III RULES: 4-Cycle, single cylinder, engines up to 450 cc are allowed. Engines allowed are: Honda CRF, Yamaha YZ. OEM parts only. After market rod/valve/valve spring assembly allowed. Cranks may be balanced. Stock stroke maintained and valve size must be maintained. Starter assembly may be removed and plugged. Engines may be modified to allow for use of external electrical starter. Carburetor open, max venturi size of 42mm. Exhaust system is open but all entries must meet 95 db limit. This limit applies only to this IKF class.

302.12 Sprint Chassis in Enduro/Laydown Classes 1-3: There is a 20 lb. weight reduction for the use of a sprint chassis in specified Enduro/Laydown class numbers 1 thru 4. Top of seat back 14 inches minimum above the ground. See Section 307 for additional specifications.

303 SUPERSTOCK BODYWORK RULES

This Section applies to classes that allow Superstock bodywork karts.

303.1 Chassis: See diagram 1A, Section 201.

303.1.1 Exception to Diagram 1A: Wheelbase maximum allowed is 42", wheelbase minimum allowed is 39-7/8".

303.1.2 Any excessive modifications to the seat or steering shaft support column to allow the driver's body to move to a lower position is illegal to use in competition in Superstock class.

303.1.3 Seat: Sprint Sit-up seat as defined by 307.1, Diagram AA, is required. Seat back shall not be inclined less than 45 degrees from horizontal. Any attempt by competitor to assume an unnatural position in the sprint seat to gain an aerodynamic advantage, is illegal.

303.1.4 Brakes: See Sections 105.2.1.7 and 112.14

Dual brakes are strongly recommended. Dual brake systems may be comprised of two independent rear brake systems, or independent front and rear brake systems.

Where dual brakes are mandatory, the following rules apply: The system will include one brake pedal, a connecting brake rod of minimum .250" diameter, two master cylinders or one master cylinder with two pistons and a single reservoir, and a bias system between the two master cylinder pistons. One master cylinder piston can only supply one rear caliper. The other piston must supply the second rear caliper or the front calipers. Each system must be fully operational if the other system fails.

303.1.5 Fuel Tank: Must be located between the frame rails - maximum 3 gallon fuel capacity.

303.1.6: The optional use of "elephant ear" bumpers is allowed. Bumper can not extend beyond the outside width of the rear tires.

303.2 Bodywork: See Section 105.2 and 302.7.

303.3 Floor pans: Full floor pans are allowed. The floor pan can extend back to the rear cross member of the main frame, but not past frame rail. Rear bumper is not part of main frame rail. Belly pan may curl up to meet frame rail. Floor pan may not be higher than rear axle.

303.4 Chain Oiler: Chain oil reservoir capacity shall not exceed four (4) oz. maximum capacity for 30 minute events and shall not exceed eight (8) oz. maximum capacity for 45 or 60 minute events.

303.5 Fuel and Lubrication System Protection: Any fuel or chain oiler tank, which is the highest portion of the kart, shall be protected by a roll bar. The roll bar shall not exceed 26" in height and shall be of suitable strength and design to prevent the tank or cap from having contact with the ground in the event of an upset.

303.6 Superstock driveline restrictions: Fixed pipe, axle clutch or engine clutch (on engine only), chain drive or belt drive allowed.

303.7 Numbers: See Sec. 302.7.9

304 SUPERKART CLASS RULES

This Section applies only to classes listed in Superkart Classes portion of Section 301, unless specifically referenced elsewhere.

304.1 Chassis regulations: sit-up road race, similar to 1995-2001 CIK approved Formula ICE regulations. Manufacturer not controlled.

304.1.1 Wheelbase: 42" minimum to 46" maximum

304.1.2 Tread width: 44" minimum to 55-1/8" maximum.

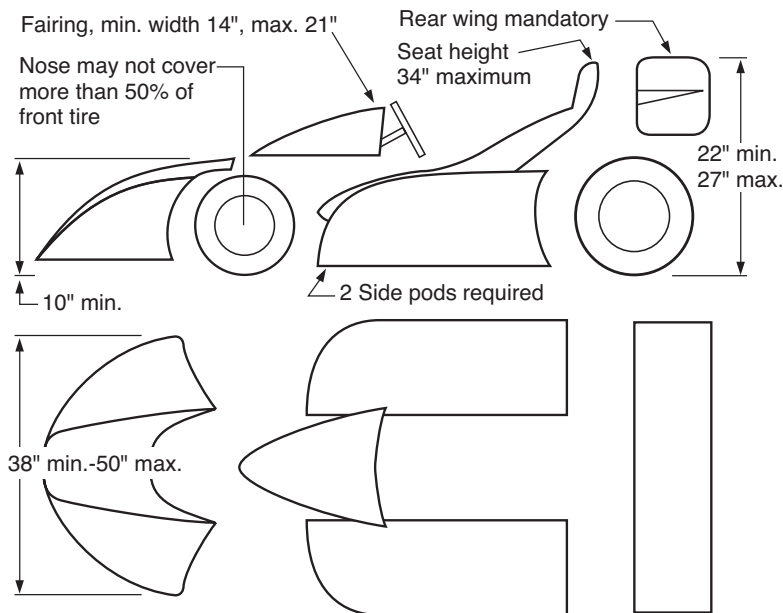
304.1.3 Length: Overall with body and wing 86" maximum.

304.1.4 Seat: No laydown seat allowed. Either a low or high back seat allowed. 34" maximum height for high back seat. Sprint type low back seats to be 25" minimum height.

304.1.5 Brakes: See Sections 105.2.1.7 and 112.14. Dual master cylinders or dual piston master cylinder front and rear wheel brakes are required.

304.1.6 Chain Oiler Reservoir: Capacity shall not exceed 8 oz maximum capacity.

304.2 Bodywork: See following diagram. Mandatory body work: nose, driver fairing, rear wing and set of side pods. To be similar to CIK approved bodywork. The 6" rule (302.7.5) doesn't apply if the side pods and nose are fastened with quick release fasteners such as dzus or R clip pins. If bodywork meets the 6" rule, it may be hard fastened. Body or shield shall not cover feet or ankles. Bodywork nose may extend to cover up to 50% of the front tire/wheel and the winglets may be extended over the top of the rear tire/wheel and may not cover the wheels/tires from the sides. Refer to drawing.



304.2.1 Nose: Full width, 38" minimum to 50" maximum. *Height 10" minimum.

304.2.2 Side pods: Two required. It may not cover the front tires. Winglets that extend to the sidepod are allowed. For safety the side pods are to be fastened with two quick release fasteners each, such as dzus, R clip pin or something similar.

304.2.3 Driver fairing: Similar to CIK approved. Width, 14" minimum to 22" maximum, mirrors not included. Maximum height allowed is 26". Must be non metallic material, e.g. plastic or fiberglass.

Driver Fairing shall not extend rearward of a plane that is perpendicular to the steering shaft defined by the driver side grip surface of round or butterfly type steering wheels. Legality shall be determined by laying a flat, rigid, plate at least 12"x18" in surface area against the driver side grip surface of steering wheel.

304.2.4 Rear Wing is required. 42" minimum to 49" maximum width, measured from outside of end plate to outside of end plate. Maximum height 27", minimum height 22", measured to top of end plate. Element thickness 1" minimum. Minimum wing area of 250 square inches measured from outside edges.

304.2.5 Floor Tray: Floor tray may be full coverage and extend to rear bumper. Floor tray may include a diffuser. No part of the Floor Tray and Diffuser may extend lower than the lowest point of the frame rails with the exception of attaching hardware. No rubber skirts or any other sealing devices allowed behind the centerline of the front wheels except for front nose including the Diffuser.

304.2.6 Numbers: Numbers may be mounted on a flat surface parallel to the tires, and within the minimum size requirement (see Section 302.7.9).

304.3 Superkart ICE Engine: Single cylinder 250cc maximum displacement. Motocross engines (Honda, Kawasaki, Suzuki, Yamaha, TM250MX), Honda ATC/ ATV 250, Rotax 257. All engines parts to be OEM, exceptions are piston, ring, bearings, seals, gaskets, reed petals, cylinder heads, hardware, and ignitions. Aftermarket rods and

aftermarket crank shafts allowed, cranks may be balanced, stock bore and stroke must be maintained. Cases must be OEM, may have starter hump modified or removed for carburetor clearance.

304.3.1 Top End: Cylinder must be OEM . Ports may be altered, no addition or deletion of ports allowed. Cylinder heads may be modified or aftermarket, 2 piece inserts OK. Base gasket is non tech, aluminum gasket okay.

304.3.2 Carburetor: One single venturi, float bowl or pumper style carb. Approved slide valve carbs are Kehin, Mikuni, and Dellorto. Power jets may be added to the carb. Power Jet may be electronically controlled. No electronic devices (other than power jet controls), turbo-charging, or fuel injection to be added.

304.3.3 Reed Cage: Intake manifold and reed block are open. OEM case mounting to be retained.

304.3.4 Ignition: Open.

304.3.5 Clutch: must be intact and operational. Wet clutch only.

304.3.6 Gearbox: Must be intact and able to be sealed from leaks. Number of gears to be OEM, ratios not controlled, and after market parts allowed.

304.3.7 4-Cycle engines allowed, see 302.11.2

304.4 Superkart Super ICE Engine: Current list of approved engines and engine kits. Refer to MSA rules for technical specifications. Maximum 250cc single cylinder 2 cycle, or 450cc single cylinder 4 cycle engine. Examples include the following list:

WIWA Gas Gas K250

DEA Technology - SK250 Single (engine)

Kit Engines/Alternative Parts :

THR Engineering - THR02-14 (kit engine)

THR Engineering - THR SS250 (kit engine)

Viper Racing UK - SK250S (kit engine)

Viper Racing UK - EVO250S (kit engine)

Viper Racing - SK250S1 (engine)

IAMEX30 Super Shifter 175cc

DEA Technology - SK250 Single pneumatic exhaust valve (alternative parts - Cylinder)

PFP - Victory - CR250R (alternative parts - Crankshaft)

KTM 450 – carbureted only

304.5 Superkart Formula E Engine

Maximum cylinder cubic capacity 250 cc obtained:

Either by one engine (maximum 2 cylinders) cooled by natural air flow or water cooled, or by 2 single-cylinder engines. Examples include: Rotax 256, DEA, PVP, Suzuki TZ250, VM250.

Or, 450cc (maximum 2 cylinders) 4 cycle engine.

304.6 Superkart 125 Engine:

One single cylinder 125cc gearbox engine. Examples include: Yamaha, Suzuki and Honda 125 engines, homologated ICC engines, and homologated KZ engines. Or, 250cc 4 Cycle Gearbox engine. Must maintain OEM bore and stroke.

304.7 Competition Format

304.7.1 Weight: 2 Cycle - 465 lbs., 4 Cycle - 460 lbs., driver and kart.

304.7.2 Tires: Tire compound open, only one set of tires allowed for a two 20 minute heat event. Option to change only one tire between heats. The rear wheels are to have bead-locks on inside and outside of the wheel; three evenly spaced around the circumference of the wheel.

304.7.3 Start: two by two rolling start after minimum one lap warm-up. Two 20 minute heats.

304.7.4 First heat: grid position to be assigned from qualifying in practice or up to the discretion of the race director. The first heat race will give you grid position for the 2nd race.

304.7.5 Second heat: grid position is determined by finishing order of the first heat.

304.7.6 Finishing position: tech applies to any trophy paying position. Equal points for each heat will be awarded. Least total points is the winner. Ties go to the competitor with the best second heat finish. Points shall be awarded as follows: 1st =0, 2nd=2, 3rd=3, etc.

305 FORMULA KART EXPERIMENTAL - FKE

This Section applies only to classes listed in FKE Section of 301, unless specifically referenced elsewhere.

All construction practices and specifications which appear under Sections 302-302.10 shall be applicable to FKE machines, with exception of the items listed below. Exceptions listed below apply only to FKE karts.

305.1 Chassis

305.1.1 Wheelbase: Maximum of 55-1/8", minimum of 40" as measured from the axle centers.

305.2 FKE Bumpers: A body shell, covering the driver's feet shall constitute a bumper for FKE karts.

305.3 Body: A body which surrounds the driver and covers the driver from the knees forward, or shell which is sat upon and no part of the driver's body is covered or enclosed, shall be required in FKE classes. It may be of the open or covered wheel type. Only metal or fiberglass materials shall be accepted for the body or shell construction. Completely enclosed driver compartment shall not be allowed. The body or shell shall extend from the front of the vehicle to at least the seat hoop or rear rollbar. It need not cover the engine compartment. Any floor or belly pan utilized in the engine compartment shall be adequately vented and equipped with drain holes.

305.3.1 Fixed Wings/Spoilers: If fixed wings/spoilers are used, they may not be higher than 26".

305.3.2 Numbers: See Sec. 302.7.9

305.4 Driver's Compartment: All FKE classes shall have a full belly pan with no openings large enough for any part of the driver's body to inadvertently pass through. Enclosed bodies shall have an operating kill switch to be located in the driver's compartment. Vehicles shall be so constructed as to permit easy entrance and exit for the driver, in assuming the driving position, without the removal of any part of the vehicle.

305.4.1 Firewalls: Required to separate engine compartment from driver's compartment.

305.5 Fuel Systems: No limit to fuel capacity. Fuel tank caps shall be exposed and accessible on the outside of the vehicle. The body section under the tanks shall be vented in such a manner as to permit fuel from a ruptured or

leaky tank to drain outside of body. All fuel lines shall be adequately safety wired or secured with hose clamps. No pressurized fuel tanks permitted.

305.6 Transmissions: Permissible. In 150cc Open/FKE II, selectable gear ratios while kart is in motion only legal up to 125cc displacement motors on gas and oil only. In Unlimited/FKE III, selectable gear ratios while kart is in motion only legal up to 250cc displacement motors (except RZ/RD 350 Yamaha) on gas and oil only.

305.7 Rollbars: On closed-bodied karts a one (1)" minimum diameter, .083 wall thickness steel rollbar shall be placed directly behind the driver and welded to the main frame rails and be adequately braced forward or rearward. It shall extend at least one inch above the driver's helmet when in a driving position. The steering hoop is also considered a rollbar and shall be a minimum of 3/4" diameter steel and of suitable wall thickness. The driver's legs shall pass under the steering hoop in closed body vehicles. Rollbar excluded from maximum height.

305.8 Seat Belts: Aircraft quality seat belts are mandatory in closed body vehicles. Seat belts shall be securely anchored to main frame rails. Shoulder harnesses are recommended. Seat belts are not permitted in shell body FKE karts where the driver is not enclosed.

305.9 Steering Wheel: Full circle not mandatory. Shall have a minimum grip length of 11". Wheel must lock with driver in place.

305.10 Throttle: Vehicles to be equipped with foot or hand operated throttle having a return spring which will closed the throttle when released.

305.11 Exhaust Systems: Shall be carried rearward and to the outside of any body panels.

305.12 Batteries: Batteries must be "gel" type. See 105.7. Wet cell batteries are not allowed.

305.13 Fire Extinguishers: Each entry shall have a minimum of an operable 1-1/2 lb. dry powder fire extinguisher at the start of each event on the starting grid or have same securely attached to the vehicle during the race event. Extinguishers must be rated for A, B & C type fires.

305.14 FKE Classes:

305.14.1 FKE I Class: 100cc Open - See Section 301 for engines and weights

305.14.2 FKE II Class: 125cc-150cc Open/FKEII - See Section 301 for engines and weights

305.14.3 FKE III Class: Unlimited/FKE III - See Section 301 for engines and weights.

305.15 Brakes: See Sections 105.2.1.7 and 112.14

Dual brake systems required. System may be comprised of two independent rear brake systems, or independent front and rear brake systems.

Where dual brakes are mandatory, the following rules apply: The system will include one brake pedal, a connecting brake rod of minimum .250" diameter, two master cylinders or one master cylinder with two pistons and a single reservoir, and a bias system between the two master cylinder pistons. One master cylinder piston can only supply one rear caliper. The other piston must supply the second rear caliper or the front calipers. Each system must be fully operational if the other system fails.

305.16 Chain Oiler Reservoir: Capacity shall not exceed 8 oz max. capacity.

306 SPRINT CLASSES

This Section applies only to classes listed in SPRINT Section of 301, unless specifically referenced elsewhere.

306.1 Chassis: All Chassis Safety specifications from 105.2 apply to all karts.

306.2 All General Chassis Specifications from 112 apply to all karts.

306.2.1 All specifications from Sections 201 through 201.7 apply to all karts. Exception: Shifter classes may have an overall length of 84".

306.2.2 Brakes: See Sections 105.2.1.7 and 112.14

Dual system brakes are strongly recommended.

Dual brake systems may be comprised of two independent rear brake systems, two calipers on one disc, or one caliper on each of two discs, or independent front and rear brake systems, unless class rules prohibit front brakes.

Where dual brakes are mandatory, the following rules apply: The system will include one brake pedal, a connecting brake rod of minimum .250" .236" diameter, two master cylinders or one master cylinder with two pistons and a single reservoir, and a bias system between the two master cylinder pistons. One master cylinder piston can only supply one rear caliper. The other piston must supply the second rear caliper or the front calipers. Each system must be fully operational if the other system fails.

Dual system four wheel brakes are required in Formula 125, Formula 125 Limited, Formula 125 Limited Heavy.

Front wheel brakes are allowed in Formula 80, Junior and Senior on a Regional option basis. Each Region has the option of requiring or prohibiting front wheel brakes in its races. Organization hosting the Grand National must declare in the 312 Section of the appropriate Rulebook whether front wheel brakes will be required or prohibited in the Grand National.

306.3 Bodywork

306.3.1 2 Cycle Sprint bodywork as specified in Sections 201.9 through 201.9.4 apply to all karts. See exceptions by Class under 306.9.

306.3.2 2 Cycle Sprint Bodywork is required.

306.3.3 Drivers fairing and all attachments, including mirrors, must fit within the specified drivers fairing dimension for that class.

306.4 Additional aerodynamic regulations: See Sec 203 for all classes

306.5 Sprint Seat

306.5.1 IKF Sprint Sit-Up Seat is required. See Section 307.

306.5.2 Seat back angle varies by class. See class specifics for required seat angle.

306.6 Fuel System: See 204

306.7 Chain Oiler: Maximum capacity allowed is 4 oz.

306.8 Numbers: See 206

306.9 Special Regulations for Certain Sprint Classes:

306.9.1 Yamaha KT100S Junior Sprint

306.9.1.1 No special built chassis.

306.9.1.2 RLV SSX muffler, engine clutch only, chain. All versions of SSX are legal.

306.9.1.3 30 minute race.

306.9.1.4 Eligibility: See 104.6, 104.7.7

306.9.2 Yamaha Ltd. Sprint, Light and Heavy

306.9.2.1 Exception to Sprint Bodywork Rules: Bodywork optional. If bodywork is used in this class, it must conform to Section 201.9. Any or all of the bodywork pieces may be used. If nose is used, number panel may not be added to nose or front bumper.

306.9.2.2 Chassis: Exceptions to 201: Wheelbase: maximum 42"- minimum 39-7/8", minimum overall width 38" outside of tire/wheel to outside of tire/wheel..

306.9.2.3 Fixed pipe, engine or axle clutch, belt drive allowed.

306.9.3 Formula 125, Super Stock CR125, Super Stock Sprint CR125

306.9.3.1 Chassis: minimum seat inclination of 50 degrees from horizontal.

306.9.3.2 Bodywork: Driver fairing required. Super Stock Sprint CR125 must be CIK. All other classes are maximum width 15" wide, see Diagram at Section 105.2.1.20.

306.9.3.3 Brakes: Functional front and rear brakes with separate master cylinders are mandatory. Carbon/carbon brakes are not allowed.

306.9.3.4 Wheels: 5 or 6 inch diameter.

306.9.3.5 Engine Specifications for classes listed above Section 654/656, ICC and 657.

306.9.4 Formula 80 Junior and Senior

306.9.4.1 Chassis: minimum seat inclination of 50 degrees from horizontal.

306.9.4.2 Bodywork: Driver fairing, required, maximum width 15" wide, see Diagram at 105.2.1.20.

306.9.4.3 Brakes: Front brakes are regionally optional. Safe track conditions must prevail. This rule is being monitored closely and is under review. Carbon/carbon brakes are not allowed.

306.9.4.4 Wheels and Tires: National, Regional, and Local events: 5" rim diameter maximum. No compound or manufacturer restrictions on tires.

306.9.4.5 Engines: Engine rules per Sec 653.

306.9.5 TAG Heavy and Light

306.9.5.1 Clutch: Engine clutch only. Any clutch drum option, factory or fabricated, including belt drive is acceptable in this class, provided the internal components of the approved TAG clutch are retained. No oil bath conversion allowed.

306.9.5.2 Auxiliary starting:

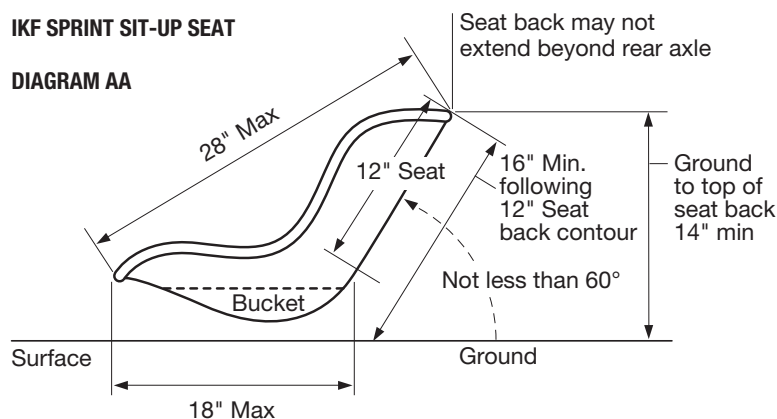
STARTER/CHARGING SYSTEM/BATTERY:

- a. At Pre-Tech, it is required that all starting components be in place and connected as per OEM specifications.
- b. If a starting system component fails during the race day, auxiliary starters may be used with no penalty.
- c. At Post-tech it is required that all starting components be in place and connected as per OEM specifications.
- d. Any competitor using auxiliary starting on the grid during qualifying or racing may be subject to additional tech to verify legitimate component failure at the discretion of the Race Director.
- e. At all times, charging system components must be in place, connected, and functional per OEM specifications.
- f. Battery must be sealed or dry cell and be securely mounted. See 105.7.

306.9.6 IKF World Formula, Med and Hvy: 5" diameter wheels only.

307 ROAD RACE IKF SPRINT SIT-UP SEAT

307.1 See Diagram AA.



- All dimensions taken as shown.
- No lip or cups on inside of seat. (i.e. Seat back at top.)
- Seat shall incorporate driver's posterior (i.e. Bucket)
- Seat to closely resemble this diagram in appearance. Speedway laydown style seats are not acceptable.
- Any attempt by competitor to assume an unnatural position in the sprint seat to gain an aerodynamic advantage is illegal.

307.2 Back of seat may not extend beyond rear edge of rear axle.

307.3 All angles and heights to be taken with the kart on a flat, horizontal surface with the steered wheels straight ahead.

307.4 Required minimum seat back angles, by Class

307.4.1 Super Stock - 45° from horizontal

307.4.2 All Section 306 Sprint Classes - 50°

308 ROAD RACING PROCEDURES

Any major deviation from IKF Race Procedures must be approved by the IKF Board of Directors in advance of the event.

308.1 Road Racing Starting Procedures:

308.1.1 Standard: Each class may be gridded separately, but if classes are combined, the faster classes shall be gridded in front. The karts are to be lined up along one side of the track with a minimum of two feet between karts. The lineup (or) starting area shall be determined by the officiating club. Road races shall incorporate standing starts. No pushing shall be allowed. The green flag shall be raised one minute before the start of the race so that the karters may start their engines. At the end of one minute, the green flag shall be dropped and the race will commence.

308.1.2 Dead Engine: (Local Option) The green flag shall be raised one minute before the start of the race to advise the participants of the time remaining. No engines on karts or starting devices shall be started until the race has officially begun. At the end of one minute, the flag shall be sharply lowered, signifying the official start of the race. At this time, engines on karts and starting devices may be started and karts shall leave the starting grid. No pushing shall be allowed.

308.2 Red Flag: (See Section 108.5) At Race Director's discretion, any competitor who is, or appears to be injured, necessitating a red flag, shall be given last place points for that race or heat. If incident is in the first heat, and driver has been cleared by the emergency response team, and the kart re-safety teched, the driver may start the second heat.

308.3 Rain Race Conditions: Raceable wet conditions are defined as follows: A wet track, but without deep standing water or heavy running water on the track surface. Heavy rainfall or the presence of electrical storms in the area are not acceptable wet weather conditions. When a race has started under dry conditions and wet weather occurs, necessitating a red flag, the event will be considered complete if one half of the race time or laps have been completed. If less than one half of the scheduled event has been completed, the Race Director may declare wet weather conditions and provide competitors' time (approx. 15 minutes) to install approved rain tires. Event will be restarted in the order of the last completed green flag lap or full course yellow order.

When wet weather conditions are declared, all competitors must mount rain tires. Only production type rain tires will be allowed. Competitor-modified slicks, grooved dirt tires, etc. are not acceptable tire for wet race conditions.

If the Race Director deems wet weather conditions have passed, subsequent races on the program will revert back to dry condition tires. At this point all competitors must switch back to dry tires. In this situation, the procedure shall be the reverse of the previous rain procedure noted. This includes the half-distance rule.

In wet weather conditions, the Race Director shall make every effort to notify karters coming to the grid if wet weather condition rules will be in effect. A competitor failing to meet the prescribed time limit will be disqualified from that race.

308.4 Relief Drivers: Relief drivers are allowed in Road Racing only. The driver of record shall complete at least one lap in competition before a relief driver may assume that entry. Alternate or relief drivers who meet all class requirements shall be officially registered as a relief driver for that class. If a relief driver is used, all drivers shall meet minimum post-race weight requirements. In the case of heat races, the driver of record must complete at least one lap in each heat race.

308.5 Engine Substitutions: If a competitor wishes to change engines between heats, the competitor must receive approval from tech and both engines will be subject to tech.

308.6 Special Procedures For Certain Road Race Classes

308.6.1 Race length for all road race classes are set at the discretion of the host club and/or the Race Director based on race day format, local conditions, and safety considerations (e.g. weather, temperature). Race lengths may be: 45 minutes, 30 minutes, two 20 minute heats, or a Pre-Final/Final.

308.6.2 Suggested Race Lengths and Format:

Enduro/Laydown classes	45 minutes
Superstock & Sprint chassis classes	30 minutes
Unlimited/FKEIII	45 mins. or two 20 minute heats
Shifters, ICE classes	30 mins. or two 20 minute heats

308.6.3 Special Road Racing Class Procedures

308.6.3.1 Formula 125 Ltd. runs opposite day from Formula 125 at multi-day events.

308.6.3.2 If two 20 minute heat format is used there shall be a minimum of one hour between heats. Grid shall be determined by pea-pick, timed practice, or at the Race Director's discretion.

308.6.3.3 Tires: All heat races will be run on the same set of tires. One set limit, heat one through heat two. One for one tire replacement due to puncture or crash damage at the Race Director's discretion. Replacement tire must be a used tire of same compound, make, and size of tire being replaced. Maximum one front tire and one rear tire.

308.6.3.4 2X2 F1-Style and Rolling Starts:

306.6.3.4.1 Two-by-two F-1 style standing start procedure: place karts a maximum of four feet apart at center aisle and a minimum of one kart length front to rear. Allow minimum of one warm-up lap before start.

308.6.3.4.2 Starting Procedure: There are three recommended methods for starting a Gearbox race. The preferred method of starting a Gearbox race is with a Christmas tree lighting system. If such a system is not available, one of the two following methods shall be employed. When all karts are in position; Option #2) The head starter holds the green flag out-stretched over his head with both hands signaling drivers to put their Karts in gear. The race shall begin within five seconds of this signal, when the starter releases and waives the flag. Option #3 When all karts are in position, the starter holds the green flag behind his back and raises one hand above his head signaling the drivers to put their karts in gear. Within five seconds of this signal the starter shall raise and wave the green flag to begin the race.

308.6.3.4.3 "Creeping" or "rolling" before the green flag drops will necessitate a three position penalty. If a competitor betters his position via a "rolling start" that competitor may be assessed a time penalty of up to one lap.

308.6.3.4.4 Any competitor whose engine "dies" on the starting grid must raise both arms over his head so as to warn the other drivers that his kart is disabled. He/She must then move the kart off the racing line so the race can be started. Failure to do so may result in disqualification from the event. The competitor may then be push started and join the rear of the pack after the green flag has been given. If the competitor's kart does not start within a safe period of time, it must be removed from the track immediately. This is the only time a kart may be restarted during green flag competition at a Road Race event.

308.6.3.4.5 Rolling start procedure (if used): All karts are pre-gridded in their assigned order. The grid official gives a 1 min. warning to start. At the end of 1 min. all karts will proceed to the track to complete 1 lap before the green flag start. Any kart unable to proceed on the track course will

only be able to start at the rear of the grid. These karts or kart will only be allowed to enter the rear of the grid if started within 30 seconds after the 1 minute warning. Karts will be allowed to move directly forward in their grid line up if the kart in front is unable to leave the pre-grid. Where applicable, if the flagman moves forward, the green flag can be given after all karts cross the start/finish line at a reasonable pace at the flagman's discretion. If at the start of the green flag lap no green flag is given, the race time will still begin and continue even under yellow flag conditions. Any driver may be penalized finishing positions or up to 1 lap for failure to stay in their assigned starting position.

308.6.3.4.6 Restarts: If a kart fails to start on the grid and leave for the warm up lap, the kart will be held by the grid steward in the hot pit until the green flag has been waved signaling the start of the race.

If after competitors leave the pre-grid for warm-up laps, a driver's engine or kart becomes disabled and that competitor is able to safely restart, he/she must grid at the rear of the field, no exceptions. If said competitor has not reached the rear of the pack before the field comes to the starting line, they shall not be allowed to start that race, and will receive a black flag and shall be considered a DNS for scoring purposes.

Changes in these procedures may be allowed at the Race Official's discretion. Decision of the Race Director or Starter may not be protested.

308.6.3.5 Scoring: Both heats scored equally. First place = 0 points, second place = 2 points, third place = 3 points, etc. Ties go to competitor with the better second heat finish.

a.) DNS (did not score) will be scored behind the starting field.

b.) DNG (did not grid) will be scored behind a participant that received a DNS.

DQ – will be scored "N+1" (N = total number of entries)

308.6.3.6 Engine tech for first and/or second heat at the discretion of tech inspector. DQ's in second heat for engine related specs will result in a DQ for each heat using that engine.

309 ROAD RACE LICENSING

309.1 Requirements: A qualified road race license will be issued if a driver participates and proceeds to post race weight in and tech to receive a finishing position in three IKF insured events. After weigh in, DQ's for weight or post race tech infractions will not eliminate the driver participation requirement. The road racing license shall be issued by IKF and the application shall be subject to final review by IKF. All qualified IKF road racing drivers may compete in IKF road races, speedway and sprint events.

309.1.1 Eligibility: Only an IKF member in good standing may apply for a Road Racing driver's license. It is understood that the applicant shall further satisfy all rules and regulations pertaining to classes, age and weight as defined in the IKF Competition Regulations.

309.1.2 Duration of Driver's License: Driver's license expires and is renewable with expiration of the membership, IKF membership is for a period of 12 calendar months, from the date of application.

309.1.3 Novice Drivers: New Road Racers are issued a Novice Permit, a yellow card. This permit is to be used until the requirements are met to receive a Qualified Road Racing license. All Novice permit holders are required to start at the back of the grid for a minimum of three events. Novice Permit holders must have a Track Official sign the Permit noting class, date, and the Official's name, signifying that the Official is satisfied that the Novice has displayed satisfactory driving ability, attitude and conduct. When the

Novice has earned three Official signatures, the Novice Permit holder must send the permit into the IKF office to receive his Qualified Racing License, a red card.

Any applicant for, or holder of, a Novice Permit shall be required to attend a special (or extended) driver's meeting. This meeting will explain in more details the flags, officials, procedures, rules, etc. All Novice Permit holders will be required to display the orange panel on the rear of their karts. If time permits, a special/separate practice shall be held for novices. If time does not permit, the first 10 minutes of the first practice session shall be reserved for any novices and tire scrubbing with the track under standing yellow conditions. This will allow the novice time to become familiar with the track and other karts. The novice's driving will be under the observation of the Race Director or their designated Novice Director at all times.

309.1.4 Renewing Qualified Road Racing Licenses: Those who have previously held a Qualified Road Racing License will be issued one when they renew without having to race in any number of races during the season to maintain it.

309.1.5 WKA/KART License: If a person applies for an IKF Road Racing License who holds a current WKA/KART Qualified Road Racing License, they automatically receive an IKF Qualified Road Racing License upon payment of fees. Applicant must furnish a photocopy of current WKA/KART Qualified Road Racing license along with application to IKF.

309.1.6 License Fee: A \$15 fee shall be sent to the IKF office with initial application for a Road Racing License. A \$10.00 fee shall be sent to the IKF office for reissuance of a lost or damaged Qualified Road Racing License.

309.1.7 Grid Positions: Drivers shall be gridded according to their grade of license or permit. Qualified Road Racing licensed drivers shall be placed in the front of the grid. Novice Permit holders shall be gridded last for three races or until three finishing positions have been completed at Race Director's discretion.

310 ROAD RACING SCORING

310.1 Transponders: Sprint Chassis (classes covered in Sec. 306) will have transponder mounted per Section 206.2. All other classes location is open and must be placed within the internal surface of the kart.

310.2 Determination of Road Racing Winner: It is not necessary for the winner to receive the checkered flag ending the race, as the winner shall be the kart which covers the greatest distance in the specified time. When the specified time has elapsed, the flag will be shown to the next kart to cross the finish line, regardless of its position in the race, and to all karts crossing the line thereafter. The finishing positions shall be determined by the race order, as scored on the checkered flag lap. If more than one kart is on the same lap, the one which crossed the finish line first shall be considered ahead. There shall be no extra or safety laps and all karts shall proceed directly into the designated impound area without stopping at the finish line or at their pits. All karts shall cross the finish line on the track, under their own momentum to be scored. All karts shall be checked for minimum class weight, maximum kart size, bodywork specifications, engine legality, exhaust system legality, legal attachment of weights, fuel legality, etc. Failure to stop in the impound area will result in an automatic disqualification. If a participant is DQ'd in tech the progression will be to move everyone up in the order of the final finish.

310.3 Determination of finish order:

310.3.1 After karts have passed through post tech, the finish order of any competitive segment of the event will be:

- a. Karts finishing

- b. DNF - Did Not Finish - Karts which left the grid and did not finish the segment, including Mechanical Black Flags which are scored as leaving the track as they receive the Mechanical Black Flag.
- c. DNS -Did Not Score - Karts that took a green flag but did not complete first lap. If multiple karts did not score they will be scored amongst themselves as they left the grid.
- d. DNG - Did Not Grid - Karts that past pre-tech, but did not appear on the starting grid.
- e. Karts DQ'd in Post Tech, e.g., underweight, non spec fuel, non spec tires, non spec motors etc. If multiple karts are DQ'd, they will be ranked, amongst themselves in the order in which they finished on the track.
- f. Karts DQ'd for driving misconduct. If multiple karts are DQ'd for driving misconduct, they will be ranked amongst themselves by the order in which they received the DQ.
- g. If a participant is DQ'd in tech, everyone finishing behind the participant DQ'd will move up in the order of the final finish.

310.4 Race Credit: Any current IKF licensed driver, who makes a valid class entry and has their kart approved at Pre-Race Technical Inspection for an IKF-sanctioned Road Race, Regional or National caliber event, shall receive participation credit. Drivers and their karts must be present at Technical Inspection on the day of the race in which they are entered, to receive race participation credit. If any member enters a race without the intent to race, it will result in an automatic one year suspension.

310.5 Combined Road Racing Classes:

310.5.1 Credit: At sanctioned road racing events where classes are combined on a local option basis to form one race due to a small number of entries, the entrant can gain participation credit for the one class in which he enters and competes, but not both. There shall be no combining of Road Racing classes at Grand National caliber events.

310.5.2 Exception: At the close of registration, if there are no conflicts of entries due to the combining of any two classes, it will then be permissible to combine classes at the Race Director's discretion. The date and time of registration closing must be included in all entry blanks and flyers along with tentative schedules.

310.6 Awarding of Regional Championship Points for Road Race Division:

See Section 800

310.6.1 Regional Championship Points will be awarded according to the overall finish order as determined below:

- a. Karts Order of Finish
- b. DNF - Did Not Finish - Karts which left the grid and did not finish the race, including Mechanical Black Flags which are scored as leaving the track as they received the Mechanical Black Flag.
- c. DNS - Did Not Score - Karts that took a green flag but did not complete first lap.
- d. DNG - Did Not Grid - Karts that past pre-tech, but did not appear on the starting grid.
- e. DQ'd in Post Tech - e.g. underweight, non spec fuel, non spec tires, non spec motors etc. If multiple karts are DQ'd, they will be ranked, amongst themselves in the order in which they finished on the track.
- f. Karts DQ'd for Driving Misconduct - If multiple karts are DQ'd for driving misconduct, they will be ranked in the order in which they received the DQ.

311 ROAD RACING GRAND NATIONALS

311.1 Eligibility to Compete: To be eligible for competition in the IKF Road Racing Grand Nationals, it is required that each entrant shall:

311.1.1 Be registered with IKF , see 309.1.5, and in possession of a current and valid IKF Qualified Road Racing License. IKF Shifter Kart License is also valid pursuant to condition noted in 311.1.2.

311.1.2 Holders of a Qualified Road Race License may compete in the Road Race Grand Nationals without having participated in 3 road race events.

311.1.3 Novice permit holders are not eligible for competition at the Road Race Grand Nationals.

311.1.4 (Road Race Only) Road Race Expert Drivers may run all Road Race classes.

311.2 Starting Grid Lineup: The previous year's National Champion is guaranteed the first starting position. All other positions are based on registration order.

311.3 Multiple Classes: Multiple classes are allowed to run simultaneously at Road Race Grand Nationals, pursuant to approval of the combined classes by the Road Race Committee excluding Juniors. Schedule must be printed in the Rule Book prior to that year's Grand Nationals.

311.4 Scoring for all classes using the two 20 minute heat format

311.4.1 Both heats scored equally; First place = 0 points, Second place = 2 points, Third place = 3 points, etc.

311.4.2 DQ'd drivers will receive last place +1 point for the heat in which they are DQ'd. In the event of a tie, the DQ'd driver will place behind a driver that did not receive a DQ.

311.4.3 All other ties will go to the driver with the better second heat finish.

311.4.4 The order of line-up for the start of the second heat is determined as follows:

1. Order of finish
2. Karts receiving Mechanical black flag
3. DNS (Did Not Score, took the Green Flag but didn't complete first lap)
4. DNG (Did Not Grid, passed pre-tech, but did not appear on the starting grid)
5. DQ'd in Post race Tech
6. DQ'd for driving misconduct

312 IKF ROAD RACE GRAND NATIONAL SCHEDULE

To be announced.

312.1 Schedule of classes may be changed only with prior IKF Board approval.

312.2 No Other Class(es) shall be run during the official Grand National event except as approved by the IKF Board of Directors.

312.2.1 Approved local option classes: To be announced

312.3 At Grand National events, classes with less than 5 entries will not run for a Duffy. See 110.9.

312.4 OFFICIAL SCHEDULE: To be announced

313 SPEC TIRES

313.1 Any IKF Club or Promoter, at a Regional or National event, may require spec tires. Any request for spec tires to be run in any class must be approved by the IKF Board of Directors at the January Meeting in the year of the request.

SPEEDWAY

The Speedway Kart is a specially designed chassis used on oval tracks consisting of dirt, asphalt or concrete. The chassis is built in an offset configuration for left turn racing. Speedway karts don't have seat belts or roll cages. The chassis is designed to flex in specific areas of the frame to achieve maximum performance.

Speedway karts have adjustments for castor, camber, lead, lag, cross, vcg, toe in and out, tire stagger, etc. Adjustments are made for different types of racing surfaces with low to high grip.

Speedway racing provides for side by side racing starting at age 5 through adult with different 2 and 4-cycle engine classes.

400

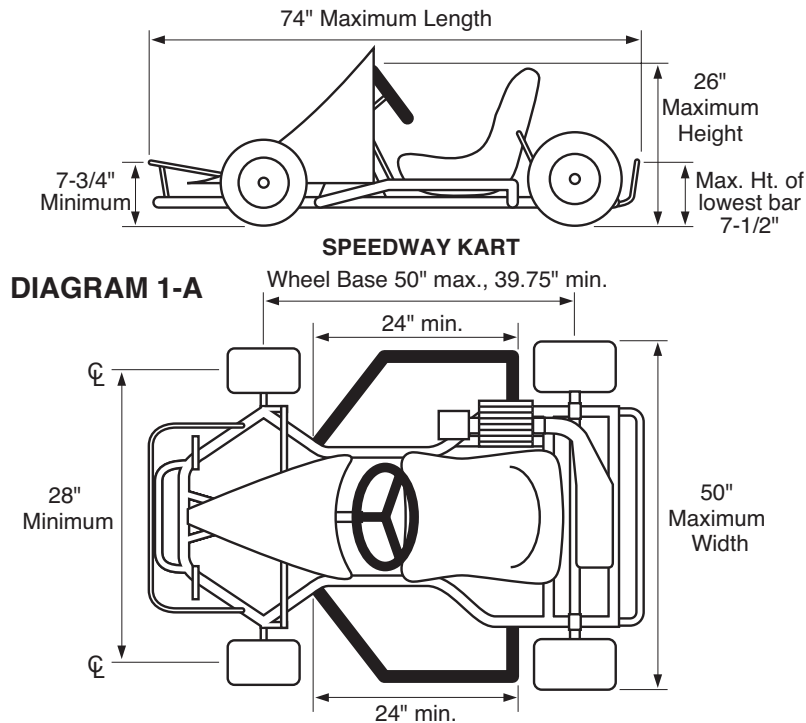
SPEEDWAY RACING

NOTE: FOR ADDITIONAL INFORMATION, PLEASE REFER TO:

<i>Event officials are authorized to decide if an equipment change or design is an attempt to "beat" the rules. They can and will disqualify an entry in violation of the Spirit and Intent of these rules. Any official or representative shall have the right to correct conditions not in compliance with the Spirit and Intent of these regulations.</i>	SAFETY	SECTION 105
	RACE PROCEDURES	SECTION 110
	CHASSIS SPECIFICATIONS	SECTION 112
	PRE-RACE TECH. INSPECTION	SECTION 503
	POST-RACE TECH. INSPECTION	SECTION 504
	PROTESTS (114.6)	SECTION 507
APPEALS	SECTION 508	

401 CHASSIS SPECIFICATIONS

(Please refer to Sections 105 and 112 General Chassis Regulations for more information)



401.1 Minimum Kart Weight: Race ready, dry, single classes - 85 lbs., dual classes - 105 lbs.

401.2 Minimum Tread Width: 28" measured from the centerline of the right tire to the centerline of the left tire.

401.2.1 Rim Width: The maximum width for the mounted wheel and tire assembly is 10-3/8".

401.3 Maximum Overall Kart Height: 26". This does not include windshield fairing, steering wheel, or air filter.

401.4 Maximum Overall Kart Length: Maximum length of kart and anything attached to it is 74".

401.4.1 Wheelbase: Wheelbase maximum of 50" and minimum 39.75" measured from center to center at the outside end of the rear axle to the outside end of the front spindle.

401.5 Front Bumpers:

401.5.1 The top rail of the front bumper must measure a minimum of 7-3/4" above the ground, with or without a nose piece. If not using a nose piece the top rail must have a straight section a minimum of 10" in width in the center of the kart.

401.5.2 Bumper must have at least two vertical supports running to the top loop of the bumper. Vertical supports will not be considered the top rail of the front bumper.

401.5.3 Main bumper members shall be not less than 3/4" outside diameter by .065" -10% wall thickness, steel tubing.

401.5.4 Front bumper can be no wider than inside of front wheels.

401.6 Front Bumper Covers:

401.6.1 Front bumper covers must not extend below main rail, must tech within 5° of vertical, must not be more than 14 inches high from ground level.

401.6.2 Must not extend rearward of the center line of front wheels and must follow contour of front bumper. Bumper cover material shall have a maximum thickness .125 inches.

401.7 Rear Bumpers:

401.7.1 There must be one rear bumper cross bar between 5" and 7-1/2" above the ground.

401.7.2 Double rail rear bumpers are suggested but not mandatory.

401.7.3 Main bumper members shall not be less than 3/4" by .065 -10% wall thickness, steel tubing.

401.8 Nerf Bars: Nerf bars constitute a bracket outside of the main frame rails, between the front and rear tires. This bracket will not be considered a nerf bar if it is completely covered by the wedge. The wedge framework must still pass tech inspection and have no sharp protrusions or edges.

401.8.1 The overall length of the side nerf bar shall be a minimum of 24" measured from the back side of the nerf bar closest to the rear tire and the rear of the kart in a straight line to where it attaches to the kart at the front. See diagram 1-A.

401.8.2 Double rail nerf bars are suggested but not mandatory.

401.8.3 Main nerf bar members shall not be less than 3/4" by .065 -10% wall thickness, steel tubing.

401.8.4 Nerf and sideboards will be no more than four inches wider on either side, than the rear wheels. Nerf bars constitute a bracket outside of the main frame rails, between the front and rear tires. This bracket will not be considered a nerf bar if it is completely covered by the wedge. The wedge framework must still pass tech inspection and have no sharp protrusions or edges.

401.9 Chain Oilers: The use of any type of chain oiler is not permitted.

401.10 Driver's Compartment: The driver's compartment shall be equipped with side rails, side panels or similarly effective lateral support. All parts of the driver shall be limited to the confines of the width and length of the kart. Driver's feet shall not extend beyond bumper when pedals are fully depressed. Driver's legs and feet must be visible when viewed from directly above with pedals depressed.

401.10.1 Seat: No part of the seat or anything attached to it, except seat struts may extend rearward of the rear axle.

401.10.2 Minimum height of the seat back for all Speedway and Speedway Pavement karts without roll bars is 10" for Junior 1, 12" for Junior 2, and 14" for all other classes from the ground. No peaks or add-on sections intended to subvert the seat back height requirement allowed.

401.10.3 Mirrors: No mirrors of any kind can be mounted on the kart for any 2 or 4 Cycle Speedway, Speedway Pavement, or Speedway Midget competition.

401.10.4 Guard: All karts must be equipped with a brake disc guard, aka Wolfe Plate, between brake disc and the back of the seat.

401.11 Floor Pan: No void large enough for any part of the driver's body to inadvertently pass through, shall be permitted.

401.12 Belly Pan: If a belly pan is used it must be fully confined within the main frame rails when viewed from directly above. The pan may not extend beyond the rear frame rail and must end inside the rear bumper. If a belly pan is used, it must be flat and parallel to the main frame rails from a line drawn across the rear edge of the front tires to a line 4" in front of the front edge of the rear axle. From that point rearward to the end of the main frame rails, the belly pan may be no higher than the center of the rear axle.

401.13 Number Panels:

401.13.1 Size: Maximum width 14", maximum height 18", minimum width 7", minimum height 7", as measured on surface of panel. The number panel must be a plain color, free of all decoration and may only contain the required numbers.

401.13.2 Color: Panels will be plain white. Numbers must be 5" minimum height, block numbers only. It is highly recommended that numbers are plain black, but other contrasting colors are acceptable. If colored numbers are not legible for scoring, scoring personnel will request that the competitor change numbers appropriately so they can be read during competition. If competitor does not make necessary changes, scoring has the right to not score competitor during competition.

401.13.2.1 IKF Experts, Duffy Winners, and Regional Champions: IKF Experts listed in Sec 115.4.4 - 115.4.8 should display gold number panels with plain black, block numbers only. Expert panels may display the IKF issued Expert banner across the bottom.

IKF Duffy winners and Regional Champions may display appropriate issued banners across the bottom of their white number panels with plain black, block numbers.

401.13.3 Material and Mounting: All panels shall be of flexible plastic with rolled edges or shall be contact paper mounted to a smooth non-movable area such as side pod, side panel, front nose or driver fairing. All panels shall be attached in a safe manner and shall be subject to rigid technical inspection.

401.13.4 Location: All competition karts must be equipped with 4 number panels meeting the above specifications. The front number panel shall be mounted in front of the steering wheel, the nose is in front of the steering wheel. Side panels must be carried between the front and rear wheels. If running a full wedge, number panel may be placed as per diagram, Section 401.15. The rear number panel must be in place and visible.

401.13.5 Legibility: All numbers must be legible to track personnel and scorers, throughout an the event. All entrants shall cooperate in making numbers legible or risk not being scored.

401.13.6 Transponders: Use of transponders does not negate the requirement for 4 legible numbers on each kart throughout the event.

401.14 Speedway Bodywork:

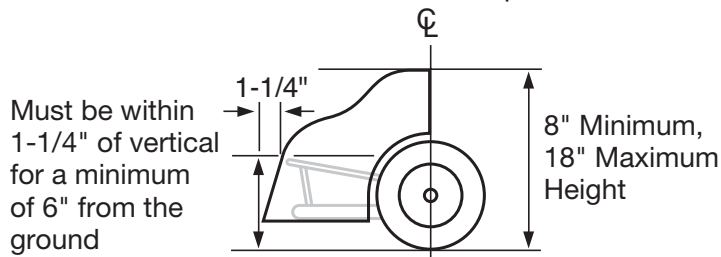
401.14.1 Aerodynamic Regulations: The intent of the following regulations is to limit aerodynamic devices used on all types of Speedway racing.

401.14.2 Speedway Nose:

401.14.2.1 Usage: Nose is required for 4-Cycle Speedway racing and optional for 2 Cycle Speedway racing.

401.14.2.2 Dimensions: Nose pieces must be a minimum of 8" high and a maximum of 18" high. Nose pieces shall not be inclined more than 1-1/4" from vertical at a height of 6" from the ground. Nose pieces shall be no more than 3" per side wider than front wheels/tires measured at the centerline of front axle with wheels straight ahead. Outside of front wheels and tires cannot shall not be covered, must be exposed. Nose shall not cover driver's feet, i.e. feet and controls must be visible.

Nose may not extend rearward of centerline of front wheels unless attached to side panels



401.14.2.3 Materials and mounting: Nose must be constructed of high strength plastic or fiberglass and must be securely mounted to the kart. Bottom of nose piece may be mounted flush to bottom side of frame extending no further back than centerline of front axle. Top surface of nose piece may not extend rearward of centerline of front axle, unless nose is attached to side pods or is part of a full body.

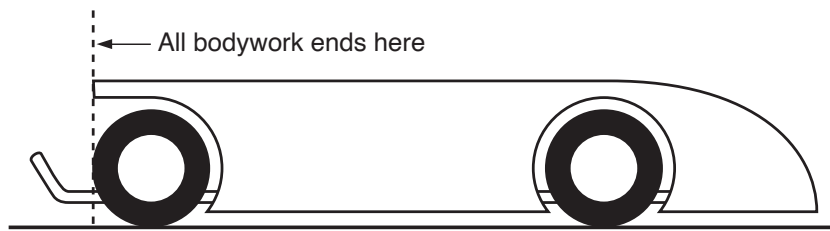
No additional protection devices such as braces, etc are allowed, internally or externally, on the nose piece. Use of expanding foam inside of the nose is allowed. Rubber baseboard or rubber molding may be mounted to the 6 inch measured area on the nose cone and subject to tech. The curved sections of the rubber or notably called duck bill, must be trimmed flat. Patching of the nose is allowed but repaired nose is subject to tech. Tape is an acceptable repair.

401.14.2.4 Ground clearance: Minimum height of nose shall be 3/4" from the ground. This is a pre-tech item only.

401.14.3 CIK Nose Piece: CIK nose pieces are not legal for Speedway racing unless they meet the dimensions in 401.14.2.2.

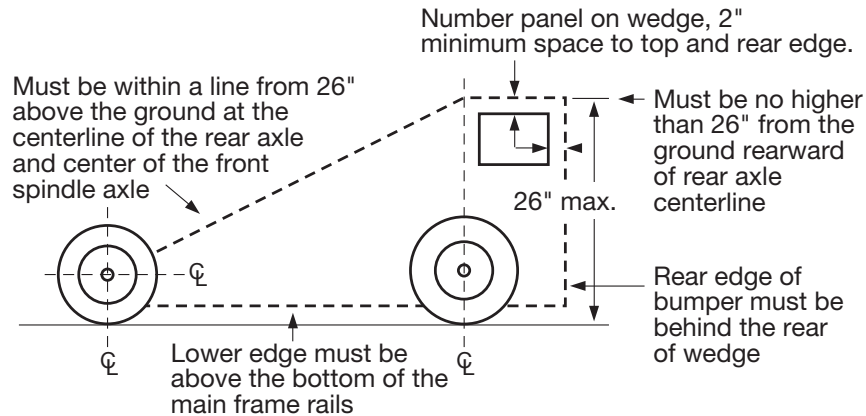
401.15 Side panels:

DIAGRAM 401.15



401.15.1 Wedge style body: Wedge side panels must not be higher than 26" from the ground, and must not extend rearward past the rear bumper. They must be within the confines of the following diagram and may not extend below the frame rails. There shall also be no vertical extensions of the windshield fairings with the intent of increasing aerodynamic stability. All panels and fairings must be securely mounted to the kart and judged to be safe in pre-race tech inspection. The decision of the pre-race tech officials shall be final.

401.15.2 "Speedway" style body:



401.15.2.1 Side panels/pods of flat or 90 degree style or CIK-style pods may be used. Must be securely mounted. Side panels and pods must be void of sharp edges. No metal panels or pods allowed.

401.15.2.2 Height: Maximum height shall be 14" from the ground measured from a point 12" rearward of the front axle centerline.

401.15.2.3 Ground clearance: Ground Clearance: minimum height of nose, side panels/pods shall be 3/4" from the ground. This is a pre-tech item only.

401.15.2.4 Clearance: 90 degree panels may not cover any part of the drivers body. Distance from seat to panel: 1" minimum, all areas. Minimum opening area forward of seat back to rearward edge of front tire is 22" minimum, measured with tires in straight ahead position. Panels may connect to nose piece. Pods or panels may be a maximum of 4" per side wider than the rear wheels.

401.15.2.5 Length: Side panels may not extend rearward of the rear edge of the rear tires. See Drawing 401.15

401.15.3 Rub Strips: Rub strips are material added outside the side panels or pods to protect those panels when karts rub together.

401.15.3.1 Rub strips may not be metallic, but must be of flexible plastic material.

401.15.3.2 Strip may be no thicker than 1/2". Ends of strip must be beveled or rounded toward flat of side pod.

401.15.3.3 Strips must be attached only with button head cap screws or non-protruding hardware (max. of .25" diameter) and flat washers or flathead cap screws or rivets.

401.16 Windshield/Driver Fairing:

401.16.1 Height: may be installed higher than 26" to protect driver. Windshield fairing or steering wheel cannot be installed in such a manner as to obstruct the driver's vision. Fairing shall be no higher than the driver's eye level while sitting in the kart in a normal driving position.

401.16.2 Width: Maximum width allowed is 14", chord measurement. Fairing must not cover the driver's feet, ankles or legs as viewed from above. Section 105.2.1.20 applies.

401.16.3 Clearance: Must have 1" minimum clearance between front fairing, nose piece, or side panels. Fairing shall not connect to nose piece.

401.16.4 Class Restrictions: Steering column fairings or windshields are not allowed in any Junior I or and Kid Karts class.

401.17 Drive Systems:

401.17.1 Direct Drive: No direct drive systems allowed in 4 Cycle Speedway or 4 Cycle Pavement Speedway Divisions.

401.17.2 The drive system to the rear axle must be #35 or #219 chain. The drive system from the engine to a jackshaft, if used, may be either a belt drive system or a chain drive system using #35 or #219 chain and must have a belt/chain guard.

401.17.3 Any kart that has a clutch between the seat and the motor must have a clutch/chain guard that is as wide as the clutch and spring extensions when clutch is engaged.

401.17.4 Clutch/Chain Guard: A clutch/chain guard shall protect the participant from coming into contact with the clutch/chain. The top and side of the inboard clutch must be covered in such a way as to protect the clutch both side and top from coming into contact with driver and or seat. Current producer of such a guard is Jex Manufacturing.

401.18 Brake System Restrictions: Front wheel brakes are not allowed in 4-Cycle Speedway or 4-Cycle Pavement Speedway racing.

401.19 Brake Lines and Connections: All brake lines shall be safely routed to prevent possible damage while kart is in motion. Hydraulic brake connections must be tight and free from any visible leaks. It is encouraged that braided brake lines be utilized which are more protective from abrasion and rubbing. Brake line fittings that are designed for such use are highly recommended.

401.20 Lighting Devices: No display lighting devices are allowed on the kart, e.g., valve stem lights, etc. Illumination for engine monitoring devices is allowed.

401.21 Video Recording Devices: No video recording devices such as cameras will be allowed anywhere on the kart in Speedway during competition.

402 2-CYCLE SPEEDWAY NATIONAL CHAMPIONSHIP CLASSES

CLASS	ENGINE TYPE/RESTRICTIONS	FUEL	WEIGHT	AGE
1. ††JUNIOR I LIGHT	Yamaha KT100S/WA55B or WA55-1 carb/RLV Box Muffler SSX-V/no Direct Drive	Gas-Oil	235	8-11
2. ††JUNIOR I HEAVY	Yamaha KT100S/WA55B or WA55-1 carb/RLV Box Muffler SSX-V/no Direct Drive	Gas-Oil	270	8-11
3. ††JUNIOR II LIGHT	Yamaha KT100S/.850 Restrictor/ RLV Box Muffler, YBX/ no Direct Drive	Gas-Oil	275	12-15
4. ††JUNIOR II HEAVY	Yamaha KT100S/.850 Restrictor/ RLV Box Muffler, YBX/ no Direct Drive	Gas-Oil	310	12-15
5. ††SR. SPORTSMAN	Yamaha KT100S/RLV Box Muffler, YBX/engine clutch/no experts any division	Gas-Oil	360	16-up
6. †YAMAHA KT100S LTD.	Yamaha KT100S/Spec header and pipe/wet or dry engine clutch per Sec. 202.5/no remote carb adjusters/Burris tires only/no experts any division	Gas-Oil	360	16-up
7. YAMAHA KT100S LIGHT	Yamaha KT100S	Gas-Oil	330	16-up
8. YAMAHA KT100S HEAVY	Yamaha KT100S	Gas-Oil	370	16-up
9. 100CC SUPER STK. LIGHT	Yamaha KT100S 100cc Piston Port 100cc Reed and Rotary	Gas-Oil	310 330 350	16-up
10. 100CC SUPER STK. HEAVY	Yamaha KT100S 100cc Piston Port 100cc Reed and Rotary	Gas-Oil	330 350 370	16-up
11.*OPEN	Cubic Centimeter up to 100cc 100+cc - 110cc 110+cc - 120cc 135cc Controlled Stock 120+cc - 130cc 130+cc - 140cc 140+cc - 150cc 150+cc - 160cc	Open*** Gas-Oil Open***	330 340 350 350 360 370 380 390	16-up
12. 200CC STOCK	2x100cc Stock Piston Valve 2x100cc Stock Reed Valve	Gas-Oil	390 430	16-up
13. SUPER SPORTSMAN (SUPER BOX)	Yamaha KT100S/RLV SSX-V Muffler/Burris Tires only/no remote carb adjusters/ wet or dry engine clutch per Sec. 202.5/ no experts any division	Gas-Oil	360	16-up

*Weight declared at sign-in and a color to be assigned for each weight.

† See spec. pipe and header rules at 623.8.

†† See Section 617.21. **Old-style cylinders must add 30 lbs.**

NOTE - DRIVER AGES:

IKF Attained Age 5 – 8 Kid Kart

IKF Competition Age 8 – 11 Jr. I

IKF Competition Age 12 (Option Year) Driver has the option to stay in Junior 1 or move up to Junior 2

IKF Competition Age 13- 15 Junior II

IKF Competition Age 16 (Option Year) Driver has the option to stay in Junior II or move to senior classes

IKF Competition Age 17 Senior classes

Refer to Sec. 104.6 for IKF age policy.

Note: No Open Fuel, all divisions, all classes. Only Acetone may be added to facilitate blending of gas and methanol, and only in quantities necessary to achieve blending. Large amounts not permissible.

~~**Note:** No water cooled engines allowed in 2-Cycle speedway classes.~~

403 4-CYCLE SPEEDWAY NATIONAL CHAMPIONSHIP CLASSES

CLASS	ENGINE TYPE	FUEL	WEIGHT	AGE
1. JUNIOR I LIGHT	5hp Briggs, .440" Blue Restrictor	Methanol	235	8-11
2. JUNIOR I HEAVY	5hp Briggs, .440" Blue Restrictor	Methanol	270	8-11
3. JR I BRIGGS ANIMAL LIGHT	Sec. 716, Rookie Black Restrictor per 700.3.7.4	Methanol	235	8-11
4. JR I BRIGGS ANIMAL HEAVY	Sec. 716, Rookie Black Restrictor per 700.3.7.4	Methanol	270	8-11
5. JUNIOR II LIGHT	5hp Briggs, .530" Red Restrictor	Methanol	285	12-15
6. JUNIOR II HEAVY	5hp Briggs, .530" Red Restrictor	Methanol	320	12-15
7. JR II BRIGGS ANIMAL LIGHT	Sec. 716, Gold Junior Restrictor per 700.3.7.5	Methanol	285	12-15
8. JR II BRIGGS ANIMAL HEAVY	Sec. 716, Gold Junior Restrictor per 700.3.7.5	Methanol	320	12-15
*9. BRIGGS ANIMAL SPORTSMAN	Sec. 716	Methanol	360	16-up
10. BRIGGS ANIMAL LIGHT	Sec. 716	Methanol	320	16-up
11. STOCK LIGHT	5hp Briggs	Methanol	320	16-up
12. STOCK MEDIUM	5hp Briggs	Methanol	345	16-up
13. STOCK HEAVY	5hp Briggs	Methanol	370	16-up
14. BRIGGS LO206 MASTERS (Must be attained age of 35)	Sec. 721	Gas	370	35-up
15. BRIGGS ANIMAL MEDIUM	Sec. 716	Methanol	345	16-up
16. BRIGGS ANIMAL HEAVY	Sec. 716	Methanol	370	16-up
17. BRIGGS ANIMAL BLUE WAZOOM HEAVY	Sec. 720	Methanol	370	16-up

* No senior Duffy winners, any division, from previous days or years allowed to compete.

NOTE - DRIVER AGES:

IKF Attained Age 5 – 8 Kid Kart

IKF Competition Age 8 – 11 Jr. I

IKF Competition Age 12 (Option Year) Driver has the option to stay in Junior 1 or move up to Junior 2

IKF Competition Age 13- 15 Junior II

IKF Competition Age 16 (Option Year) Driver has the option to stay in Junior II or move to senior classes

IKF Competition Age 17 Senior classes

Refer to Sec. 104.6 for IKF age policy.

Note: No axle mounted clutches allowed in any class.

Note: No water-cooled engines allowed in 4-cycle speedway classes.

Note: No front wheel brakes allowed in 4-cycle speedway racing.

404 IKF 2-CYCLE SPEEDWAY/SPEEDWAY MIDGET GRAND NATIONAL SCHEDULE

To be announced

404.1 Schedule of classes may be changed only with prior IKF Board approval.

404.2 No Other Class(es) shall be run during the official Grand National event except as approved by the IKF Board of Directors.

404.2.1 Approved local option classes: To be announced

404.3 At Grand National events, classes with less than 5 entries will not run for a Duffy. See 110.9.

404.4 OFFICIAL SCHEDULE: To be announced

405 IKF 4-CYCLE SPEEDWAY GRAND NATIONAL SCHEDULE

To be announced.

405.1 Schedule of classes may be changed only with prior IKF Board approval.

405.2 No Other Class(es) shall be run during the official Grand National event except as approved by the IKF Board of Directors.

405.2.1 Approved local option classes: To be announced

405.3 At Grand National events, classes with less than 5 entries will not run for a Duffy. See 110.9.

405.4 OFFICIAL SCHEDULE: To be announced

406 SPEEDWAY RACE PROCEDURES

Please refer to Section 110, General Race Procedures, for more information.

406.1 Start-up Clock: When the grid is opened for karts to enter the track, the start-up clock will commence to run. After 90 seconds for singles, 180 seconds for duals or Champ Karts there will be no pushbacks or restarts allowed. The grid area will be closed at the end of the start-up clock period or on the display of the green flag and will remain closed until the race is completed.

406.2 Timing Device Beacons: All timing/trigger beacons must be placed on the outside of the track.

406.3 Scratched Entries: Whenever an entry is scratched, the grid shall be reformed by karts moving straight forward, maintaining their position in pole or outside line.

407 SPEEDWAY RACE FORMAT

407.1 Meeting of the Drivers and Officials: Prior to each race, the Flagman or Race Director shall conduct a meeting of drivers for the discussion and interpretation of the rules and any specific regulations applying to that race. All drivers are required to attend. Any driver failing to attend shall be charged with knowledge of the matter discussed at such meeting as if he had been present.

407.2 Flag Signals: Starter shall use flag signals according to the following code:

Green Flag - Start, course is clear.

Yellow Flag - Caution, reduce speed immediately and maintain your position.

Red Flag - Stop, race is halted.

Black Flag - Stop next lap at pits for consultation.

Black w/orange ball (Meatball Flag) - Stop at pits next lap, you have mechanical problems.

Royal Blue with Orange diagonal stripe - The lapping driver is attempting to pass, give him consideration.

White Flag - The leader has commenced his last lap.

Checkered Flag - You have completed the race.

407.3 Method of Starting: Unless otherwise specified on the entry form, all races, heats or qualification trials shall begin with a flying start. A flying start shall occur, from any point behind the line, when the karts are in continuous movement up to and across the starting line. The initial start attempt shall be made with the karts formed into two lines.

407.4 Start: All drivers must form in their proper position on the parade or pace laps. Parade laps start when the start-up clock has elapsed. Drivers must remain in position unless mechanical difficulty occurs. In the event a driver drops out due to mechanical difficulty, the balance of the field will move straight ahead. After the original start-up clock has elapsed, or a green flag thrown, there will be no working on the kart.

407.4.1 Drivers dropping out of the parade or pace laps will not be considered cause for delaying the start. They must be left behind at the official start.

407.4.2 With the approval of the flagman, the pole kart will set the pace for the parade and pace laps

407.4.3 Drivers cannot raise their hands and postpone a start.

407.4.4 After the green flag and/or green light is displayed, all drivers may pass. If, in the opinion of the flagman, a driver flagrantly improves his position without cause, he will be penalized. The flagman's decision to penalize in accordance with this rule is not protestable.

407.5 Moment of Starting: Starting of the race will be on the front straight away by the flagman and the race shall begin at the moment when the green flag/green light is displayed.

407.6 Method of Scoring: A kart will be officially credited with a lap only when its front wheels cross the start/finish line after completing one entire lap of the course.

407.7 Yellow Caution Period: The Flagman or Race Director is empowered to call at any time for any reason a yellow caution period. Their decision to call, not to call, or to end a yellow caution period is not protestable.

407.7.1 Should a race be yellow flagged, prior to all starting karts completing one lap, no race laps will be officially credited. Total laps (see 407.10.2), for the 40 lap (30 laps for Juniors) count will start counting with the initial green signal. A complete restart will be conducted using the original starting lineup in effect after the original start up clock expired. However, the Race Director may alter the restart order by assessing penalties upon drivers that he feels have contributed to the yellow flag period.

407.7.2 Should a race be yellow flagged after all karts have completed one lap, person(s) causing the yellow flag will be put to the back. If no fault can be determined, no penalty will be assessed. All other karts will resume racing at the end of the yellow period in the order they were scored on the last complete lap before the yellow.

407.7.3 The yellow caution period starts with the display of the yellow flag and/or yellow lights and ends with the display of the green flag and/or green lights.

407.7.4 No conditional yellows allowed. Any yellow flag displayed on the track at anytime will result in a full course yellow.

407.7.5 Following a yellow caution flag, any karts that have been lapped will start at the back of the pack.

407.7.6 In 4 Cycle classes a kart may be stopped on the track by a Race Official. Should a competitor's motor cease running after kart is stopped by an Official, the competitor shall have 90 seconds to restart his motor.

407.8 Black Flags, Stop for Consultation: The Flagman or Race Director is empowered to order any driver at any time to stop at the pits for consultation by displaying the black flag.

407.8.1 The Race Director or Starter may order a driver to stop at the pits if, in his non protestable opinion, a condition on the kart exists which could create a safety hazard to the driver or to other competitors.

This decision may be based on, but is not limited to: mechanical conditions, leaking fluids, inoperative exhaust system, bodywork or safety equipment missing from the driver or kart. A driver receiving a mechanical black flag shall receive his appropriate finish position.

407.8.2 A driver may be ordered to stop at the pits, if in the opinion of the Flagman or Race Director, the driver has flagrantly violated the rules or is driving in a reckless, improper or unsportsmanlike manner.

407.8.3 The Flagman or Race Director's decision to order or not to order a driver to stop at the pits is not protestable.

407.8.4 Drivers who receive the black flag will no longer be scored.

407.8.5 A person receiving the black flag for flagrant driving misconduct in a heat will receive no points toward the feature line-up. A person receiving a black flag in the feature will receive last place points for Regional/Series.

407.9 Red Flag: When the red flag is displayed by the Starter, it signifies the stopping of a race immediately. If safe, drivers will proceed very slowly to the starting line, or as instructed, and stop. There shall be no working on karts during the red flag period.

407.9.1 Should a race be red flagged prior to all starting karts completing one lap, no laps will be officially credited, and a complete restart will be conducted using the original starting line-up in effect after the original start up clock expired. However, the Race Director may alter the restart order by assessing penalties upon drivers who he feels may have contributed to the red flag.

407.9.2 Should a race be stopped anytime following the lap completion as set in 407.9.1, the last official race lap will be the last completely scored lap in which the race leader and all successive karts running on the course, excluding karts lapped during the lap, were scored at the start/finish line prior to the display of the red flag. Within this lap, each kart will receive credit for its more recently scored lap.

407.9.3 In the event of a race continuation other than as set out in 407.9.1, the karts will be lined up in single file order beginning with the race leader. The restart order of the remaining karts will be determined by their physical sequence at the start/finish line during the last officially scored lap as determined in 407.9.2. Karts that have been lapped will start at the back of the pack.

407.9.4 When a red flag is displayed stopping the race, karts causing the red flag will not restart the race and will receive points for that heat or feature where they dropped out. Competitors disqualified for

flagrant driving misconduct during red flag situations will receive no points. The decision as to whether a kart caused an accident is not protestable. If no fault can be determined, no penalty will be assessed.

407.9.5 If the red flag has been thrown necessitating a restart, a kart that previously dropped out prior to the red flag cannot restart the race.

407.9.6 The decision to red flag a race is not protestable.

407.10 Race Completion:

407.10.1 A race will be considered complete at the moment the checkered flag is displayed to the leading kart. The race competition will be considered complete when, after this moment, each kart still running on the course has, in the opinion of the Flagman or Race Director, had safe and sufficient opportunity to return to start/finish line. At this time, scoring will cease and the event is completed. The Flagman or Race Director's decision in this matter is not protestable.

407.10.2 The white flag will be displayed to the race leader as he starts his last lap and will continue to be displayed to each successive kart until the last kart on the lead lap as received the white flag. If there is a yellow or red flag thrown during the white flag lap, the race will be restarted for a green/white/checkered finish. In the event a race has completed 40 laps (Juniors 30 laps) on the track, the white flag will be displayed on lap 41 (Juniors lap 31) and checkered on lap 42 (Juniors lap 32). If a yellow flag is displayed after lap 40 (Juniors lap 30) scoring will revert to the last completed green flag lap and will be the official finish order for that race. Person(s) causing the yellow flag will be scored at the back. If no fault can be assessed, no penalty will be assessed.

If laps are incorrectly counted and the leader is not shown the checkered flag on lap 42 (lap 32 for Juniors), the Race Director and Chief Scorer will reconstruct the race order as of lap 42 and the leader at that point will be the winner.

407.10.3 All karts must complete the race under self generated momentum, that is, they may not be pushed to the finish line by another competitor.

407.10.4 Final standings will be determined by the sequence in which the karts completed the scheduled distance. Karts not completing the scheduled distance will be ranked in order by total laps completed and sequence of completion. Regional points are awarded accordingly.

407.10.5 If a race is stopped by the use of the red flag and is ruled complete, final standings will be determined by ranking all karts in order by total laps completed and sequence of completion through the last official race lap. Points will be awarded as the entrants drop from competition with the first out receiving the lowest number of points and so on.

407.10.6 If a participant is DQ'd in tech, everyone finishing behind the participant DQ'd will move up in the order of the final finish.

408 SPEEDWAY SCORING

The standard line-up and scoring procedure for all IKF Speedway events shall be as follows: draw for 1st heat, invert that draw for 2nd heat line-up, line-up the feature/final 3rd heat by a combination of the points accumulated in the first two heats. The class winner shall be the winner of the Feature/Final/Main.

Recommended number of laps are:

Based on 10 Karts/Heat

Adults:

Heats 10
 Consi 12
 Semi 15
 Main 20

Juniors:

Heats 10
 Consi 10
 Semi 12
 Main 15

408.1 Draw: Participants will draw from a suitable container that will ensure chance. Numbers will have no duplicates and will not be returned to the draw.

Drawn numbers will be used to set up heats according to the following chart: This chart is a device for dividing karts into heats depending upon the number of entries. This is a recommended procedure for local and regional races and mandatory for Grand National Speedway events.

The goal is to have an even number of karts in each heat as often as possible. This will allow karts to grid on the inside in one heat and on the outside in one heat:

No. of Karts	Heats
10	6-4
11	6-5
12	6-6
13	6-7
14	8-6
15	8-7
16	8-8
17	8-9
18	10-8
19	10-9
20	10-10
21	8-6-7
22	8-8-6
23	8-8-7
24	8-8-8
25	8-8-9
26	10-8-8
27	10-8-9
28	10-10-8
29	10-10-9
30	10-10-10
31	8-8-8-7
32	8-8-8-8
33	8-8-8-9
34	10-8-8-8
35	10-8-8-9
36	10-10-8-8
37	10-10-8-9
38	10-10-10-8
39	10-10-10-9

No. of Karts	Heats
40	10-10-10-10
41	8-8-8-8-9
42	10-8-8-8-8
43	10-8-8-8-9
44	10-10-8-8-8
45	10-10-8-8-9
46	10-10-10-8-8
47	10-10-10-8-9
48	8-8-8-8-8-8
49	10-10-10-10-9
50	10-10-10-10-10
51	10-8-8-8-8-9
52	10-10-8-8-8-8
53	10-10-8-8-8-9
54	10-10-10-8-8-8
55	10-10-10-8-8-9
56	8-8-8-8-8-8-8
57	10-10-10-10-8-9
58	10-10-10-10-10-8
59	10-10-10-10-10-9
60	10-10-10-10-10-10
61	10-10-8-8-8-8-8-9
62	10-10-10-8-8-8-8-8
63	10-10-10-8-8-8-8-9
64	8-8-8-8-8-8-8-8
65	10-10-10-10-8-8-9
66	10-10-10-10-10-8-8
67	10-10-10-10-10-8-9
68	10-10-10-10-10-10-8
69	10-10-10-10-10-10-9

408.2 Flights: If the number of entrants exceeds the number of vehicles that can safely run at one time, then it will become necessary to run more than one (1) flight of each heat. The flight position will be determined by the low draw number entrant being placed on the pole for flight "A". For example, if two (2) flights are to be used

then the third low draw number entrant will be outside pole position in flight "A", and the fourth low draw number entrant will be the outside pole position in flight "B". This procedure is continued until all entrants are assigned heat and flight positions. The entrants will compete in the same flights for each heat.

408.3 Heat races: Each competitor will compete in 2 heats in his flight. The draw number is used as the starting order for heat 1. The starting order is inverted for heat 2. (Points will be scored on the basis of 100 points for 1st, 99 points for 2nd, 98 points for 3rd, etc.)

In Heat races a kart receiving:

1. Mechanical black flag will receive finish points in the order the kart drops out of the race.
2. DNS (Did Not Start) will receive 0 points
3. DQ for post heat tech will receive 0 points for that heat only.
4. DQ for driving misconduct will receive 0 points for that heat only.

408.4 Main, Semi-Mains, Consolation: When the heat races are complete, the points scored will determine the entrants' position in the main, semi-main and consolation races. All point ties will be decided by the low draw number. Highest point scorer will go to the pole, the second highest outside front row, etc. For example, assume 20 is the maximum number of karts that can safely compete at one time. The highest 18 point scorers from the heat races will automatically make the Main event. The next highest point scorers, 19 through 39, are in the Semi-main event. 40 through 60 are in the Consolation race.

The first two finishers in the consolation race start the semi-main in the last two positions. The first two finishers in the semi-main start the Main in the last two positions.

408.5 The final order of finish for Regional points shall be determined thus:

1. Main event order of final finish
2. Karts receiving mechanical black flag in Main in order
3. Order of finish in Semi-Main
4. Karts receiving mechanical black flag in Semi-Main
5. Order of finish in Consolation race
6. Karts receiving mechanical black flag in Consolation race
7. Any kart taking green flag at any time in the event
8. Karts DQ 'd in post race tech from Main, Semi-Main, Consolation, in order
9. Karts DQ'd for driving misconduct in Main
10. Any kart that has passed pre tech, but does not complete any laps at any time during the event, shall be marked DNR (Did not race) on the scoring sheets and shall receive a punch but no Regional Championship points.

408.6 In The Event of Rain:

408.6.1 If the event is rained out, the entrant shall receive a punch (race credit) if they completed pre-tech.

408.6.2 In any Speedway event that is rained out after sign in and before the first set of heats are completed, the competitors will receive 200 points plus the number of entries towards the Regional points program. If all classes complete one set of heat races, normal points will be awarded. Any class that completes both sets of heats will be scored as such even if all classes do not complete the second set.

410 SPEEDWAY MIDGET RULES (KAGE KART)

Speedway Race Procedures and Race Format apply.

Speedway Midget Division Purpose:

Within this set of rules, the items of the Speedway Midget Chassis that have been determined to control the competitiveness of the kart chassis are strictly controlled. Furthermore, any change, other than safety, to this set of rules shall not be forthcoming.

The primary intent of the IKF Spec Speedway Midget class is to help further ensure the safety of the competitor in the event of an on track mishap. Secondary intent is to equalize the competitiveness of the chassis, control escalating costs, and provide special emphasis on spectator appeal. The karts competing in the class may be built by any competitor or manufacturer. The kart, as built, must comply with all the guidelines set forth in this rule book.

410.1 Chassis Specifications: *Please refer to Section 110, General Race Procedures, for more information. See diagram at end of Section 410.*

Frame must be similar in design and appearance to a down tube sprint car. Total dimensions of the kart may not exceed a length of 98" and width of 54" at any point. Maximum kart height 72", measured from the highest point on the wing 90° perpendicular to that point on the ground. Kart must provide a minimum of 3" between top of driver's helmet and the top of roll cage (Bolt-on or weld-on cage extensions will be acceptable to maintain these clearances. Tubing used must be same diameter and material as main frame tubing). The driver must be belted in and race ready for this measurement. Main frame must be constructed of minimum .062 wall thickness, one inch OD 1020 electric weld mild steel tubing or material of equal or greater strength, minimum 1" OD round tubing only, with the following exceptions:

410.1.1 Nerfs: 3/4" OD minimum.

410.1.2 Front Bumper: 3/4" OD minimum.

410.1.3 Rear Bumper: 3/4" OD minimum.

All 3/4" OD will be a minimum of .065 wall thickness, cold rolled steel tubing or other material of equal or greater strength.

410.1.4 Motor mount 1.125" OD standard American mounts suggested. Mount may be on left, right, or both sides.

410.1.5 Suspension: Any steel body coil over shock allowed; travel unlimited. All suspension part must be keyed or safety wired. Place steel washer on each side of rubber grommet on both ends of shock to prevent pull-out.

410.1.6 Rear axle must be one piece, no differentials.

410.1.7 Front axle must have a positive stop to control upward movement if legs are over front axle.

410.1.8 Must have "A" frame behind driver's seat. See diagram. Main frame must be welded, no slip joints.

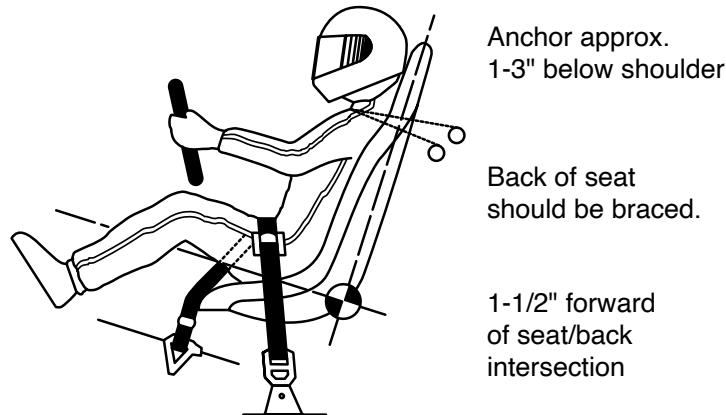
410.1.9 Front bumper must be one of two designs, a double loop design with top bar a minimum of 12" off the ground with a 4" minimum loop or a single loop, sprint car style front bumper with comensurate dimensions.

410.1.10 Rear bumper must be double rail design with top nerf bar a minimum of 12" off the ground when kart is race ready. Extra bars are recommended for motor protection. See diagram.

410.1.11 Nerf bars must be double rail design with top nerf bar a minimum of 12" off the ground. Extra bars are recommended for motor protection.

410.1.12 Wheelbase: Wheelbase maximum of 63" and minimum 42" measured from center to center at the outside end of the rear axle to the outside end of the front spindle.

410.2 Seat : Must be high back aluminum seat



410.3 Safety Equipment Drivers must be able to exit kart without additional assistance.

410.3.1 Five point seat restraint system required.

410.3.2 Commercially manufactured arm restraints only.

410.3.3 Commercially manufactured seat belts only.

410.3.4 Fire resistant suit required. A full fire resistant suit with a SFI 3.2A1 or better rating is required. Undergarments of Nomex or equivalent material are recommended.

Installation Tips

When measuring your car for lap belts allow for a minimum of 3" pull tab on each side as a safety margin. Take the distance from mounting point to mounting point (measured across the lap) and add 6". Compare this to the belt length range. The most desirable lap belt mounting point is 1-1/2" forward of the seat and back rest intersection.

Shoulder harness lengths are based on the distance from the adjuster (halfway between the collarbone and chest nipple - approximately underarm level) to the mounting point. The shorter the better. Once the harness is installed the adjuster should be in the proper position to avoid injury - take up any slack back by the mounting point. The shoulder harness should be anchored from behind the driver and above a line down toward the shoulder point at an angle of 40 degrees to horizontal (usually between 1-2" below shoulder line.)

The crotch strap should be installed at an angle parallel to the body line.

Do not allow any adjustment buckles to ride on seat. Maintain a minimum of 1-1/2" between seat and buckles.

Any mounting brackets should be installed at the same angle as the webbing will be pulled under load.

410.3.5 Must have right side cage net. See Sect. 410.8.

410.4 Fuel System:

410.4.1 Mandatory fuel cell located between the main frame rails. One gallon maximum capacity. Fuel cell allowed in NMMA (National Modified Midget Association) is allowed in Speedway Midget classes, this cell is SFI certifiable. Any SFI certifiable fuel cell allowed. Maximum two (2) fuel cells per kart (dual engines). Mandatory to put bulk head fitting in Jaz Part #230-001-01 cell to replace existing hose fitting or purchase #250-001-01 complete cell.

410.4.2 No pressurized fuel tanks.

410.5 Wheels/Tires: Shall be void of any defects. Max. number of 4 wheels.

410.5.1 Rear tires: Any 5, 6, or 8 inch tire. Asphalt track: any tire.

410.5.2 Front tires: Any 5, 6, or 8 inch tire. Asphalt track: any tire.

410.6 Wing requirements

410.6.1 Top wing required in all classes. Flat part of wing must have a surface area of 6 square feet minimum, 9 square feet maximum. Length and width dimension will not vary 33%.

410.6.2 Side panels are optional, but must not obstruct driver's vision.

410.6.3 No adjustment while kart is in motion.

410.6.4 Nose wing optional.

410.7 Steering Specifications:

410.7.1 The steering system shall be direct acting and of suitable design for maximum safety. Rack and Pinion type systems are approved. Steering designs using a pittman arm must be constructed so arm may not rotate over center and cause reverse steering. All collars and other devices used on the steering column shaft shall be secured to prevent possible loss. All bolts used in the steering shall be grade 5 or better and shall be 5/16" minimum diameter. All steering assembly bolts and nuts, including spindles and king pins, shall be safety wired or cotter keyed. All rod ends shall have universal type swivel joints and jam nuts. The steering shaft shall be solid steel, minimum diameter 5/8". Shaft must be equal to or greater in strength than cold rolled steel.

410.8 Body: Must be complete. This includes hood side panels, floor pan, and tail. May be built of aluminum, fiberglass, or non-splintering plastic. All hood styles must have a "stock car" style window net of at least 3/4" wide nylon webbing to restrain lower extremities in case of upset. Nylon webbing must be installed inside kart bodywork.

410.9 Brakes: All karts shall have pedal operated brakes, operating in such a manner to brake both rear wheels equally and adequately. No scrub type brakes permitted. Dual brakes are recommended for karts entered in classes over 100cc's. Dual brakes consist of two individual braking systems on separate brake discs or drums. All brake caliper bolts, master cylinder bolts, and master cylinder roll pins must be cotter pinned or safety wired so that bolt cannot unscrew, allowing the brake puck to fall out.

410.10 Numbers: Must be of contrasting colors, at least 10" tall. They should be located on the hood, both sides of tail, and both sides of wing.

410.11 Direct Drive not permissible

410.12 Drivers will be responsible to see that their karts have no sharp edges or protrusions that will injure a competitor or themselves.

410.13 All Speedway Midget races will be run per IKF Speedway format and rules.

410.14 Classes:

410.14.1 Junior Class: 8-15 years old

CLASS	ENGINE	WEIGHT
410.14.1.1 Junior Midget	Yamaha KT100S, RLV SSX or SSX-V box muffler, engine mounted clutch only	425 lbs

410.14.2 Adult 2-Cycle: 16 years old and up.

CLASS	ENGINE	WEIGHT
410.14.2.1 Super Stock	Yamaha KT100S	450 lbs
	100cc Piston Port	470 lbs
	100cc Reed Valves	490 lbs
	135cc Controlled stock	530 lbs
410.14.2.2 Open 2-Cycle	One open motor 100-160cc	480 lbs
	2x100cc Stk. Yamaha KT100S	500 lbs
	2x100cc Stk. Piston Port	540 lbs
	2x100cc Stk. Reed/Rotary Valves	560 lbs
	Stock 250cc Shifter*	560 lbs
*Entrant must provide engine documents with technical specifications to the Tech Director if requested.		

NOTE - DRIVER AGES:

IKF Attained Age 5 – 8 Kid Kart

IKF Competition Age 8 – 11 Jr. I

IKF Competition Age 12 (Option Year) Driver has the option to stay in Junior 1 or move up to Junior 2

IKF Competition Age 13- 15 Junior II

IKF Competition Age 16 (Option Year) Driver has the option to stay in Junior II or move to senior classes

IKF Competition Age 17 Senior classes

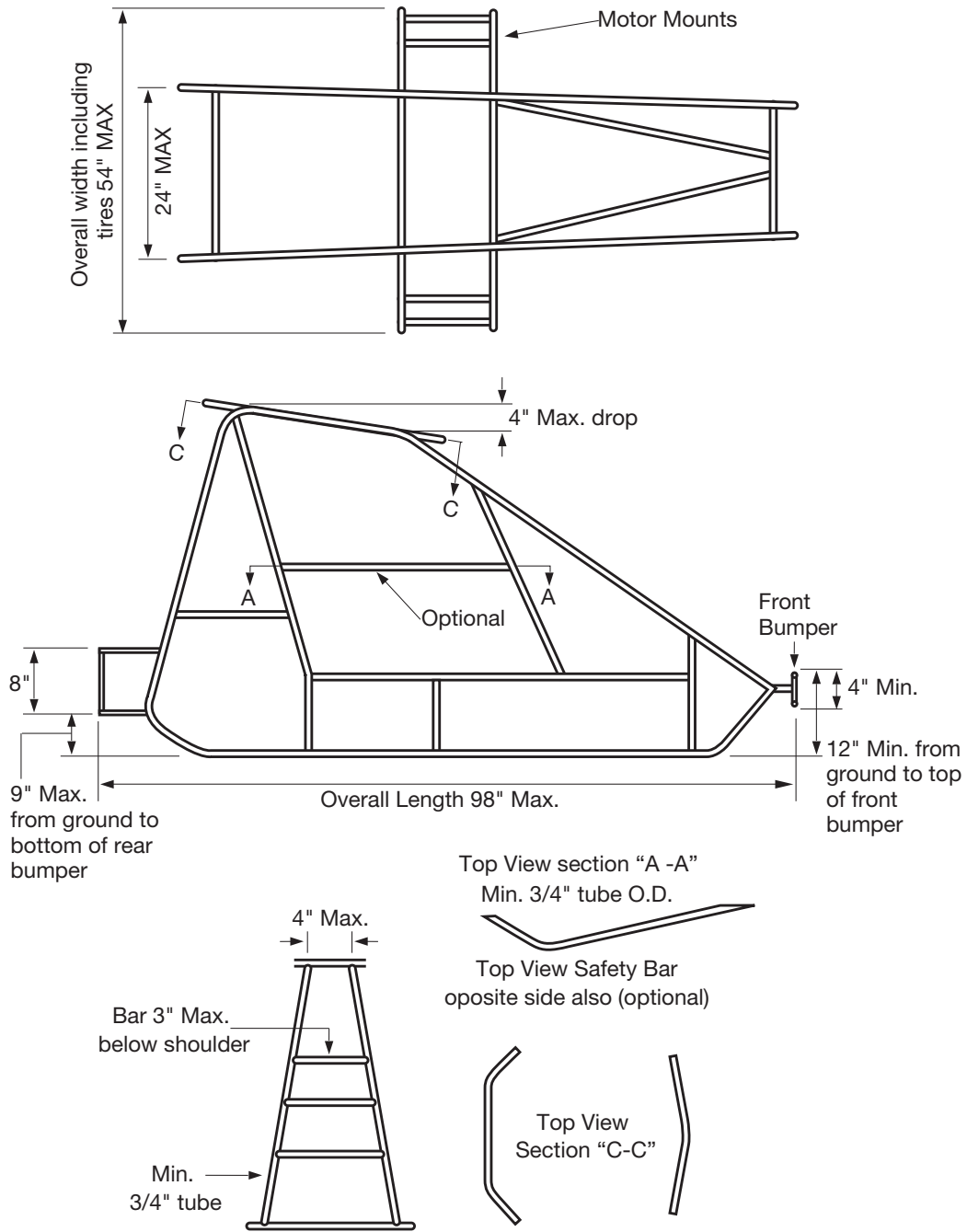
Refer to Sec. 104.6 for IKF age policy.

410.15 Fuel: Gas and Oil. Open motor in 410.14.2.2 may run Methanol and oil.

410.16 Kill Switch: Mandatory kill switch location near intersection of hood and roll bar.

410.17 Adjustments: No part of the kart chassis may be adjusted while the kart is in motion.

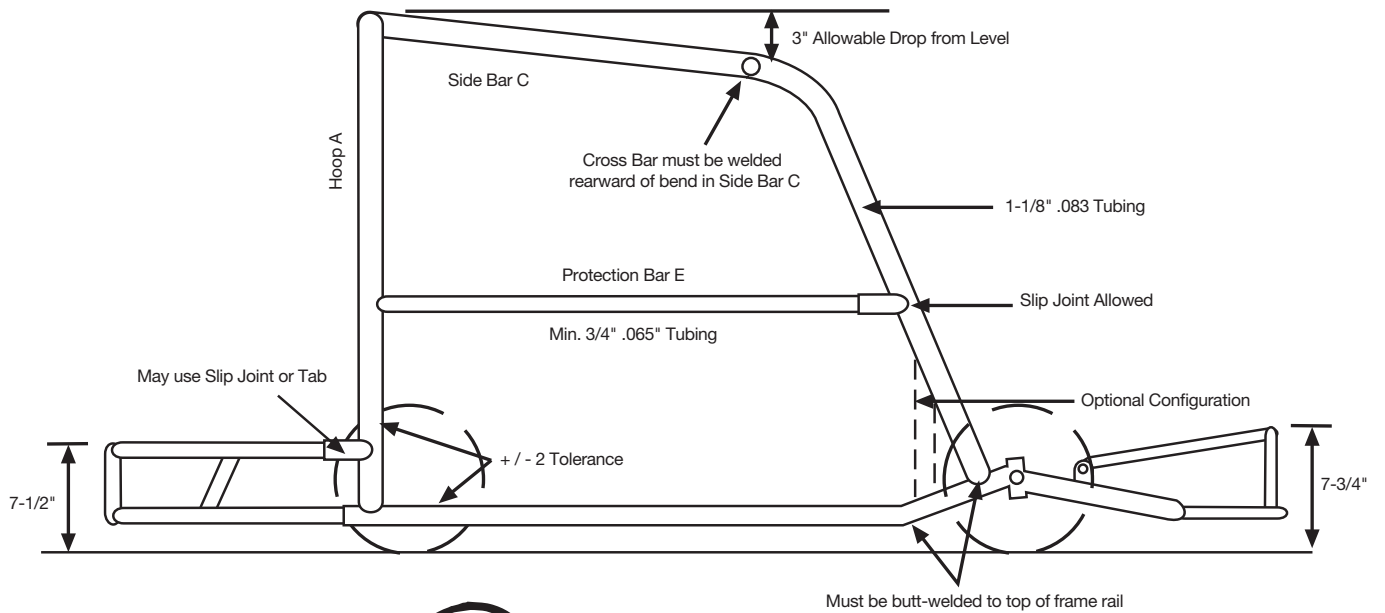
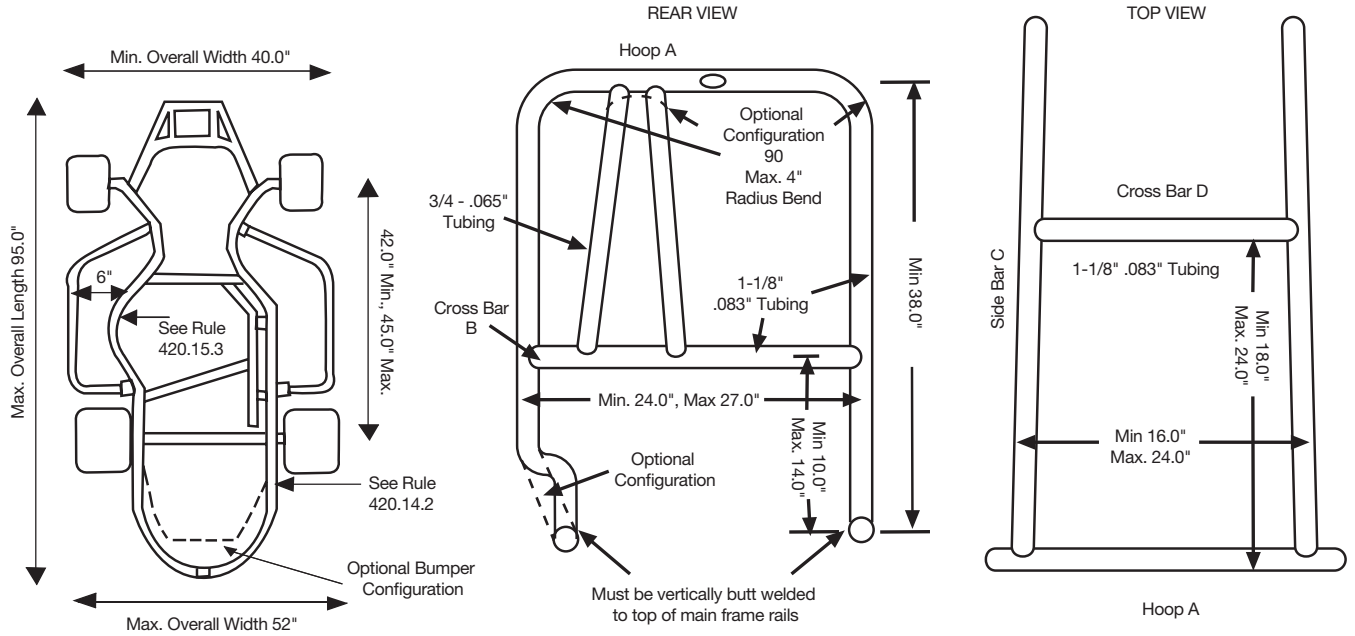
IKF Speedway Midget Frame (Suggestions only, designs may vary by manufacturer)



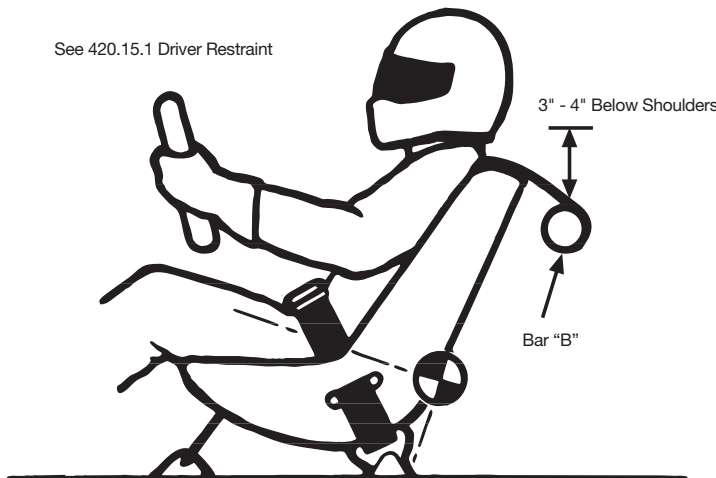
411 IKF SPEEDWAY MIDGET GRAND NATIONAL SCHEDULE

(See 2-Cycle Speedway Grand National Schedule, sect. 404)

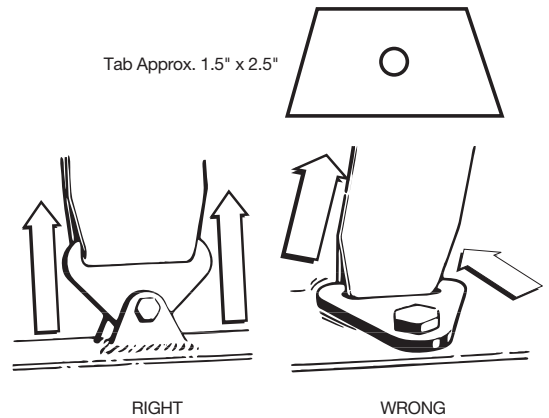
CHAMP KART SPECIFICATIONS DIAGRAM



See 420.15.1 Driver Restraint



Tab Approx. 1.5" x 2.5"



420 SPEEDWAY CHAMP KART CHASSIS SPECIFICATIONS

For specifications, Champ Kart Specifications Diagram.

420.1 FRAME: Main frame rails must be constructed of minimum 1 1/8" diameter, .083" wall thickness mild steel, round tubing.

NOTE: Tubular steel construction technology is the only type of frame design method currently considered to be within the spirit and intent of the rules for all classes, in all Divisions. The Board of Trustees shall, via an appointed Competition Committee, maintain an open policy to investigate examples of monocoque or unit-type frame design and/or non-traditional construction materials utilization on the basis of safety, availability and cost impact upon the sport, making recommendations as necessary.

420.2 WHEELBASE: shall be minimum of 42.0" and maximum of 45.0". Wheelbase is measured from center to center at the outside end of the rear axle to the outside end of the front spindle.

420.3 MAXIMUM OVERALL WIDTH: shall be 52.0" measured outside tire to outside tire.

420.4 MINIMUM OVERALL WIDTH: shall be 40.0" measured outside tire to outside tire.

420.5 OVERALL MAXIMUM LENGTH: shall be 95.0".

420.6 ROLL-CAGE: Full Roll cage of four point configuration is mandatory. Roll cage must be constructed of 1 1/8" diameter, .083" wall thickness D.O.M. mild steel, or better grade tubing. For configuration and dimensions on roll cage, **Champ Kart Specifications Diagram**. Welding attachment points to main frame rails must be in areas as depicted in top view of kart. Rear Hoop A must be one continuous tube with either three or four bends depicted in drawing Rear Hoop A. Right upright must be butt-welded vertically to the main frame rail; left side must be butt-welded to the main frame rail not more than 45° to the top of the main frame rail. Rear Hoop A must be attached in the area from behind the bearing hanger to the end of main frame rails. "Tolerances of + or - 2 degrees will be allowed on the vertical uprights of Hoop A." Rear cross bar B must be 1 1/8" diameter .083" thickness D.O.M. mild steel, or better grade tubing. It must be butt welded horizontally and laterally between the two vertical uprights of hoop A. Height of rear cross bar B will be a minimum of 10.0" and a maximum of 14.0" from center line of main frame rails. Rears support braces between top of hoop A and cross bar B are mandatory. They must be a minimum of 3/4" diameter .065" wall mild steel tubing. They may be two straight bars welded to bar B and the bottom of hoop A. They may be of one piece configuration with approximately a 180 degree bend welded to the bottom of hoop A and the bottom welded to the top of cross bar B. The width of the bar and location must be in a position so the drivers helmet will be protected from coming out the rear of the roll-cage. Sidebars C must be one continuous tube of 1 1/8" diameter .083" wall thickness D.O.M. mild steel, or better grade tubing. The distance between sidebars C must be a minimum of 16" and a maximum of 24". It must be vertically butt welded to main frame rails in an area 6" on either side of kingpin as shown on drawing. It must be butt welded to the horizontal cross bar of hoop A as shown. "Side rail can drop 3.0" from 38" rear measurement, when measured at a point 18.0" from hoop A." Side rail C can have no other bends other than those shown in drawing. Front cross bar D must be 1 1/8" diameter, .083" mild steel, or better grade tubing. It must be butt welded horizontally and laterally between the two sides of side bar C. "Location of front bar D is a minimum of 18.0" and a maximum of 24.0" forward from the top of rear bar of hoop A." It must be welded rearward of the front bend in side bar C.

420.6.1 ROLL-CAGE NOTES: Drivers head may not protrude above hoop A, side bar C, or front bar D. Extra gussets welded in the top corners of roll cage are acceptable. Any other attachments to the roll cage must be approved by safety tech personnel with safety being the determining factor.

420.6.2 ROLL-CAGE CORNERS: Roll-cage "corners" and/or structure extremities must be of a rounded design. Square, triangulated or sharp-ended tube junctions on the upper "hoop" portion of the roll-cage structure are not acceptable (see Champ Kart Specifications diagram at end of this Section).

420.6.3 REAR UPRIGHTS: Cross bar B has a two fold purpose. To lend strength to the rear hoop A and to be an anchoring point for the shoulder harness of driver restraints. The location of this bar if at all possible should be below the drivers shoulders when seated in a normal position.

420.6.4 SIDE PROTECTION: It is mandatory that side-protection bars E, (See Champ Kart Specifications Diagram) extend longitudinally on both sides of the roll-cage structure from front roll-cage upright to rear roll-cage upright, located at a height approximately between the driver's elbow and shoulder when driver is seated normally.

Side protection bars must weld directly to one of the roll-cage uprights (front or rear), however; opposite end may have a slip-joint connection.

Slip-joint must be located directly at end of side protection bar/upright junction and be designed to keep bar securely captive.

The side-protection bars or braces are the only bars that can be slip jointed on the champ kart frame and roll cage.

420.7 WHEEL AND TIRES

420.7.1 WHEELS: Material optional, but must be of proven design capable of maintaining tire bead seal in competition conditions. Maximum 6" diameter. No "G-rings" or lateral-supported wheels allowed.

420.7.3 WHEEL WEIGHTS: Double back tape balancing weights are not to exceed 1 oz. weight each. Additional security is suggested when utilizing stick-on weights. A lack of security is not grounds for disqualification.

420.7.4 MAXIMUM WIDTH: Maximum width of any tire and wheel combination is 10 3/8".

420.8 AXLES AND HUBS

420.8.1 WHEEL HUBS: All wheel hubs, both front and rear, must be constructed of metallic materials.

420.8.2 WHEEL BEARINGS: Ground-ball or roller-type bearings only. Split race bearings are not acceptable. Wheel bearings must be adjusted so there is no excessive wheel play.

420.8.3 AXLE NUTS AND FASTENERS: Front axle nuts must be cotter-keyed and rear must be safety wired, cotter-keyed or snap-ringed. Self-clamping wheels may utilize snap-rings instead of nuts. Berry clips or circlip-type safety fasteners ARE ALLOWED in place of safety wire or cotter pins where applicable. The use of castle-nuts is suggested. Bolts must be keyed in such a manner to prevent any movement of bolt or nut without key removal.

420.8.4 REAR AXLE ASSEMBLY: Axles may be solid or tubular of one-piece design, minimum diameter is 25mm (25.4 mm = 1.0"). Maximum axle diameter is 1.375". Both driving wheels must be locked to the rear axle with a "live" axle design. Snap rings or similar fasteners are required at each end of rear axle. Axle stiffeners are allowed as long as they are secured by cotter pin, through-bolt or circlip.

420.8.5 Front spindle axle and rear axle may not protrude beyond outside of rim and tire.

420.9 STEERING AND STEERING SHAFT SPECIFICATIONS

420.9.1 STEERING GENERAL: Must be of direct, mechanical type. All steering assembly bolts and nuts, including spindle bolts, must be cotter-keyed and/or safety wired. All bolts will be minimum 14,000 lb. tensile strength and be minimum 1/4" diameter, and at least Grade 5 or US Mark 3 rating. All rod ends must have universal type swivel joints.

NOTE: Any fastener (nut on bolt, etc.) of a component that would enable movement of or adjustment of spindle(s), such as for castor, camber, etc., must be drilled for and utilize either a cotter pin or safety wire.

420.9.2 STEERING SHAFT: Steering shaft must be one-piece with no extensions.

420.9.3 SOLID SHAFT: Minimum .625" diameter cold-rolled steel.

420.9.4 STEERING WHEEL: Quick-release type steering wheel is MANDATORY. May be of splined-shaft or hexagonal design. Attachment bolts must be safety wired.

420.9.5 TILLER STEERING: Tiller/vertical shaft steering systems are not allowed. No rack and pinion steering allowed.

420.10 BRAKES

420.10.1 BRAKES GENERAL: All karts must have brakes working in such a manner to at minimum, brake both rear wheels equally and adequately. All bolts and nuts must be cotter-keyed in such a way to prevent the nut from moving. Brake pedal must be secured to the kart with safety wire or cotter keys. No scrub or band-type brakes allowed. Master cylinder actuating rod or cable must be .250" diameter steel or equal quality cable, with positive fasteners at each end.

420.10.2 DUAL BRAKE SYSTEMS: Dual braking systems (front and rear) are required for some classes. When used, these systems will consist of 2 independent brake systems, operated by separate master cylinders. One system shall be fully operational if either front or rear system fails; i.e., if bias control is used, it must allow proper operation of the remaining system should either system fail, etc.

NOTE: Front wheel braking systems are not allowed in 4-Cycle Champ Kart classes.

420.10.3 BRAKE MOUNTING: All master cylinder and caliper mounting bolts and master cylinder roll pins are to be cotter-pinned or safety wired in such a manner that they cannot be loosened without removal of the cotter pins or safety wire. Nylock-style nuts used to hold the brake disk or drum to their hubs IS PROHIBITED. Use of steel locking nuts or drilled bolts with castellated nuts, properly pinned, are the only acceptable fastener for disk or drums.

420.10.4 PAD MOUNTING: Since most competition karts have brake pads secured by countersunk bolts, safety wiring is not feasible. Each karter should monitor proper tightness, and use appropriate thread locking substance to prevent loss of this hardware.

420.10.5 CONNECTIONS AND ROUTING: Hydraulic brake connections must be tight and free of any visible leaks. All brake lines should be safely routed to prevent any possibility of being rubbed through or pulled loose while kart is in motion.

420.10.6 BRAKE COMPONENTS: Traditional type brake components only. No carbon fiber components, etc.

420.11 DRIVE-LINE COMPONENTS

420.11.1 CLUTCH: Dry-type engine clutch is mandatory.

420.11.2 CHAIN GUARDS: A chain guard designed to retain a broken chain from reaching the driver is mandatory

420.11.3 TRANSMISSIONS AND TORQUE CONVERTERS: No transmission, gearbox or other device which permits a change of gear/sprocket ratios while the vehicle is in motion is allowed. Torque converters are not allowed. Jack shafts not allowed; must be on unaltered crankshaft.

420.11.4 EXPOSED SPROCKET: Karts starting a race or practice which are equipped with a sprocket hub not being used MUST NOT have an exposed sprocket mounted in any manor. Sprocket must be removed.

420.11.5 CHAIN OILER: Chain oilers are prohibited.

420.12 FUEL SYSTEM

420.12.1 FUEL TANK: Fuel cell recommended but not mandatory. If tank is inside drivers compartment it must be vented to the outside of driver's compartment, and a check valve must be in place to prevent fuel from spilling in case of accident. If tank other than fuel cell is used, tank must have only one vent, with check valve, attached directly to the fuel tank cap. Stock Briggs fuel tank, mounted outside driver's compartment may run with stock cap intact.

420.12.2 FUEL SYSTEM: No pressurized fuel systems are allowed. No axle or electric fuel pumps allowed. Must be pulse-driven fuel pump.

420.12.3 FUEL LINES: Fuel lines must be safety wrapped at all connecting points.

420.12.4 HEADER PIPE: Header must extend beyond the fuel tank.

420.13 BODY COMPONENTS

420.13.1 BODY: A full, midget/sprint-type, open-wheel body is mandatory. Entire cockpit area will be open as viewed from above. Rounded, compound curve body components consisting, at minimum of nose/cowl section. Tail section is optional. Flat and angular body components with non-rounded edges are not acceptable. Body components must be located within area defined by vertical inner surfaces of tires. Only flat style side panels or standard number panels are allowed to be attached to side nerf bars.

420.13.2 WINGS: No wings, spoilers or air-channeling devices are acceptable.

420.13.3 BODYWORK MATERIAL: Fiberglass or similar material is acceptable for construction of bodywork.

420.13.4 BODYWORK GUIDELINE: Bodywork will be contained approximately within an area defined by lines within the inner tire surfaces and within the front and rear bumpers.

420.13.5 BODYWORK COMPONENTS: Body components may not be adjustable while kart is in motion.

All body components must be securely attached to kart frame.

All body components shall be painted or of a colorful gel-coat type finish. A number easily readable for scoring purposes shall be included, at minimum, on nose and both sides of tail surfaces. A number panel may be included on the roll-cage structure providing it does not interfere with the normal vision field of the driver.

420.13.6 WINDSHIELD: A clear windshield constructed of Plexiglas-type material may be added to the cowl section to a height of approximately the driver's eye level.

420.13.7 HEADER PIPE: Header must extend beyond the fuel tank.

420.13.8 TAIL SECTION (optional): Tail section, if used, shall be a full, midget/sprint type. Minimum length 15", minimum width 13", minimum height 14", and shall be fully enclosed by the rear bumper.

420.13.9 SIGNAGE: A panel, measuring no more than 8" on the top/front curved surface, may be attached to the forward edge of Cross Bar D and between Side Bars C, Panel must be securely fastened and shall have no sharp edges.

420.14 BUMPERS AND NERF BARS

420.14.1 FRONT BUMPER: Mandatory steel tubing bumper constructed of minimum 3/4" diameter material, with a minimum tubing wall thickness of .065". Bumper must encircle the front nose area at a minimum height of 7-3/4" above the ground plane. Double bumper is strongly recommended.

420.14.2 REAR BUMPER: Steel tubing bumper constructed of 3/4" minimum diameter material, with a minimum tubing wall thickness of .065". Bumper must encircle the rear tail section at a maximum height of 7-1/2" above the ground plane as raced. Double bumper is mandatory. At least one of the bars must be no higher than 7 1/2" above the ground as raced. See drawing for configuration and option on rear bumper.

NOTE: Oil catch cans shall not be attached to rear bumper.

420.14.3 NERF BARS: Double-rail nerf bars constructed of 3/4" diameter steel tubing, with a recommended minimum tubing wall thickness of .065". Nerf bars are required in the area between the front and rear wheels as viewed from both sides of the kart, attached with a 1/4" minimum bolt. Bottom bar must be no lower than normal frame ride-height. Upper bar shall be no higher than top of rear tire(s). Nerf bars must extend from an area inside a longitudinal line drawn from the outer portion of the front tire(s) as viewed from above, to a point no further laterally than 1" outside a line along the outer tire surface(s). No ballast weights may be bolted to bumpers or nerf bars.

420.15 MISCELLANEOUS

420.15.1 DRIVER RESTRAINTS: A full, designed-for-racing, SFI-rated, five point bolt in or wrap around harness is mandatory. Metal-to-metal type fasteners are mandatory when bolt in harness is used. Tabs attaching harness to frame must be bolted to a steel plate minimum 2" square, 3/16" thickness that is welded directly to the kart frame and/or roll-cage structure. Retaining nuts must be cotter keyed or safety wired. See Champ Kart Specifications Diagram for recommendations regarding restraint location.

Driver must be held securely in the seat. When the driver is small and lap belts wrap across the seat preventing the driver from being held securely in the seat, clean rounded slots should be cut into the sides to allow the belts to pass through and hold the driver securely in the seat.

420.15.2 ARM RESTRAINTS: Arm restraints are mandatory and must attach to restraint system.

420.15.3 SEAT: The driver must be seated in a bucket-type seat providing adequate lateral support and back support. Seat back should extend to within a minimum of 5" of horizontal line projected across shoulders, or where shoulder straps normally run, with driver seated normally. Seat must be constructed of material resisting bending or fracture. Seat must have 4-point, bolted mounting to kart frame structure with minimum 5/16" diameter bolts and load-spreading washers.

NOTE: Driver's seat must be positioned in such a manner that NO PORTION OF THE DRIVER'S SEAT MAY BE CLOSER THAN 6" MINIMUM FROM THE INSIDE OF THE LEFT NERF BAR. This requirement is for "as raced" configuration and can be subjected to post-race technical inspection (See Champ Kart Specifications Diagram).

420.15.4 THROTTLE SPRING: It is mandatory for all karts to be equipped with a positive acting throttle-return spring.

420.15.5 REAR VIEW MIRRORS: Rear View Mirrors are not allowed.

420.15.6 RADIOS: Driver may not utilize any type of radio communication device.

420.15.7 CHASSIS ADJUSTMENT: No type of chassis-adjusting, frame-loading, etc., device may be available for adjustment by the driver while the kart is being raced. Any means taken to circumvent this requirement could result in suspension of membership privileges for the driver.

420.15.8 FIRE EXTINGUISHERS: On-board extinguisher is recommended. If used, extinguisher should be operable, and within reach of driver while belted in seat. Not to be larger in size than small, 2 lb. max. unit.

420.15.9 DRIVING SUITS: All Champ Kart drivers, in all race events, **MUST WEAR** a full fire resistant driving suit with an SFI rating of 3.2A1 or better.

430 SPEEDWAY KID KART RULES

See engine technical specifications at Section 622.50/51

See Section 208.3 for rules and chassis specifications. All 208.3 rules apply.

EXCEPTION: Full speedway type bodywork, as described in 401.14, 401.15.2, and 401.16.4, with allowances for smaller size and scale, is allowed for Kid Karts in Speedway only.

450

PAVEMENT SPEEDWAY

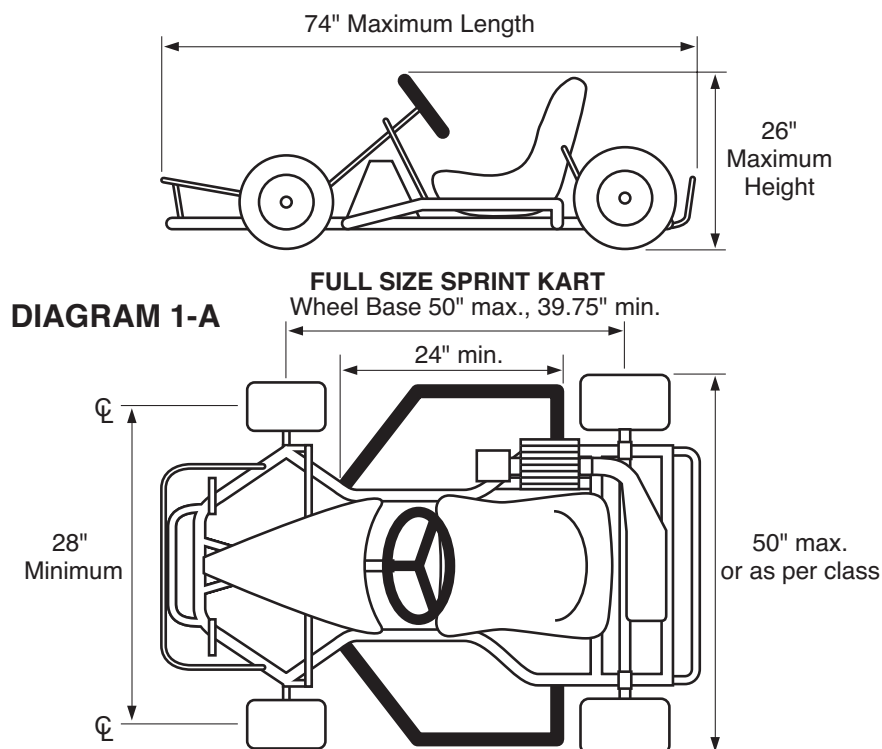
NOTE: FOR ADDITIONAL INFORMATION, PLEASE REFER TO:

Event officials are authorized to decide if an equipment change or design is an attempt to "beat" the rules. They can and will disqualify an entry in violation of the Spirit and Intent of these rules. Any official or representative shall have the right to correct conditions not in compliance with the Spirit and Intent of these regulations.

SAFETY	SECTION 105
RACE PROCEDURES	SECTION 110
CHASSIS SPECIFICATIONS	SECTION 112
PRE-RACE TECH. INSPECTION	SECTION 503
POST-RACE TECH. INSPECTION	SECTION 504
PROTESTS (114.6)	SECTION 507
APPEALS	SECTION 508

451 CHASSIS SPECIFICATIONS

(Please refer to Sections 105 and 112 General Chassis Regulations for more information)



Note: Cadet karts are not allowed in Speedway Pavement competition except in the Junior I Cadet Class (Class #1) where they are required.

Note: No axle larger than 40mm diameter will be allowed in 4-Cycle Pavement Speedway racing.

451.1 Minimum Kart Weight: Race ready, dry, single classes - 85 lbs., dual classes - 105 lbs.

451.2 Minimum Tread Width: 28" measured from the centerline of the right tire to the centerline of the left tire.

451.3 Maximum Overall Kart Height: 26". This does not include windshield fairing, steering wheel, or air filter.

451.4 Wheels and tires:

451.4.1 All wheels will be 6" diameter.

451.4.2 The maximum width for the mounted wheel and tire assembly is 10-3/8".

451.4.3 One-for-one replacement of damaged tires is permitted. The replacement of tires must be authorized by the Race Director. There is a maximum of two replaced tires allowed. Replacement tire must be same size and compound.

451.5 Maximum Kart Length: Maximum length of kart and anything attached to it is 74".

451.5.1 Wheelbase: Wheelbase maximum of 50" and minimum 39.75" measured from center to center at the outside end of the rear axle to the outside end of the front spindle.

451.6 Front Bumpers:

451.6.1 The top rail of the front bumper must measure a minimum of 7-3/4" above the ground, with or without a nose piece. If not using a nose piece the top rail must have a straight section a minimum of 10" in width in the center of the kart.

451.6.2 Bumper must have at least two vertical supports running to the top loop of the bumper. Vertical supports will not be considered the top rail of the front bumper.

451.6.3 Main bumper members shall be not less than 3/4" outside diameter by .065" -10% wall thickness, steel tubing.

451.6.4 Front bumper can be no wider than inside of front wheels.

451.7 Front Bumper Covers:

451.7.1 Front bumper covers must not extend below main rail, must tech within 5° of vertical, must not be more than 14 inches high from ground level.

451.7.2 Must not extend rearward of the center line of front wheels and must follow contour of front bumper. Bumper cover material shall have a maximum thickness .125 inches.

451.8 Rear Bumpers:

451.8.1 There must be one rear bumper cross bar between 5" and 7-1/2" above the ground.

451.8.2 Double rail rear bumpers are suggested but not mandatory.

401.8.3 Main bumper members shall not be less than 3/4" by .065 -10% wall thickness, steel tubing.

451.9 Nerf Bars: Nerf bars constitute a bracket outside of the main frame rails, between the front and rear tires. This bracket will not be considered a nerf bar if it is completely covered by the wedge. The wedge framework must still pass tech inspection and have no sharp protrusions or edges.

451.9.1 The overall length of the side nerf bar shall be a minimum of 24" measured from the back side of the nerf bar closest to the rear tire and the rear of the kart in a straight line to where it attaches to the kart at the front. See diagram 1-A.

451.9.2 Double rail nerf bars are suggested but not mandatory.

451.9.3 Main nerf bar members shall not be less than 3/4" by .065 -10% wall thickness, steel tubing.

451.9.4 Nerf and sideboards will be no more than four inches wider on either side, than the rear wheels.

451.10 Chain Oilers: The use of any type of chain oiler is not permitted.

451.11 Driver's Compartment: The driver's compartment shall be equipped with side rails, side panels or similarly effective lateral support. All parts of the driver shall be limited to the confines of the width and length of the kart. Driver's feet shall not extend beyond bumper when pedals are fully depressed. Driver's legs and feet must be visible when viewed from directly above with pedals depressed.

451.11.1 Seat: No part of the seat or anything attached to it, except seat struts may extend rearward of the rear axle.

451.11.2 Minimum height of the seat back for all Speedway and Speedway Pavement karts without roll bars is 14" from the ground. No peaks or add-on sections intended to subvert the seat back height requirement allowed.

451.11.3 Mirrors: No mirrors of any kind can be mounted on the kart for any 2 or 4 Cycle Speedway, Speedway Pavement, or Speedway Midget competition.

451.11.4 Guard: All karts must be equipped with a brake disc guard, aka Wolfe Plate, between brake disc and the back of the seat.

451.12 Floor Pan: No void large enough for any part of the driver's body to inadvertently pass through, shall be permitted.

451.13 Belly Pan: If a belly pan is used it must be fully confined within the main frame rails when viewed from directly above. The pan may not extend beyond the rear frame rail and must end inside the rear bumper. If a belly pan is used, it must be flat and parallel to the main frame rails from a line drawn across the rear edge of the front tires to a line 4" in front of the front edge of the rear axle. From that point rearward to the end of the main frame rails, the belly pan may be no higher than the center of the rear axle.

451.14 Number Panels:

451.14.1 Size: Maximum width 14", maximum height 18", minimum width 7", minimum height 7", as measured on surface of panel. The number panel must be a plain color, free of all decoration and may only contain the required numbers.

451.14.2 IKF Experts, Duffy winners and Regional Champions:

IKF Experts listed in Sec 115.4.4 - 115.4.8 must display gold number panels with plain black, block numbers only. Expert panels may display the IKF issued Expert banner across the bottom.

IKF Duffy winners and Regional Champions may display appropriate issued banners across the bottom of their white number panels with plain black, block numbers.

451.14.2.1 IKF listed experts must run plain gold number panels, per Rule 115.2, with plain black, block numbers only.

451.14.3 Material and Mounting: All panels shall be of flexible plastic with rolled edges or shall be contact paper mounted to a smooth non-movable area such as side pod, side panel, front nose or driver fairing. All panels shall be attached in a safe manner and shall be subject to rigid technical inspection.

451.14.4 Location: All competition karts must be equipped with 4 number panels meeting the above specifications. The front number panel shall be mounted in front of the steering wheel, the nose is in

front of the steering wheel. Side panels must be carried between the front and rear wheels. If running a full wedge, number panel may be placed as per diagram, Section 401.15.

451.14.5 Legibility: All numbers must be legible to track personnel and scorers, throughout an the event. All entrants shall cooperate in making numbers legible or risk not being scored.

451.14.6 Transponders: Use of transponders does not negate the requirement for 4 legible numbers on each kart throughout the event.

451.15 Speedway Bodywork:

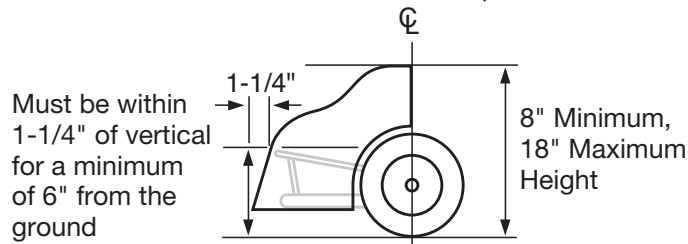
451.15.1 Aerodynamic Regulations: The intent of the following regulations is to limit aerodynamic devices used on all types of Speedway racing.

451.15.2 Speedway Nose:

451.15.2.1 Usage: Nose pieces are required for 4-Cycle Pavement Speedway racing and optional for 2 Cycle Pavement Speedway racing.

451.15.2.2 Dimensions: Nose pieces must be a minimum of 8" high and a maximum of 18" high. Nose pieces shall not be inclined more than 1-1/4" from vertical at a height of 6" from the ground. Nose pieces shall be no more than 3" per side wider than front wheels/tires measured at the centerline of front axle with wheels straight ahead. Outside of front wheels and tires shall not be covered, must be exposed. Nose shall not cover driver's feet, i.e. feet and controls must be visible.

Nose may not extend rearward of centerline of front wheels unless attached to side panels



451.15.2.3 Materials and mounting: Nose must be constructed of high-strength plastic or fiberglass and must be securely mounted to the kart. Bottom of nose piece may be mounted flush to bottom side of frame extending no further back than centerline of front axle. Top surface of nose piece may not extend rearward of centerline of front axle, unless nose is attached to side pods or is part of a full body.

No additional protection devices such as rub strips, braces, etc are allowed, internally or externally, on the nose piece. Use of expanding foam inside of the nose is allowed. Patching of the nose is allowed but repaired nose is subject to tech. Tape is an acceptable repair.

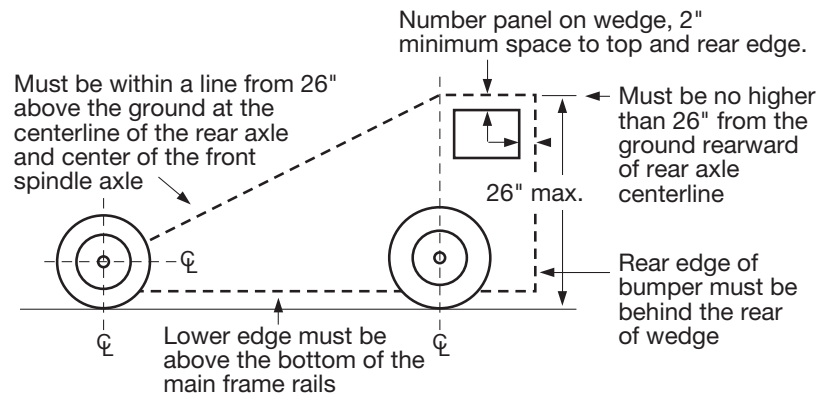
451.15.2.4 Ground clearance: Minimum height of nose shall be 3/4" from the ground. This is a pre-tech item only.

451.15.3 CIK Nose Piece: CIK approved nose piece using CIK mounting hardware is legal. CIK nose pieces are not legal for Pavement Speedway racing unless they meet the dimensions in 451.15.2.2.

451.16 Side panels:

451.16.1 Wedge style body: Wedge side panels must not be higher than 26" from the ground, and must not extend rearward past the rear bumper. They must be within the confines of the following diagram and may not extend below the frame rails. There shall also be no vertical extensions of the windshield fairings with the intent of increasing aerodynamic stability. All panels and fairings must be securely

mounted to the kart and judged to be safe in pre-race tech inspection. The decision of the pre-race tech officials shall be final.



451.16.2 "Speedway" style body:

451.16.2.1 Side panels/pods of flat or 90 degree style or CIK-style pods may be used. Must be securely mounted. Side panels and pods must be void of sharp edges. No metal panels or pods allowed.

451.16.2.2 Height: Maximum height shall be 14" from the ground measured from a point 12" rearward of the front axle centerline.

451.16.2.3 Ground clearance: minimum height of nose, side panels/pods shall be 3/4" from the ground. This is a pre-tech item only.

451.16.2.4 Clearance: 90 degree panels may not cover any part of the drivers body. Distance from seat to panel: 1" minimum, all areas. Minimum opening area forward of seat back to rearward edge of front tire is 22" minimum, measured with tires in straight ahead position. Panels may connect to nose piece. Pods or panels may be a maximum of 4" per side wider than the rear wheels.

451.16.2.5 Length: Side panels may not extend rearward of the rear edge of the rear tires. See Drawing 401.15.

451.16.3 Rub Strips: Rub strips are material added outside the side panels or pods to protect those panels when karts rub together.

451.16.3.1 Rub strips may not be metallic, but must be of flexible plastic material.

451.16.3.2 Strip may be no thicker than 1/2". Ends of strip must be beveled or rounded toward flat of side pod.

451.16.3.3 Strips must be attached only with button head cap screws or non-protruding hardware (max. of .25" diameter) and flat washers or flathead cap screws or rivets.

451.17 Windshield/driver fairing:

451.17.1 Height: may be installed higher than 26" to protect driver. Windshield fairing or steering wheel cannot be installed in such a manner as to obstruct the driver's vision. Fairing shall be no higher than the driver's eye level while sitting in the kart in a normal driving position.

451.17.2 Width: Maximum width allowed is 14", chord measurement. (Section 105.2.1.19)

451.17.3 Clearance: Must have 1" minimum clearance between front fairing, nose piece, or side panels. Fairing shall not connect to nose piece.

451.17.4 Class restrictions: Steering column fairings or windshields are not allowed in any Junior I or Kid Kart class.

451.18 Drive Systems:

451.18.1 Direct Drive: No direct drive systems allowed in 4 Cycle Speedway or 4 Cycle Pavement Speedway Divisions.

451.18.2 The drive system to the rear axle must be #35 or #219 chain. The drive system from the engine to a jackshaft, if used, may be either a belt drive system or a chain drive system using #35 or #219 chain and must have a belt/chain guard.

451.18.3 Any kart that has a clutch between the seat and the motor must have a clutch/chain guard that is as wide as the clutch and spring extensions when clutch is engaged.

451.19 Brake System Restrictions: Front wheel brakes are not allowed in 4 Cycle Speedway or 4 Cycle Pavement Speedway racing.

451.20 Brake lines and connections: All brake lines shall be safely routed to prevent possible damage while kart is in motion. Hydraulic brake connections must be tight and free from any visible leaks. It is encouraged that braided brake lines be utilized which are more protective from abrasion and rubbing. Brake line fittings that are designed for such use are highly recommended.

451.21 Lighting Devices: No display lighting devices are allowed on the kart, e.g., valve stem lights, etc. Illumination for engine monitoring devices allowed.

451.22 Video Recording Devices: No video recording devices such as cameras will be allowed anywhere on the kart in Speedway during competition.

452 SPEEDWAY PAVEMENT NATIONAL CHAMPIONSHIP CLASSES

CLASS	ENGINE TYPE/RESTRICTIONS	FUEL	WEIGHT	AGE
1. JR. I LIGHT	Flat Head, .425" Restrictor	Methanol	235	8-11
2. JR. I HEAVY	Flat Head, .425" Restrictor	Methanol	270	8-11
3. JR. I BRIGGS ANIMAL LIGHT	Animal, Sec. 716 Black Restrictor per 700.3.7.4	Methanol	235	8-11
4. JR. I BRIGGS ANIMAL HEAVY	Animal, Sec. 716 Black Restrictor per 700.3.7.4	Methanol	270	8-11
5. *JR. I HEAVY 2-CYC.	Yamaha KT100S, WA55B or WA55-1 carb, RLV Box Muffler SSX-V, no direct drive	Gas-Oil	270	8-11
6. JR. II LIGHT	Flat Head, .500" Restrictor	Methanol	285	12-15
7. JR. II HEAVY	Flat Head, .500" Restrictor	Methanol	320	12-15
8. JR. II BRIGGS ANIMAL LIGHT	Animal, Sec. 716 Gold Restrictor per 700.3.7.5	Methanol	285	12-15
9. JR. II BRIGGS ANIMAL HEAVY	Animal, Sec. 716 Gold Restrictor per 700.3.7.5	Methanol	320	12-15
10. *JR. II HEAVY 2-CYC.	Yamaha KT100S, .850"Restrictor, RLV Box Muffler YBX, Eng. Clutch, no direct drive	Gas-Oil	320	12-15
11. BRIGGS ANIMAL MEDIUM	Animal, Sec. 716	Methanol	345	16-up
12. BRIGGS ANIMAL HEAVY	Animal, Sec. 716	Methanol	370	16-up
13. BRIGGS ANIMAL LIGHT	Animal, Sec. 716	Methanol	320	16-up
14. STOCK MEDIUM	Flat Head 5 hp Briggs	Methanol	345	16-up
15. STOCK HEAVY	Flat Head 5 hp Briggs	Methanol	370	16-up
16. BLUE WAZOOM OHV MEDIUM	Blue Wazoom Animal, Sec. 720	Methanol	345	16-up
17. BLUE WAZOOM OHV HEAVY	Blue Wazoom Animal, Sec. 720	Methanol	370	16-up
18. BRIGGS LO206 MASTERS	Sec. 721	Gas	370	35-up
19. *YAMAHA KT100S HEAVY 2-CYC.	Yamaha KT100S	Gas-Oil	370	16-up

* See Section 617.21

NOTE DRIVER AGES:

IKF Attained Age 5 – 8 Kid Kart

IKF Competition Age 8 – 11 Jr. I

IKF Competition Age 12 (Option Year) Driver has the option to stay in Junior 1 or move up to Junior 2

IKF Competition Age 13- 15 Junior II

IKF Competition Age 16 (Option Year) Driver has the option to stay in Junior II or move to senior classes

IKF Competition Age 17 Senior classes

Refer to Sec. 104.6 for IKF age policy.

Note: No water-cooled engines allowed in 2-Cyc Pavement Speedway classes.

Note: Front wheel brakes are not allowed in 4-Cycle Pavement Speedway racing.

Note: No axle larger than 40mm allowed in 4-Cyc Pavement Speedway racing.

Note: No Direct Drive allowed in Pavement Speedway racing.

453 IKF PAVEMENT SPEEDWAY GRAND NATIONAL SCHEDULE

To be announced

453.1 Schedule of classes may be changed only with prior IKF Board approval.

453.2 No Other Class(es) shall be run during the official Grand National event except as approved by the IKF Board of Directors.

453.2.1 Approved local option classes: To be announced

453.3 At Grand National events, classes with less than 5 entries will not run for a Duffy. See 110.9.

453.4 OFFICIAL SCHEDULE: To be announced

454 PAVEMENT SPEEDWAY RACE PROCEDURES

Please refer to Section 110, General Race Procedures, for more information.

454.1 Track Length: All Pavement Speedway Grand National competition shall be conducted on tracks not to exceed 1/4 mile in length.

454.2 Fuel: At the Pavement Speedway Grand Nationals: 2-cycle and 4 cycle fuel will be controlled. The method will be specified in the Grand National proposal and must be approved by the Board of Directors.

454.3 General Race Format:

1. Entrants will draw for Qualifying order.
2. There will be two laps of Qualifying.
3. Qualifying times will determine the starting positions for the Main and Pre-Final.
4. Scoring, as specified below, Sec 456, for Qualifying and the Pre-Final.
5. Entrants will start the main in order of points earned in Qualifying and the Pre-Final race, lowest to highest
6. Main will be 30 laps, Junior 2's will run 25 laps, Junior 1's will run 20 laps, and the Pre-Final Race 20 laps for all classes. Race distances are dependent upon size and configuration of track and final determination of race distances and number of entries per feature will be made by Race Director.
7. The results of the Main will determine the winner.

454.4 Number of Karts Allowed: A maximum number of karts allowed will be determined by the length of the track and may be changed at the discretion of the Race Director.

Recommended Kart counts are:

Track Length	Maximum # of Karts	First Qualifiers	From Pre-Final
1/5 mile	22	18	4
1/6 mile	18	14	4
1/7 mile	16	12	4
1/8 mile	14	10	4

454.5 Qualifying Procedures: There will be qualifying. Qualifying order shall be determined by a draw, which shall be done at time of sign-in by each participant.

Draw shall be done from a suitable container that will ensure chance. Any pushing or drafting will result in those laps being deleted from scoring.

454.5.1 Qualifying: Two laps of qualifying shall be the standard. Any kart not ready in their sequence by their draw will not be allowed to qualify and will be at the rear of the grid.

Any kart that is in their proper sequence on the grid but (A) is unable to leave the grid, (B) breaks while on their first lap of qualifying, or (C) does not take the green flag will be allowed only one lap to qualify at the end of their qualifying class, or at the end of the next qualifying class if they were one of the last karts to qualify. Tires must be within 5 degrees of ambient temperature before re-qualifying. Any kart falling under A, B, or C, that is rained out of its qualifying lap shall not be cause for the re-qualifying of its class and shall be placed at the rear of the grid, by draw number, for the Pre-Final, ahead of any kart that drew but was not ready in qualifying order and in front of those who signed in late.

If any class is rained out while qualifying, the entire class shall re-qualify.

454.6 Pre-Final: All karts should be in their starting position on the grid one class prior to their class. Fast qualifier shall have pole position. If there is a scratch on the grid, the line up shall be adjusted by moving straight forward.

The Race Director shall determine the pole lane before the event starts.

454.7 Final Race or Main. All karts should be in their starting position on the grid one class prior to their class. If there is a scratch on the grid, the line up will be adjusted by moving forward.

455 PAVEMENT SPEEDWAY RACE FORMAT

At Grand National events, classes with less than 5 entrants will not be run for a Duffy. (See 110.9)

455.1 Meeting of the Drivers and Officials: Prior to each race, the Flagman or Race Director shall conduct a meeting of drivers for the discussion and interpretation of the rules and any specific regulations applying to that race. All drivers are required to attend. Any driver failing to attend shall be charged with knowledge of the matter discussed at such meeting as if he had been present.

455.2 Flag Signals: The Starter shall use flag signals according to the following code:

- **Green Flag** - Start, course is clear.
- **Yellow Flag** - Caution, reduce speed immediately and maintain your position.
- **Red Flag** - Stop, race is halted.
- **Black Flag** - Stop next lap at pits for consultation.
- **Black with orange ball (Meatball Flag)** - Stop at pits next lap, you have mechanical problems.
- **Royal Blue with Orange diagonal stripe** - The lapping driver is attempting to pass, give him consideration.
- **White Flag** - The leader has commenced his last lap.
- **Checkered Flag** - You have completed the race.

455.3 Method of Starting: Unless otherwise specified on the entry form, all races, heats, or qualification trials shall begin with a flying start. A flying start shall occur, from any point behind the line, when the karts are in continuous movement up to and across the starting line. The initial start attempt shall be made with the karts formed into two lines.

455.4 Start: All drivers must form in their proper position on the parade or pace laps. Parade laps start when the start-up clock has elapsed. Drivers must remain in position unless mechanical difficulty occurs. In the event a driver drops out due to mechanical difficulty, the balance of the field will move straight ahead. After the original start-up clock has elapsed, or a green flag thrown, there will be no working on the kart.

455.4.1 Drivers dropping out of the parade or pace laps will not be considered cause for delaying the start. They must be left behind at the official start.

455.4.2 With the approval of the flagman, the pole kart will set the pace for the parade and pace laps.

455.4.3 Drivers cannot raise their hand and postpone a start.

455.4.4 After the green flag and/or green light is displayed, all drivers may pass. If, in the opinion of the flagman, a driver flagrantly improves his position without cause, he will be penalized. The flagman's decision to penalize in accordance with this rule is not protestable.

455.5 Moment of Starting: Starting of the race will be on the front straight away by the flagman and the race shall begin at the moment when the green flag/green light is displayed.

455.6 Method of Scoring: A kart will be officially credited with a lap only when its front wheels cross the start/finish line after completing one entire lap of the course.

455.7 Yellow Caution Period: The Flagman or Race Director is empowered to call at any time for any reason a yellow caution period. Their decision to call, not to call, or to end a yellow caution period is not protestable.

455.7.1 Should a race be yellow flagged, prior to all starting karts completing one lap, no race laps will be officially credited. Total laps (see 455.10.2), for the 40 lap (30 laps for Juniors) count will start counting with the initial green signal. A complete restart will be conducted using the original starting lineup in effect after the original start up clock expired. However, the Race Director may alter the restart order by assessing penalties upon drivers that he feels have contributed to the yellow flag period.

455.7.2 Should a race be yellow flagged after all karts have completed one lap, person(s) causing the yellow flag will be put to the back. If no fault can be determined, no penalty will be assessed. All other karts will resume racing at the end of the yellow period in the order they were scored on the last complete lap before the yellow.

455.7.3 The yellow caution period starts with the display of the yellow flag and/or yellow lights and ends with the display of the green flag and/or green lights.

455.7.4 No conditional yellows allowed. Any yellow flag displayed on the track at anytime will result in a full course yellow.

455.7.5 Following a yellow caution flag, any karts that have been lapped will start at the back of the pack.

455.7.6 In 4 Cycle classes a kart may be stopped on the track by a Race Official. Should a competitor's motor cease running after kart is stopped by an Official, the competitor shall have 90 seconds to restart his motor.

455.8 Black Flags, Stop for Consultation: The Flagman or Race Director is empowered to order any driver at any time to stop at the pits for consultation by displaying the black flag.

455.8.1 The Race Director or Starter may order a driver to stop at the pits if, in his non protestable opinion, a condition on the kart exists which could create a safety hazard to the driver or to other competitors. This decision may be based on, but is not limited to: mechanical conditions, leaking fluids, inoperative exhaust system, bodywork or safety equipment missing from the driver or kart. A driver receiving a mechanical black flag shall receive his appropriate finish position.

455.8.2 A driver may be ordered to stop at the pits, if in the opinion of the Flagman or Race Director, the driver has flagrantly violated the rules or is driving in a reckless, improper or unsportsmanlike manner.

455.8.3 The Flagman or Race Director's decision to order or not to order a driver to stop at the pits is not protestable.

455.8.4 Drivers who receive the black flag will no longer be scored.

455.8.5 A person receiving the black flag for flagrant driving misconduct in a heat will receive no points toward the feature line-up. A person receiving a black flag in the feature will receive last place points for Regional/Series.

455.9 Red Flag: When the red flag is displayed by the Starter, it signifies the stopping of a race immediately. If safe, drivers will proceed very slowly to the starting line, or as instructed, and stop. There shall be no working on karts during the red flag period.

455.9.1 Should a race be red flagged prior to all starting karts, completing one lap, no laps will be officially credited, and a complete restart will be conducted using the original starting line-up in effect after the

original start up clock expired. However, the Race Director may alter the restart order by assessing penalties upon drivers who he feels may have contributed to the red flag.

455.9.2 Should a race be stopped anytime following the lap completion as set in 455.9.1, the last official race lap will be the last completely scored lap in which the race leader and all successive karts running on the course, excluding karts lapped during the lap, were scored at the start/finish line prior to the display of the red flag. Within this lap, each kart will receive credit for its more recently scored lap.

455.9.3 In the event of a race continuation other than as set out in 455.9.1, the karts will be lined up in single file order beginning with the race leader. The restart order of the remaining karts will be determined by their physical sequence at the start/finish line during the last officially scored lap as determined in 455.9.2. Karts that have been lapped will start at the back of the pack.

455.9.4 When a red flag is displayed stopping the race, karts causing the red flag will not restart the race and will receive points for that heat or feature where they dropped out. Competitors disqualified for flagrant driving misconduct during red flag situations will receive no points. The decision as to whether a kart caused an accident is not protestable. If no fault can be determined, no penalty will be assessed.

455.9.5 If the red flag has been thrown necessitating a restart, a kart that previously dropped out prior to the red flag cannot restart the race.

455.9.6 The decision to red flag a race is not protestable.

455.10 Race Completion:

455.10.1 A race will be considered complete at the moment the checkered flag is displayed to the leading kart. The race competition will be considered complete when, after this moment, each kart still running on the course has, in the opinion of the Flagman or Race Director, had safe and sufficient opportunity to return to start/finish line. At this time, scoring will cease and the event is completed. The Flagman or Race Director's decision in this matter is not protestable.

455.10.2 The white flag will be displayed to the race leader as he starts his last lap and will continue to be displayed to each successive kart until the last kart on the lead lap has received the white flag. If there is a yellow or red flag thrown during the white flag lap, the race will be restarted for a green/white/checkered finish. In the event a race has completed 40 laps (Junior I's 30 laps) on the track, the white flag will be displayed on lap 41 (Junior I's lap 31) and checkered on lap 42 (Junior I's lap 32). If a yellow flag is displayed after lap 40 (Junior I's lap 30) scoring will revert to the last completed green flag lap and will be the official finish order for that race. Person (s) causing the yellow flag will be scored at the back. If no fault can be assessed, no penalty will be assessed.

If laps are incorrectly counted and the leader is not shown the checkered flag on lap 42 (lap 32 for Junior I's), the Race Director and Chief Scorer will reconstruct the race order as of lap 42 and the leader at that point will be the winner.

455.10.3 All karts must complete the race under self generated momentum, that is, they may not be pushed to the finish line by another competitor.

455.10.4 Final standings will be determined by the sequence in which the karts completed the scheduled distance. Karts not completing the scheduled distance will be ranked in order by total laps completed and sequence of completion. Regional points are awarded accordingly.

455.10.5 If a race is stopped by the use of the red flag and is ruled complete, final standings will be determined by ranking all karts in order by total laps completed and sequence of completion through the last official race lap. Points will be awarded as the entrants drop from competition with the first out receiving the lowest number of points and so on.

455.10.6 If a participant is DQ'd in tech, everyone finishing behind the participant DQ'd will move up in the order of the final finish.

456 PAVEMENT SPEEDWAY SCORING

456.1 Qualifying: Qualifying will be scored by the fastest lap of the two Qualifying laps.

456.2 Pre-Final: Finishing order of the race.

456.3 Main: The starting position will be awarded to all drivers based on their qualifying times and the finishing position of the Pre-Final will set the grid for the Main. If there is a tie in qualifying time the Draw will break the tie. The finish order of the Main will be the finish order for the race. The winner of the Main is the winner.

456.4 Transponder: If transponders are used they must be mounted on the upright of the left nerf bar so the transponder is vertical to the ground.

TECHNICAL INSPECTION SECTION

DISCLAIMER

The rules and/or regulations set forth herein are designed to provide for the orderly conduct of racing events and to establish minimum acceptable requirements for such events. These rules shall govern the condition of all events and by participating in these events, all participants are deemed to have complied with these rules. No express or implied warranty of safety shall result from publications of or compliance with these rules and/or regulations. They are intended as a guide for the conduct of the sport and are in no way a guarantee against injury or death to a participant, spectator or official.

The race director shall be empowered to permit minor deviation from any of the specifications herein or impose any further restrictions that in his opinion do not alter the minimum acceptable requirements. No expressed or implied warranty of safety shall result from such alteration of specifications. Any interpretation or deviation of these rules is left to the discretion of the officials. Their decision is final.

The Management of IKF.

500

TECHNICAL SECTION INTRODUCTION

The purpose of this tech manual is to provide a uniform set of standards and procedures to establish the legality of equipment used in sanctioned events. While it is intended to be a guide for tech inspectors, we hope it will also provide assistance to the general member in preparing legal engines.

No pretense is made of having designed a fool-proof set of rules and regulations. Karting is a sport designed for the fun and enjoyment of the whole family. There have been attempts to test the rules by deviating from this purpose for which the basic sport is intended. The Spirit and Intent of the rules is going to be the standard by which Karting will be guided. Event officials are authorized to decide if an equipment change or design is an attempt to beat the rules. They can and will disqualify an entry in violation of the Spirit and Intent of these rules. Any official or representative shall have the right to initiate action correcting a hazardous condition or a condition not in compliance with the Spirit and Intent of these regulations.

The tech inspector may use whatever tools he deems necessary to accomplish the tech procedures, unless a specific tool is specified elsewhere in the rules.

As karting progresses, manufacturers will submit replacement parts for approval. Remember, all approved replacement parts are required to be of factory specifications and have same general appearance.

The IKF Board of Directors reserves the right to approve any new products or technology that affect the performance of karts or motors or increase the cost to the competitors racing under IKF Rules. New products should be submitted to the IKF Board of Directors for review prior to general marketing or distribution of the products. Distribution and availability will be a factor for approval.

The IKF Board members wish to remind all tech inspectors that it is their responsibility to check the engine(s) only for the legality of the engine in respect to the tech manual and not to add or delete from it. Likewise, it is the competitors' responsibility to assure themselves that the engine is legal in respect to the same tech manual.

501 SCOPE OF TECH INSPECTION MANUAL

All components of each entry's engine is subject to complete technical inspection. Any part or hole not called out, or without dimensions given doesn't exclude it from tech inspection.

502 PRE-RACE INSPECTION

Karts must pass inspection to the satisfaction of the officials before they are allowed on the track.

The pre-race inspection area should be located as near the pit area as possible.

Pre-Tech all karts according to 105.1.6 through 105.3. Officials may require presence of IKF Rulebook and required fire extinguisher at Pre-Tech.

A suitable device (box, cage, template etc.) shall be provided for quick-checking maximum length, height, and width of the karts.

503 RACING INSPECTION

After any competitive, on-track, segment of a race, Tech Officials shall:

503.1 Inspect karts for compliance with minimum class weight.

503.2 Mark or seal motors, or re-inspect marks or seals, if required,.

503.3 Mark tires, or re-inspect markings, if required.

503.4 Test or re-test fuel, if required.

503.5 Check for compliance with all safety specifications, if required.

503.6 It is the competitors' responsibility to cooperate in all inspections.

503.7 It is the competitors' responsibility to ensure that all required weighing, marking or inspecting is carried out on his kart before competitor or kart leave the inspection area.

503.8 It is the competitors' responsibility to preserve the marks or seals. No mark or seal may be broken without prior permission of the Tech Inspectors. No marked tire may be replaced in competition without prior permission from the Tech Director or his designee.

504 POST-RACE INSPECTION

(See Section 113.7) At the end of competition, all karts and drivers shall proceed directly to the scales and the designated impound area to be checked for minimum class weight, maximum kart size, bodywork specifications, engine legality, exhaust system legality, legal attachment of weights, fuel legality, tire legality, etc.

Post race scale and tech areas must be cordoned off from persons other than the competitors.

504.1 Scale area and weight check: Suitable scales shall be provided for driver and kart to be weighed together.

Only the drivers for the current class being weighed shall be allowed in the scale area.

Drivers shall be weighed in full driving uniform, including helmet, jacket, shoes or boots, etc., after time trials and each heat or event. Drivers shall not add any weight to themselves or their karts between the finish of the competition and weigh-in of driver and kart. Any driver found adding weight between the finish and weigh-in, shall be disqualified for the event.

Any driver leaving the scale area without weighing in shall be disqualified for that portion of the event.

Any competitor that fails to meet minimum weight for his class shall be disqualified for that portion of the event.

Any driver that fails to meet the minimum weight for his class shall have the opportunity to re-weigh, once only. The driver and his kart shall be removed from the scale, the scale shall be readjusted to original settings (zeroed for electronic scales) and the driver and kart re-weighed. Failure to meet weight at this re-weigh shall result in disqualification for that portion of the event. The race organizers always have the right to alter standard procedures to repair or adjust a malfunctioning scale.

504.2 Impound area: All competitors shall proceed from the scale to the impound area unless released by a Race Official. A competitor may not be penalized for leaving the Impound area if a Race Official releases him by mistake.

Maximum kart size, bodywork specifications, engine legality, exhaust system legality, legal attachment of weights, fuel legality, tire legality, etc. may be inspected in the Impound Area at the Technical Inspectors discretion.

All of the above must meet specifications for the given class. Failure to meet specification shall result in disqualification for that portion of the event.

All competitors shall follow the instructions of the Race Officials in the Impound Area. Do not alter or remove any component of the chassis or engine until instructed to do so by a Race Official.

504.3 Entrants Responsibility: One representative from each entry is expected to remain with the kart/motor through Final Inspection to expedite the Tech Inspection. This representative is expected to have sufficient experience and tools to disassemble the engine/clutch as directed by the tech official.

Also be prepared to present homologation documents or prior rule books with technical specifications that applies to the kart/motor.

504.4 Illegal Engine/Components Confiscation: Any engine, or other component found to be illegal during technical inspection may be impounded at the discretion of the Head Technical Inspector for later evaluation. Engines and/or components held under this Section can be appealed in accordance with Section 508. If the component is deemed illegal it becomes the property of IKF. If found to be acceptable for competition, it will be returned to the competitor at IKF expense. Refusal to surrender an engine or component under this Section can result in a 12 month suspension from competition.

505 FINAL INSPECTION AREA

For purposes of convenience and control, the final inspection area should be divided into sections for teardown and inspection.

505.1 Tear-Down Area: Where driver or mechanic removes the engine at the instruction of the tech instructor. Only one person per kart allowed in this area.

505.2 Inspection Area: One representative per engine is allowed (required) in this area for the purpose of observation, as well as assisting in the tear down procedure under the direction of the tech official. Discussions of all tech personnel involved in deciding legality of equipment shall be confined to this area and limited to other assigned inspectors until specific decisions have been finalized. A competitor shall not be invited in to argue his cause. It shall be the competitor's prerogative to file a protest after the tech inspectors have made a decision.

While equipment is being inspected in this area, all possible care must be exercised to ensure that the inspector does a fair and impartial inspection. The inspector will assure impartially.

The prime function of the work group and personnel involved is only that of determining the legality of a given engine. It is not to examine the handwork or modifications performed on the engine, or to determine who owns and/or who has modified the engine being checked.

505.3 Engine legality shall be determined according to specifications contained in this Technical Inspection Manual. All engine parts shall be teched at ambient temperature, not "hot".

505.4 Engine Components: Engine components may be compared to known stock parts to determine legality (ie. weight, size, shape, measurement, appearance, etc.).

505.5 Port Opening (Duration/Timing): Any means taken to circumvent specified port opening rules (duration/timing) is not legal. This would include (but not limited to): offsetting crankshaft centerline to bore centerline by any means, asymmetrical (scalping) machining of piston crown or skirt, etc. May be teched by any means at the discretion of the Technical Inspector.

505.6 “Original Manufacture”—Defined: “Must be of original manufacture” means part shall be run exactly as supplied by the manufacturer with no alterations other than those specifically noted.

505.7 Restricted Engines: For intake and exhaust restricted engines, any method to determine if the spirit and intent of the restrictor is being violated may be used if deemed necessary by the Technical Inspector.

506 IDENTIFICATION TAG

To ensure the competitors the return of their impounded equipment, engine identifications tags, claim checks or other method of identification should be issued at post-race inspection.

506.1 Engine Markings Method is up to the individual tech inspector.

506.2 Engine Substitutions If a competitor wishes to change an engine during an event, he must first notify the tech inspector and the engine must be turned in per instructions of the tech inspector. The paint or seals must never be broken.

507 PROTESTS

No protests for non-performance items.

All protests involving engine legality shall be submitted by a legal entrant in the same class the protest occurred.

All protests shall be submitted in writing to the race director of the event within 30 minutes after the final finishing positions are received by post-race inspection in which the given competition heat or race has been completed. Written protest must refer to specification or regulation contained in these rules by page number and Section number. A fee of \$100.00 must accompany each protest.

A competitor protesting another competitor's equipment must keep his equipment in the Tech/Impound area and may be subject to inspection of his equipment to the extent that he is protesting another competitor's equipment. Once a competitor's equipment has been removed from Tech/Impound, he has lost the right to protest another competitor's equipment. The protesting competitor's equipment must remain in Tech/Impound until the result of the protest is determined at which point Tech personnel shall determine whether or not to subject the protestor's equipment to a similar inspection.

Every effort should be made to handle all protests at the local level where witnesses can present evidence pertaining to the protests.

Any protest that cannot be handled at the local level shall be submitted in writing to the National Board and signed by at least two officers of the local club and/or track owner or his representative. Only the National Board will have the power of suspension and their decision shall be final.

508 APPEALS

At all IKF insured events, except Grand National events, a decision involving engine legality may be appealed in writing to the National Tech Committee. The part or parts in question must be submitted to the National Tech Committee by the Race Director or Tech Inspector of the event. Before a disputed part leaves the tech area and the control of the Tech Inspector, the part or parts in question shall be packaged and sealed with tape; both the competitor's and Race Director's (or Tech Inspector's) signature must appear on the tape. This box can be packaged into a shipping box or suitable container by the Race Director or Tech Inspector. The submitted part or parts shall be shipped in a timely manner. Parts submitted in a manner other than this will not be valid for review.

The entrant will be responsible for a \$100.00 appeal fee, in addition to a shipping fee deposit of \$100.00, and shall assume all responsibility and risk involved; fees shall be paid to the Race Director or Tech Inspector at the time the part or parts are prepared for shipping and shall be forwarded to the IKF office. The entrant shall be provided with a receipt upon payment to the Race Director or Tech Inspector; the receipt shall include the paid fee as well as an itemized listing of the part or parts submitted for inspection.

The part or parts will be returned to the competitor with a written evaluation; the Race Director or Tech Inspector will also be notified of the review results.

There can be no appeals of decisions made by the IKF Appointed Director-in-Charge or IKF Appointed Tech Person at Grand National events.

509 2-CYCLE TECH TOOLS

Technical inspection requires the use of gauges as specified below. Drill blanks, vernier and snap gauges are not a substitute for gauges.

509.1 No-Go: A No Go gauge is a nonadjustable tool that is inserted into a specified opening. A part is illegal if the No Go gauge enters the opening being measured. When measuring a chamfered or angular opening, the No Go gauge may not be self-supporting when the part is rotated at any angle. Note: A dial caliper is not a No Go gauge and may not be used to tech any opening where this manual specifies a No Go gauge.

509.2 No Go Gauge standards and Checking Dimensions: No Go gauges will be used for chord widths of ports, exhaust systems, carburetor air horn, venturi and flanged end (throttle bore). Pin gauges for metering holes. Plug No Go gauges must be blade type with blade made from tool steel, heat treated, ground and clearly marked. All plug No Go gauges up to .361" blade must have a minimum thickness of .060" and maximum thickness of .125". All plug No Go gauges .362" and up, blade must have a minimum thickness of .125" and maximum thickness of .250". All chord No Go gauges must have a minimum thickness of .060" and maximum thickness of .125". No Go gauges may not enter or pass through the opening or gap of a measured part. On chamfered or angular openings, the No Go gauge may not be self-supporting when part is turned 90 degrees; i.e., tool cannot support itself at any angle. No Go gauge is to be used without a holder.

509.3 Plug Gauges Defined: Plug Gauges are used to measure round openings. Plug No Go gauges must be made from tool steel, heat treated, ground and clearly marked. Plug Gauges up to a diameter of .361" are to be round. Plug gauges larger than .361" are to be machined on each side to achieve a blade thickness of .215" minimum and .250" maximum. The tolerance on Plug Gauges up to .750" is $+.0001"/-0"$. The tolerance on Plug gauges over .750" is $+.0003"/-0"$. It is recommended that Plug Gauges not be held in an aluminum handle to reduce the total gauge weight.

509.4 Chord Gauges Defined: Chord Gauges are used primarily to check port widths. All Chord No Go gauges must have a blade thickness of .125". The tolerance for Chord Gauges (width) is $+.0002"/-0"$. Note: Fractional dimensions for blade thickness of Chord Gauges are nominal dimensions with a tolerance of $+.015"/-.015"$.

509.5: SAE Conversion: Where metric dimensions (cm, mm) are specified in this document, conversion to SAE units (inches) is permissible for verification purposes. Where SAE dimensions (inches) are specified in these regulations, conversion to metric units (mm, cm) is permissible for verification purposes. The following conversion formulas shall be used: Divide millimeters (mm) by 25.4 to obtain inches. Divide centimeters (cm) by 2.54 to obtain inches. Multiply inches by 25.4 to obtain millimeters (mm). Multiply inches by 2.54 to obtain centimeters (cm).

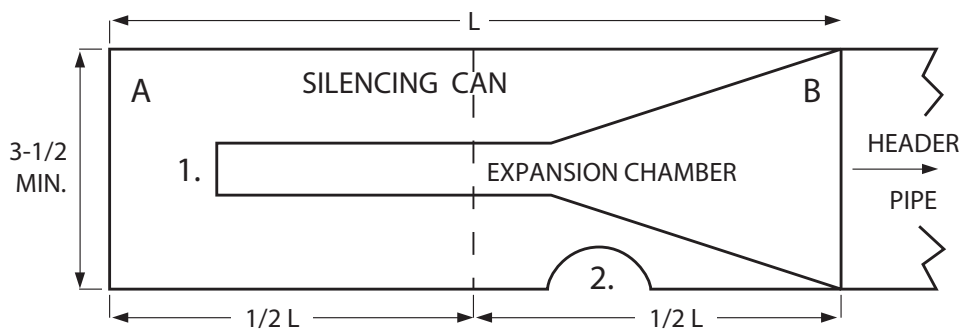
510 MUFFLERS

All karts must be equipped with a silenced exhaust system. Any extended/extending tip, (stinger, outlet pipe, etc.) of any muffler, chamber or exhaust system that could puncture, penetrate, cut or otherwise cause injury to any other competitors must be fitted with a safety guard. Said safety guard shall be a metal washer having a minimum thickness of 0.125 inch and a minimum outside diameter of 2.0 inches welded or brazed to the immediate end of the tip.

The exhaust system must be completely intact at the start and through the entirety of the race. An entrant whose exhaust system or silencer becomes disconnected from the engine and is no longer operable, shall be automatically black flagged. The competitor may resume racing when the exhaust system is repaired.

511 IKF 2-CYCLE LEGAL EXHAUST SYSTEMS (Established 1983)

511.1 Method A:



511.1.1 No minimum or maximum length (l).

511.1.2 The expansion chamber must outlet (1) into the rearward half of silencing can (A) that portion farthest from the header pipe.

511.1.3 The exhaust gas outlet hole to atmosphere (2) must be in the forward half of the silencing can (B), that portion closest to the header pipe.

511.1.4 The exhaust gas outlet hole to atmosphere (2) may be of any number or shape, but may not exceed .7854 square inches (the area of a 1" diameter circle.)

511.1.5 There may be no physical connection between the expansion chamber outlet (1) and the exhaust gas outlet hole to atmosphere (2).

511.1.6 Engines 125cc and above may use 1 or more holes of equal area of two one inch holes (1.571 sq. in.)

511.1.7 Speedway and Sprint exhaust systems cannot be adjusted while the kart is in motion.

511.1.8 The sound limit for all karts shall be 92 DB (A weighing scale, slow response), measured 100 feet, 90° from the source, 4 ft. from the ground. Measurement shall be taken during qualifying at the loudest point on the track under no wind conditions.

511.1.9 To encourage noise reduction, add on silencers may be allowed to be attached and removed for pipe tech.

511.2 Method B

Perforated stingers and/or glass packed type silencers are legal, as per rule in Method A, Item 511.1.8 (applies to CIK approved classes and shifter karts only.)

511.2.1 For all classes with a stinger type silencer with a protruding tube at the outlet: a 2" diameter washer, with a minimum thickness of .065" must be attached the the outlet of the protruding tube. Not required if tube already has a rolled edge or some other means of covering sharp edges.

511.3 Sprint and Enduro - all classes except Open, including Stock Appearing, no multiple adjustable pipes. No means of adjusting the head pipe length allowed. Only convergent (2nd cone) may be adjusted.

511.4 Exhaust headers - all classes, except Open. Headers for all Stock and Stock Appearing engines must be contemporary design, i.e. flange, tubular head pipe and connector cup if connector tube is utilized. No cooling fins, water jackets, header cooling adapters, etc. (Also see sect. 623.3)

512 IGNITIONS

All engines that previously required the use of motoplat ignitions may substitute any of the following ignitions:

512.1 Approved Ignitions:

- Point type (DANSI or CEV) legally interchangeable between all engines.
- Motoplat (Rotor and stator serial numbers must match) - 9600-903-1, 0619029 (CCW), 9600-916-1 (CW)
- PVL (clockwise and counter clockwise)- 105.458 .XX (where XX is the PVL customer number, ie.: 01, 02, 04, 05, 06, 09, 10, 11, 12, 16 or 18) (Both potted and unpotted stators are legal.) Legal potted stator numbers are: 1050, 1051, 1053, 1055, 1056, 1060, 1062, and 1071. Legal unpotted stator numbers are 01, 02, 04, 05, 06, 09, 10, 11, 12, 16 and 18. Coil must be marked 105.458 and be black in color. Rotor: B7-917
- Selettra Ignition (Approved for clockwise and counter clockwise) - P3356 (CCW), Coil 03.0030.60, Stator 06.0001.60, Rotor 02.0053.60, 02.0053.60d

Rotor part number P3356 may be finned.

512.2 External coil with tachometer connection is legal. Ignition must be of original manufacture and stock appearing.

512.3 All classes except open: Any modification to high-tension coil wire or connector except for the express purpose of repair or noise suppression is illegal.

512.4 All hardware is non-tech including Rotor keys and Stator hold down screws.

512.5 Fixed Timing: no provision for advance or retard allowed

600

2-CYC. TECHNICAL INSPECTION

601.1 SPEC FUEL FOR 2 CYC. SPRINT, SPEEDWAY AND ROAD RACING

All 2-Cycle Sprint, Shifter, Speedway and Road Racing Grand National events will run spec fuel and oil as approved by the appropriate Technical Committee Chairman. VP MS98L Karting is the designated IKF fuel. All Regional and Club events are encouraged to use this fuel.

NOTE: Some classes in Shifter, Speedway and Road Racing may require a higher octane fuel and may request an exemption to this requirement. A request must be made, in writing to the IKF office. The request will be either be approved or denied by the appropriate committee chair.

601.1.1 Each track will provide a source of gasoline, with VP MS98L being recommended.

601.1.2 Spec Fuel Test Procedure for use with racing fuel (VP MS98L Karting recommended):

1. The goal of these fuel rules is to ensure that all entries in a class are using the same fuel.
2. A sample of the brand of gasoline specified, provided or available for purchase at the track on a daily basis, will be placed into a suitable container that has been triple rinsed with the gasoline to be used. New gasoline must be acquired daily to comply with these rules.
3. The specified number of ounces of the specified oil will be added per gallon of gasoline and thoroughly mixed.
4. This mixture will be known as the Spec Fuel.
5. Fuel is subject to inspection any time a kart comes off the track.
6. Fuel is subject to comparison to the Spec Fuel on the basis of color, turbidity, odor, specific gravity and Digatron meter reading.
 - 6.1 **Color, turbidity and odor** will be evaluated by the Tech Inspector. Color, turbidity and odor will be evaluated on a sample removed from the carburetor end of the fuel line by the Tech Inspector into a suitable container provided by the Tech Inspector. If the Tech Inspector suspects fuel to be incorrect for any of these reasons, he will consult with the Race Director or other qualified person. The inspection team is reminded that every consideration is to be given to the competitor prior to disqualification.
 - 6.2 **Specific gravity** will be measured on a sample removed from the carburetor end of the fuel line by the Tech Inspector into a suitable container provided by the Tech Inspector. An entrant's fuel that tests more than plus or minus .003 units from the spec fuel sample is incorrect.
 - 6.3 **Digatron test** - A sample of the Spec Fuel will be used to set the Digatron meter at zero. The sample will be maintained throughout the day out of direct sunlight, but at ambient temperature for resetting the zero on the meter. Any fuel that tests more than plus 5 or minus 5 units will be deemed incorrect.

- 6.3.1** Fuel will be tested by inserting the clean Digatron test head into the fuel tank. Any fuel that tests more than plus 5 units or minus 5 units from the spec fuel will be deemed incorrect.
- 6.3.2** The entrant may request that the fuel be retested once, after the Digatron meter is reset at zero. Any fuel that during the second try tests more than plus 5 units or minus 5 units will be deemed incorrect.
- 6.3.3** For the second test the entrant may request that fuel be tested out of the kart tank. The entrant's fuel will be drained from the tank through the carburetor end of the fuel line into a suitable container provided by the tech inspector and retested with the Digatron meter. In this second testing any fuel that tests more than plus 5 units or minus 5 units will be deemed incorrect.
- 6.3.4** Any Digatron meter test that tests the entrant's fuel to be within plus or minus 5 units will result in that fuel being declared correct and there will be no penalty.
- 6.4 Germaine Fuel Test** - Use of the test developed by Germaine Engineering, Provo, Utah – as used by many sanctioning bodies such as NHRA. This test is designed to disclose the presence of Propylene Oxide, Dioxin and oxidizers. The IKF Board of Directors approves it for use only under the following conditions.
 - a.** Operators of the test are to review the instructions for the test and be familiar with the MSD information on the reagents used for the test.
 - b.** The test is only to be used under controlled spec fuel situations with fuel purchased at the track under closely monitored conditions. This must be race fuel without oxidizers.
 - c.** The spec oil used must be tested in advance to determine if masking agents are present that will invalidate the test. While pure castor as used by many series will not cause problems, other castor based oils do contain various ingredients that will test positive. Many synthetics also contain compounds that will test positive. If the advance test shows a positive result a different oil should be specified.
 - d.** Extreme care should be taken to ensure that all containers used for the test are either new or cleaned completely prior to use.
 - e.** One retest is permitted. It is strongly suggested that the operators practice the test prior to actually using it under race conditions.
- 7. Constraints upon the Tech Inspector:**
 - 7.1** The same test will be used for all competitors in a class, however different classes may be subjected to different tests.
 - 7.2** No entrant will be disqualified for illegal Spec Fuel unless at least two other entrants in the same class have been tested and have passed with correct Spec Fuel.
 - 7.3** Every competitor is allowed one courtesy check to be sure that his fuel compares to the Spec Fuel.
 - 7.4** Following any test that shows an entrant's fuel to be incorrect, the Inspector will ensure that all relevant test equipment is cleaned before retesting an entrant's fuel or testing another entrant's fuel. No entrant's fuel can be judged incorrect without a retest with clean equipment and a correct test of the Spec Fuel.
 - 7.5** All testing will be done in the presence of the Entrant or his representative.
- 8. Responsibilities of the entrant**

- 8.1 It is the responsibility of the entrant to be sure that his handling of the Spec Fuel does not result in the fuel becoming contaminated to the point it will not pass the above tests.
- 8.2 Every entrant is allowed, upon request, one courtesy check to be sure that his handling of the fuel is correct.
- 8.3 The entrant or his representative must remain with the kart until fuel testing is complete.
- 9. Penalty: If an entrant's fuel is incorrect by any one test, the entrant will be disqualified from that portion of an event that has just been completed. There will be no appeal of the results of steps 1 - 8 as specified above.

601.2 FUEL TESTS FOR EVENTS NOT USING SPEC FUEL

NOTE 1: IKF strongly recommends the use of the VP MS98L Fuel program for all race events. Pump gas contains elements such as oxidizers that make efficient fuel testing very difficult. Because of this the possibility of non-conformance to fuel standards is much more difficult to determine.

NOTE 2: Every entrant is allowed, upon request, one courtesy check, with the test to be used for his class, to be sure that his fuel is correct.

601.2.1 Digatron Gasoline Meter Test:

Set meter to -45 using Cyclohexane (C₆H₁₂). Competitors' fuel that reads more than zero is illegal and the competitor shall be disqualified. Cyclohexane and fuel sample must be same temperature for an accurate test.

601.2.2 Hydrometer Check: A competitor's fuel with a specific gravity greater than .775 is illegal and the competitor shall be disqualified.

601.2.3 Water Test: Refer to 2012 Rulebook for specific procedures and requirements for conducting this test on fuel.

601.2.4 Any other test that has the I.K.F. Board of Directors approval.

601.2.5 Pump-Around: Instead of one of the above fuel tests an event may specify a fuel pump-around. Some, all, or none of the fuel will be removed from multiple karts in a class, mixed in a common container, and this mixture shall be used to refill each kart's tank. Care must be taken to avoid fire hazard and spillage of fuel when conducting a pump-around.

601.3 Additional Notes:

601.3.1 Hydrazine Fuels: The use of hydrazine fuel is illegal in all classes.

601.3.2 All oxidizers and nitro compounds found in a competitor's fuel, in concentrations greater than 2% by molecular weight, will be deemed illegal fuel additives. Note: Some pump gasses, oils, or race fuels may contain more than 2% of these additives. It is the competitor's responsibility to assure the legality of his fuel.

601.3.3 No cool cans or insulated tanks allowed.

601.3.4 Fuel must be run at ambient temperature and may be checked at any time.

601.3.5 All sanctioned Regional events must run a spec fuel program. Any sanctioned Regional event not using spec fuel may be subject to losing matching funds.

602 TECHNICAL INSPECTION PROCEDURES

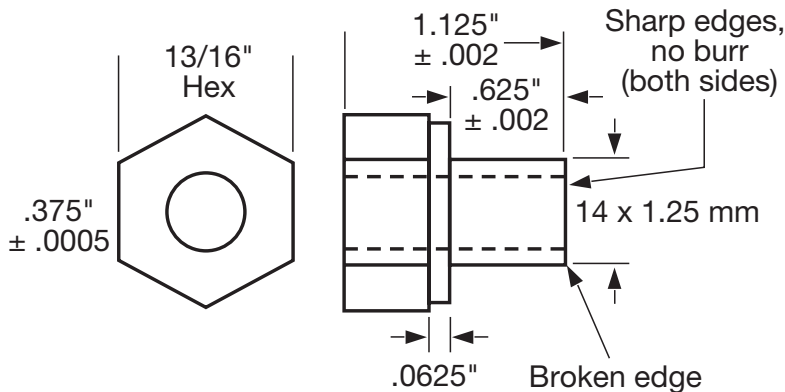
602.1 Checking Head Volume

602.1.1 Head volume is to be checked with the following tools: Burette and IKF 2 Cycle CC Measuring Plug.

602.1.2 Burette: Must be glass with Class A certification, or electronic accurate to 3 decimal places.

602.1.3 IKF 2-Cycle CC Measuring Plug

IKF 2-Cycle CC Measuring Plug



Notes: When reading the fluid level, use the bottom of the meniscus as the reference. Hold a finger behind the burette and slightly below the fluid level. When held up to the light, the fluid level, using the bottom of the meniscus, will become much more distinct.

This tech procedure should only be performed after the engine has cooled to ambient temperature to ensure that a legal engine is not disqualified due to thermal expansion of the petroleum fluid used to check the combustion chamber volume.

602.1.4 Fill the burette with the appropriate fluid (Marvel Mystery Oil), minimizing the amount of air bubbles formed during the filling process. Allow sufficient time for all air bubbles to rise to the surface.

602.1.5 Bleed all air from the stopcock and outlet stem. Run fluid out of the burette until the lowest point on the shadow formed by the fluid surface is in line with top of the starting cc mark.

602.1.6 Install 2-Cycle cc Measuring Plug and torque to 90 in. lbs. minimum. Set the piston level of the engine to be inspected at .050 - .150 inches before top dead center.

Before dispensing the fluid into the engine, show the burette to the driver, car owner, or mechanic of the engine to be checked (only one person can be with the engine). Show the starting point and finishing point to the respective person and explain the procedure. (The reason for this explanation is that this test is to be done only once. Tech inspector does have the option to retest if time permits; no head removal; wash through exhaust port with Brake Clean only [dries fast] and allow to dry before retest.)

With the centerline of the spark plug hole in a vertical position, dispense the specified quantity of fluid through the CC adapter hole into the combustion chamber one CC shy of total CC. Wait 15 seconds and dispense the remaining CC. (This is to allow the residue left on the wall of the burette to be added to the engine.) Reading of the fluid level shall be done the same as in 602.1.5.

602.1.7 Slowly turn the crankshaft of the engine causing the piston to rise to top dead center. If any fluid rises to above the level of the top of the 2-Cycle CC measuring plug, the engine is illegal.

602.2 Checking Exhaust Port Height (The purpose of the exhaust check and intake gauge is to control the actual timing of these parts. Any means to circumvent the intent of these rules shall be illegal.)

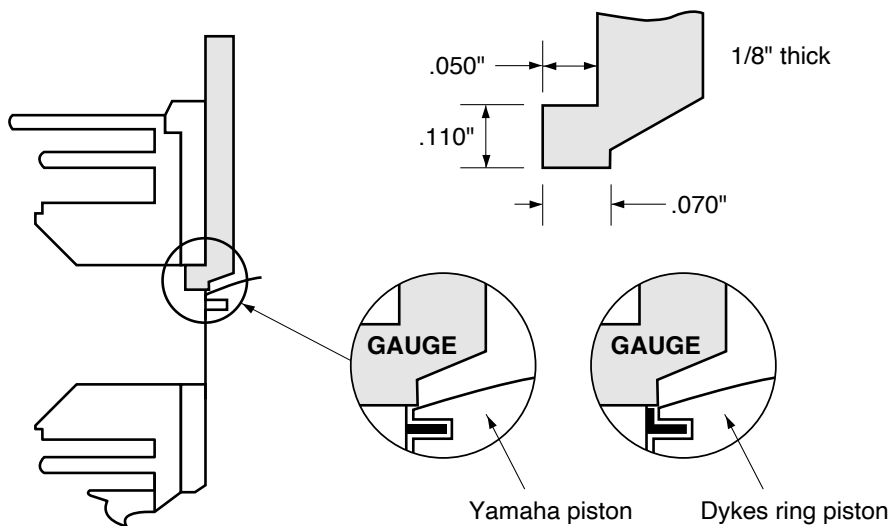
To check exhaust port height, use a dial indicator. When checking exhaust port height, torque for the dial indicator bridge is not to exceed 150-inch-pounds. Zero the indicator to top dead center then rotate crank until piston has traveled just past the allowable distance of the particular engine being checked. Then insert the exhaust check gauge between the controlling edge of the piston and the top of the highest exhaust port. Roll piston up until gentle contact is made. Indicator reading must now be the same, or greater than the stated dimension for the particular engine being checked.

Notes:

602.2.1 Exhaust gauge should be held against top of exhaust port roof.

602.2.2 For pistons with dykes top ring, the top edge of the ring is considered to be the controlling edge.

602.2.4 Exhaust Check Gauge: Piston Port



Port Height Check before top dead center (minimum)

Yamaha KT100S, Komet K-71, KPV/HPV = 1.155

Note: If, at the controlling edge of the exhaust port, a chamfer is present, the following visible light break check shall be used:

602.2.5 Visible Light Break Exhaust Ports Height Check

Zero dial indicator at top dead center then rotate crank until piston has traveled just past the allowable distance for the engine being checked, then roll the piston up to the dimension listed under visible light break check. Shine outside light beam directly into the center of the bore. No light shall beam thru exhaust port when piston and ring are at listed dimension. See chart.

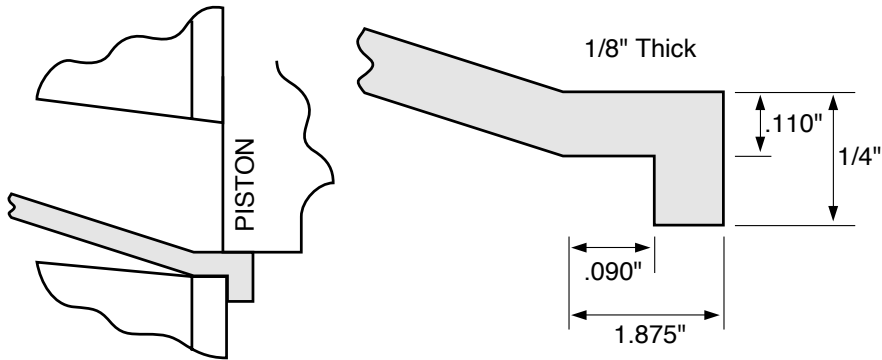
This additional tech procedure was derived from the subtraction of the .110 thickness of the LAD tool plus .015 for port and ring chamfer. This will equal .125 which was deducted off of our standard LAD gauge dimensions.

Note: The light must directly beam through the chamfer when viewed directly from the header side of the exhaust port.

602.3 Inlet Opening, Check at Top Dead Center: (The purpose of the exhaust check and intake gauge is to control the actual timing of these parts. Any means to circumvent the intent of these rules shall be illegal.)

Inlet opening is checked by holding gauge against bottom of the inlet tract with inlet manifold and gaskets removed. Piston is then rotated to gently contact the gauge.

602.3.1 Intake Check Gauge: Piston Port

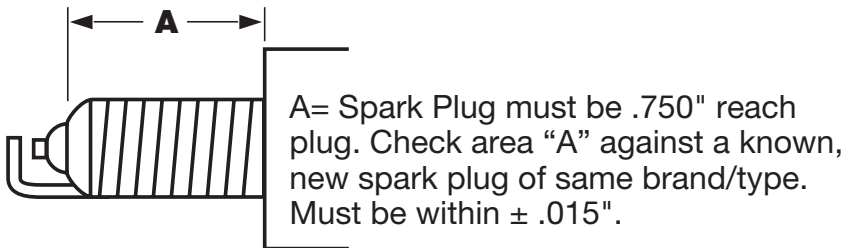


Inlet Opening, Check At Top Dead Center (Maximum)

Yamaha KT100S, Komet K-71, KPV = .775

602.4 Spark Plug Specifications

IKF Spark Plug Specifications



603 GENERAL NOTES

603.1 Carburetors

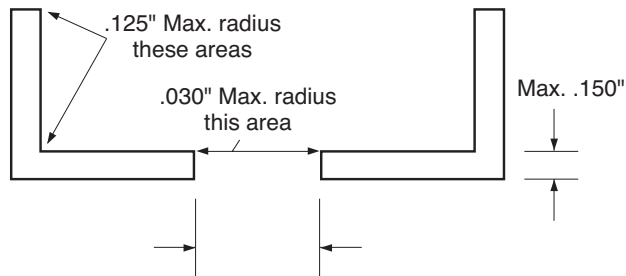
603.1.1 O-ring and/or sealing devices are approved for carb shafts. This includes the machining of the carb body to install the sealing device.

603.1.2 Button head screws may be used in carb shafts. All 2-Cycle engines, all 2-Cycle classes.

603.1.2.1 Extensions may be added to carb adjustment needles to assist in carb tuning. All 2-Cycle engines/classes.

603.1.3 Air Filter/Silencer Adapter

AIR FILTER ADAPTER - ALL CLASSES EXCEPT OPEN OR WHERE OTHERWISE NOTED



Comer K80 1.050" Min.
Walbro & HL 1.150" Min.
(Bolt bosses on HL allowed)
HR & Mikuni 1.450" Min. (**see 603.2.15**)

603.1.4 Induction Silencer: If used, must meet requirements in Sections 603.1.4.1 through 603.1.4.5. Airbox must be run as manufactured and without modifications. Exception: one drain hole permitted, not to exceed 0.250" (6.35mm) in diameter. No coatings, no painting, no stickers, no tape except 2" from outside base of boot connector to prevent rotation. No attempt to insulate air box in any manner is allowed. Air box must be intact and operational throughout the race.

603.1.4.1 Where required, 2-cycle engines up to 110 cc displacement must use approved induction silencer with a maximum of two baffles each not to exceed 23 mm (.905") in diameter and 95 mm (3.74") minimum length.

603.1.4.2 Where required, 2-cycle engines exceeding 110 cc displacement must use approved induction silencer with a maximum of three baffles each not to exceed 23 mm (.905") in diameter and 95 mm (3.74") minimum length. Water cooled gearbox engines may use any air box with up to three baffles, each not to exceed 29 mm (1.142").

603.1.4.3 Induction silencer dimensions: (See following diagram)

1. 270 mm \pm 10 mm (10.629" \pm .393")
2. 440 mm \pm 20 mm (17.322" \pm .787")
3. Baffle Tube length: 95 mm minimum (3.740")
4. Baffle Tube inside diameter: 23 mm maximum (.905") or 30 mm (1.181") maximum if specified.
5. Carb mount in box is at 90 degree to air inlet tubes as per diagram. Only exception is for 100cc stock rotary valved engines where carb mount hole may be parallel to inlet tubes as per diagram.

603.1.4.4 Internal or external air cleaners are legal.

An external filter adapter for an air filter may be utilized providing that air enters the engine via the intake tubes specified in 603.1.4.3. Induction silencer intake tubes must extend above the floor level of the external filter adapter (thus creating a ledge perceptible during inspection.) All openings and or edges of the external filter adapter may have a maximum radius of .125". Maximum external filter adapter flange height is 1.25" and filter cup may not provide a ram-air or velocity stack effect.

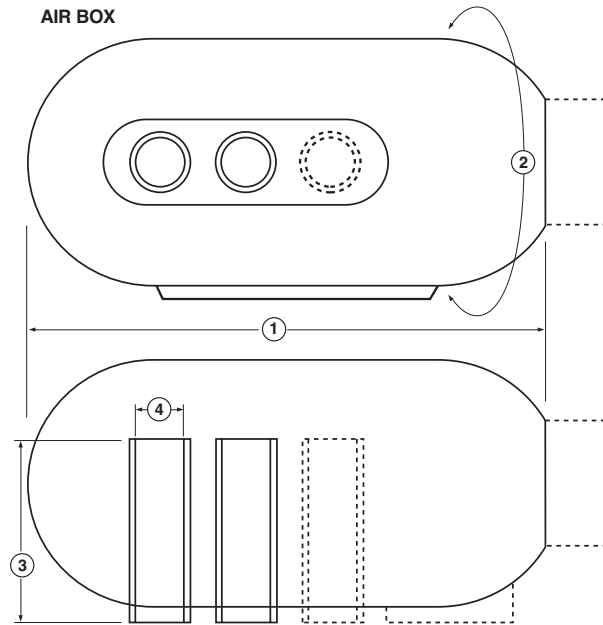
603.1.4.5 Rubber mounting flange may be used in straight or angled position. Max. angle 25 degrees.

The un-used end of double ended rubber flange may be left as manufactured and run inside the air box, or may be trimmed on the inside of the airbox up to the flange lip.

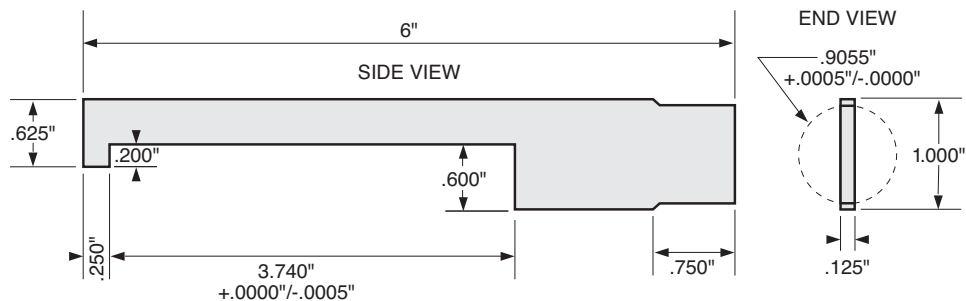
603.1.4.6 Approved Induction Silencers are:

Approved Induction Silencers are:

- All pre-2004 CIK air boxes configured like, and resembling the drawing.
- All RLV air boxes configured like, and resembling the drawing.
- K&N Air box with rigid internal filter
- 2004 and later CIK air boxes are permitted only on ICC/KZ engines, where they are required.



603.1.4.7 Airbox Tech Gauge for 23mm tubes



603.2 Engines These rules apply to all engines except as noted in specific engine rules.

603.2.1 Inserts may be installed in the aluminum engine cases for worn bearing housings. Original center lines must be well maintained.

603.2.2 Motoplat flywheels to be as cast. Balancing holes allowed.

603.2.3 All engines may use two flywheel side half cranks to allow use of direct drive sprockets (direct drive or axle clutches etc.) JICA/KPV type output shafts also approved. In 200 Sprint Division Yamaha classes, the use of two ignition crankshaft halves is not allowed.

603.2.4 Grinding of a maximum of four oil supply notches per side in crankshaft end of connecting rod. Legal in all engines.

603.2.5 Stuffing may be notched above crank pin - all classes.

603.2.6 All Classes: serial numbers on motoplat stator assembly and flywheel must be the same.

603.2.7 All classes other than Stock Appearing and Open, all minimum strokes are to be .015" less than the maximum stroke listed.

603.2.8 Coated pistons are allowed in all 2-Cycle classes including Yamaha.

603.2.9 Gaskets: All stock classes, unless otherwise specified, gaskets are non-tech but must be in place. Silicone rubber is considered a gasket material.

603.2.10 Cylinder/Cylinder Heads: exterior surface is non-tech. No coatings allowed except as homologated. Cylinder heads only—two outermost fins may be painted for identification.

603.2.11 Spark Plug: spark plug must be 14mm by 3/4" maximum reach unless otherwise specified.

603.2.12 Head Inserts: The diameter of the insert may not exceed the spark plug boss and must be flush within the top of the boss. Maximum diameter 1.00".

603.2.13 All Engines: Exhaust gas temperature gauge is allowed. Fitting must not leak.

603.2.14 Exhaust Temperature and Lambda Sensor Fitting: Exhaust temperature and Lambda sensor fitting must be welded or brazed in place. Pipe clamp types are not allowed. If temperature probe is not in place in the fitting, the fitting must be plugged. Lambda sensors are allowed.

603.2.15 All Engines: Any air filter and air filter adaptor, if used, may not be velocity stack shaped or act as a ramtube (except Open classes).

603.2.16 Ram Tube: shall be defined as anything designed, built or installed, in such a manner to deliver air to the engine air intake above the pressure that there would be without it present.

603.2.17 Modifications: Any attempt to modify, change, or defeat any of the basic design criteria of any engine is illegal. Air and fuel can only enter the engine as originally designed.

603.2.18 Main Bearings: No ceramic ball or any other type of exotic design main bearings are permitted.

603.2.19 Pressure/Vacuum Test: In any class that has intake or exhaust restriction, any test deemed appropriate to determine seal/crankcase integrity is permitted. Seals do not have to be OEM but integrity must be maintained. Both pressure and vacuum tests may be used not exceeding 5 PSI/5 in. Hg. The engine shall maintain at least 1 psi pressure and 1 in Hg within 60 seconds. The seal failure will be verified by spraying WD-40 or equivalent into the seal looking for bubbles, in the case of pressure leaks, and the suction of the liquid into the engine, in the case of vacuum leaks.

Division and Classes that are subject to this test:

Division 200 Classes, Kid Kart, Rookie Comer 80, Junior 1, Rookie Sportsman, KPV 1 Cadet, Junior Sportsman.

Division 400 Classes, Kid Kart, Junior 1 Light, Junior 1 Heavy, Junior 2 Light, Junior 2 Heavy.

603.3 Clutches: the following classes require the use of the unaltered clutches as provided by engine manufacturer:

Junior I, Comer only	KPV 4 Senior	IKF World Formula
KPV 1 Cadet	KPV 3 Senior	Kid Kart Comer 50/51
KPV 2 Junior	Honda GX50	

603.4 Materials/manufacture:

603.4.1 Clutches in the Junior I (Yamaha only), Rookie Sportsman, Junior Sportsman, Junior Super Sportsman, Senior Sportsman, and Super Sportsman classes shall not be manufactured with any of the following materials: titanium, carbon fiber, carbon-carbon or magnesium.

603.4.2 Clutches for these classes shall be manufactured in the USA.

603.5 Requirements for Clutches:

603.5.1 Clutches for Junior Super Sportsman, Super Sportsman, Super Sportsman Heavy, Formula Y/C Heavy, and Masters Formula Y/C will use a wet engine clutch only as manufactured by approved manufacturers or dry clutch meeting specifications in 202.5.4.

603.5.2 The Approved Wet Clutch Manufacturers are: Horstman Manufacturing (Horstman DXL and Steel Nytro only), and L&T Manufacturing. Approved manufacturers will supply IKF with technical drawings and specifications for the purpose of post race tech. IKF reserves the right to review these rules and make any changes deemed necessary at any time. The criteria for these rule changes will be to uphold the intent of these classes at the time they were introduced, which were a low maintenance and easily participated program for all.

603.5.3 Wet Clutch specifications

603.5.3.1 The clutch is to be a wet clutch where the disc is continuously bathed in oil. The oil must be in contact with the disc. Oil must run from the clutch when teched. Drips are not considered running.

603.5.3.2 The clutch will be checked for weight after the oil has been drained. The clutch will have a minimum weight of 31 ounces. This will not include starter nut, hardware or mounting parts, clutch assembly only.

603.5.3.3 The clutch will be a 3 disc minimum with 6 total surfaces of friction material. No more than one surface per side per disc will be counted to make 6. The friction material must form a continuous band around the face of the backing plate no less than .350" wide on each side of all discs. The friction disc will have a minimum I.D. of 1.990" and a minimum O.D. of 2.890".

603.5.3.4 The clutch must be manufactured in the USA.

603.5.3.5 Clutch may not be manufactured from the following materials: titanium, carbon fiber, carbon/carbon, or magnesium.

603.5.3.6 No alteration of the clutch from known manufacturer's stock parts is allowed. Any attempt to bypass or circumvent this rule is not allowed.

603.5.4 Requirements for Dry Clutches:

603.5.4.1 Clutches for Junior Super Sportsman, Super Sportsman, Super Sportsman Heavy, Formula Y/C Heavy and Masters Formula Y/C can use a dry clutch if it meets the following specifications.

603.5.4.2 Dry Clutch Specifications:

603.5.4.2.1 The clutch assembly including the basket, and excluding the starter nut, shall be checked for weight. The clutch assembly will have a minimum weight of 500 grams.

603.5.4.2.2 The clutch will have no more than 4 friction surfaces and no less than 2. No more than one-friction surface per side of each disk is allowed. The friction material must form a continuous band around the face of the backing plate no less than .410" wide. The friction surface-band will have a minimum I.D. of 1.500".

603.5.4.2.3 The clutch must be manufactured in the U.S.A.

603.5.4.2.4 Clutch may not be manufactured from the following materials: titanium, carbon fiber, carbon/carbon, magnesium or other exotic material.

603.5.4.2.5 No alteration of the clutches original design, other than replacement of disks, springs, shims, arms and fasteners using standard parts is allowed.

610 OBSOLETE ENGINES

Rules for these engines may be found in the referenced IKF Tech Manual at the listed Section Number. Information available at the IKF office.

- **80cc, 100cc, 200cc, 125cc McCulloch engines:** Refer to 1986 Competition Regulations and Technical Manual, Sec. 604.
- **U.S. 820 engines:** Refer to the 1987 Competition Regulations and Technical Manual, Sec. 605.
- **100cc Stock Appearing:** Refer to 2007 Competition Regulations and Technical Manual, Sec. 606.
- **Open Classes:** Refer to 2007 Competition Regulations and Technical Manual, Sec 607.
- **A-Limited:** Refer to 2007 Competition Regulations and Technical Manual, Sec. 608.
- **Formula A (CIK):** Refer to 2007 Competition Regulations and Technical Manual, Sec. 609.
- **RZ/RD 350 Yamaha:** Refer to 2007 Competition Regulations and Technical Manual, Sec 610.
- **Stock 100cc Reed/Rotary Valve Engines:** Refer to 2007 Competition Regulations and Technical Manual, Sec. 611.
- **Stock 100cc Reed/Rotary Valve Specifications:** Refer to 2007 Competition Regulations and Technical Manual, Sec. 612.
- **Carburetors for Reed/Rotary Valve Engines:** Refer to 2007 Competition Regulations and Technical Manual, Sec. 613.
- **Mac Minarelli AR125:** Refer to 1997 Competition Regulations and Technical Manual, Sec. 614.
- **Controlled Stock 135Cc Reed Valve Engine:** Refer to 1997 Competition Regulations and Technical Manual, Sec. 615.
- **K-71 PISTON PORT:** Refer to 2006 Competition Regulations and Technical Manual, Sec. 620.

615 IAME KA100 REED VALVE 100CC

615.1 Class Intent: The intent of the class is to run the engine (kit) as produced from manufacturer. Items inspected may be compared to known stock parts to ensure compliance. This does not apply to hardware unless specifically called out. Homologation material, supplemental rules and factory identification information may be used if deemed necessary.

615.2 Exterior Modifications: No external modifications allowed. Painting of the head fins for advertisement is allowed. No anodizing or coatings of any parts allowed. Unless otherwise specified, non-tech items include gaskets, oil seals and fasteners.

615.3 Stroke and Bore:

Maximum bore 48.53 mm (1.911")
Maximum stroke 54.05 mm (2.128")
Con rod length 102 mm (+/- 0.1 mm) between con rod centers

615.4 Carburetor: Tillotson HW-33A

Maximum venturi .950" No-Go
Maximum throttle bore 1.107" No-Go
To be run as factory supplied. Butterfly screw must be as factory supplied type.

615.5 Cylinder Head: Squish is .041" minimum with .0625" (1/16") solder. Subject to inspection with profile gauge.

615.6 Air Box: Factory supplied # IAG-9000 blue color type. No modifications allowed.

Two tubes .871" No-Go.
IAME air filter # 10751-A must be utilized except in declared wet conditions where not running a filter is allowed.

615.7 Ports: To be as factory supplied without modification. Port heights checked with LAD tool.

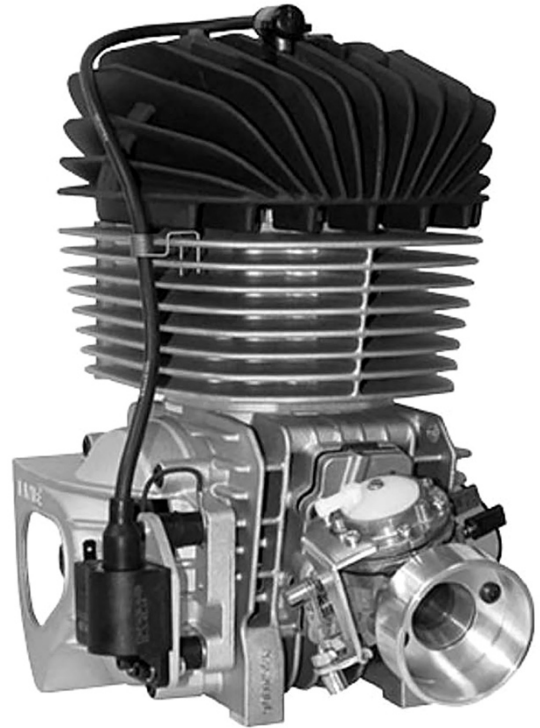
Exhaust 1.420" minimum
Exhaust light break check 1.295" minimum

615.8 Exhaust: System to be run as factory supplied with no modifications.

615.9 Clutch: To be run as factory supplied with no modifications.

Clutch Drum maximum ID 85.2 mm (3.354")
IAME sprocket only
Maximum 6000 rpm per clutch test procedure Sec. 675.13.1
Center friction hub minimum diameter 83 mm (3.268")
Factory supplied 17 mm hex nut required
No holes in drum allowed.

615.10 Ignition: To be run as factory supplied with no modifications.



Timing: .080 minimum – .106 maximum

Spark plug: Only the following spark plugs are allowed, heat range is not specified - NGK B10EG, NGK BR10EG, NGK R6252K-105, NGK R6254E-105. Spark plug must be stock and unmodified. May be compared to known stock plug to determine any modification. Spark plug washer and head temperature sensor must be in place.

615.11 Bearings: Must be of original manufacturer specifications. No double row ceramic balls or other exotic bearings allowed. Ceramic and angular contact type not allowed. Replacement bearings must be of standard type with metal or plastic retainers and must be of the same dimensions as the factory original type.

615.12 Reed Valves: IAME OEM fiberglass reeds marked "IAME" only, # X30125840. Minimum thickness 0.25 mm (0.010"), .009" No-Go.

615.13 Piston: To be run as factory supplied with no modifications.

616 STOCK 100CC PISTON VALVE

Refer to 2007 Competition Regulations and Technical Manual.

616.7 Walbro WB3A Carburetor:

Note: Sections 616.7 through 616.7.3 do not apply to engines under Section 621.2. See Section 621.2.7 for carb information for these engines.

Must be of original manufacture and stock appearing. Fuel can only pass through stock metering orifices. Any means taken to bypass fuel to the engine in any other manner is illegal, no matter how it is accomplished. Any components not specifically called out must be stock appearing. Inlet spring is a non-tech item. Carburetor may be run in either position.

No machine work or metal removal of throttle shaft allowed. Shaft may be sealed with "O" rings. No sleeving of throttle shaft bore allowed.

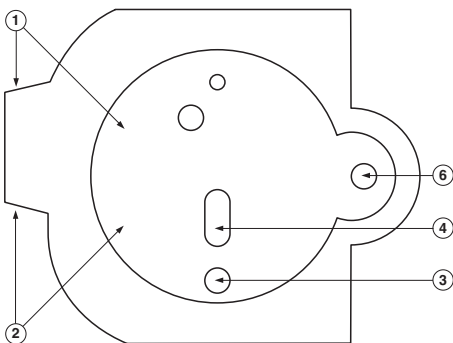
Both screens must be intact at circuit plate and under inlet needle. Filtering devices to protect metering diaphragm allowed. No means of depressing diaphragm allowed.

Fuel Inlet: funneling of brass inlet illegal.

Shims are allowed under metering spring to adjust pop-off pressure.

No sleeving of throttle shaft bore allowed.

(Walbro Carburetor WB3A)

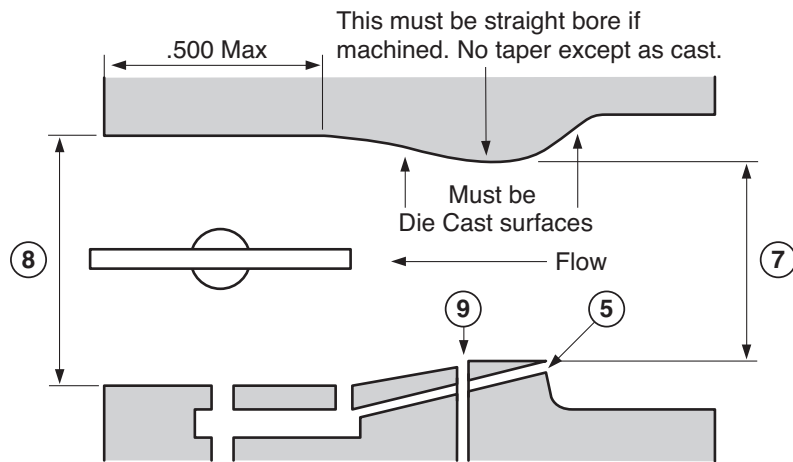


616.7.1 Yamaha KT100S, DAP T50, PCR PP100, TKM BT-82, Komet K-71, KPV, Comer P-50

- | | |
|--|------------------------------------|
| 1. High speed needle seat | .081 No-Go |
| 2. Low speed needle seat | .0595 No-Go |
| 3. Idle Jet | .042 No-Go |
| 4. Transition Jet | .052 No-Go |
| 5. Air pre-mix orifice | .042 No-Go Max.
.032 No-Go Min. |
| 6. Fuel inlet valve seat | .064 No-Go |
| 7. Diameter at narrowest part of venturi | .950 No-Go |
| 8. Diameter at flange end | 1.010 No-Go |
| 9. High speed jet | .074 No-Go |

(Check with bent gauge from inside venturi)

Note: No-Go definition, refer to Section 509.



616.7.2 Fuel Pump Diaphragms: Either Teflon or rubber types are legal.

616.7.3 Fuel Passage Holes: All fuel passage holes on fuel pump side are .140" no-go. (Note: some older carbs may have cast radius at top of holes) No-go drill blank may start into brass inlet tube but may not go through.

617 YAMAHA KT 100S

NOTE: Any attempt to modify, change, or defeat any of the basic design criteria of the Yamaha KT100S engine is illegal.

617.1 Displacement:

Maximum Bore 2.090 Maximum Stroke 1.816

617.2 Cylinder: All ports are to be in "as cast" condition except at the junction of the cast iron sleeve and aluminum jacket. Factory grinding is permitted to remove casting irregularities at the junction only. **No chamfer on port edges.**

This rule does not allow:

617.2.1 Grinding the aluminum to change the roof angle of the transfer ports.

617.2.2 Grinding the port to alter the height, width, or angle.

617.2.3 Grinding to change the shape or size of the passages from the cylinder base to the port.

617.2.4 Grinding to match the cases to the port passages (when cylinder is or is not reversed.)

617.2.5 Sandblasting, glass beading, peening, etc. are not a substitute for "as cast" condition.

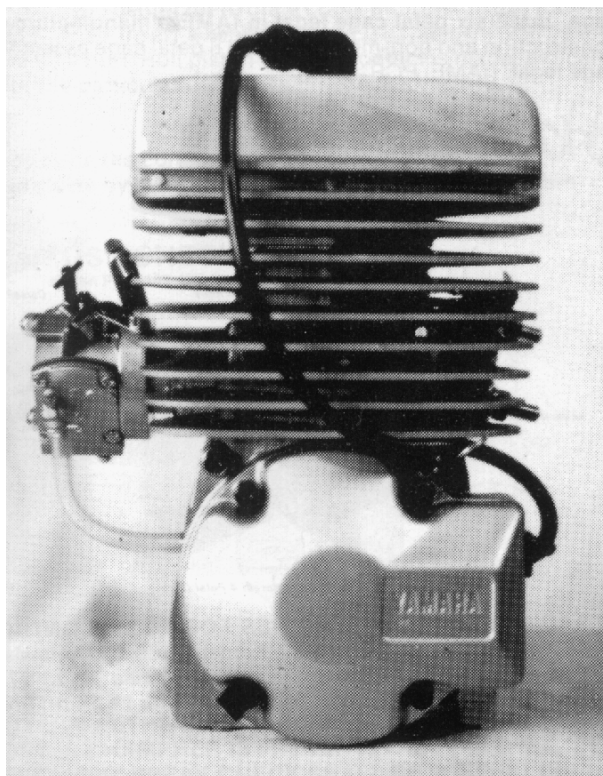
617.2.6 Due to the manufacturing procedures, it is possible that some engines may have slightly "broken" port edges. When this exists it is uniform on all port edges (tops, bottoms and sides) of all ports in the cylinder. The intersection of the port edges and the cylinder wall must still be within tech measurements. As the bore size increases the amount of "break" diminishes. If the cylinder bore size is 2.065 or larger, no "broken" edges are allowed.

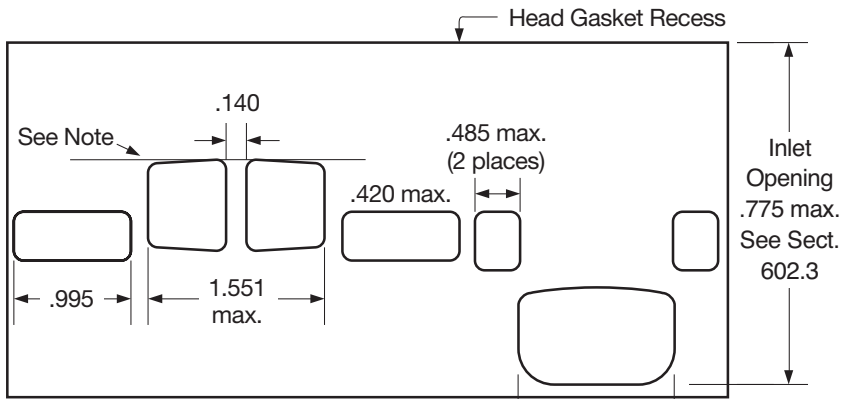
617.2.7 Cast iron may show grinding nicks only. Aluminum only may be blended in the inlet track behind carb and exhaust outlet areas only. Aluminum surfaces non-tech in these two areas only.

Maximum no-go exhaust 1.600.

617.2.8 Blowdown Checking Procedure for Yamaha KT100S Engines:

1. By a careful visual inspection, identify the highest exhaust port and the highest transfer port.
2. Using the Lad tool, zero the dial indicator on the highest exhaust port, taking care to hold the shaft of the tool against the cylinder wall. Refer to Section 602.2.4 for Lad Tool Usage.
3. Roll the crankshaft backwards five turns (.500" on the dial indicator).
4. Insert the Lad tool into the highest transfer port, holding the shaft of the tool against the cylinder wall.
5. Roll the crankshaft forward until the piston stops on the Lad tool and note the value.
6. The value must be between .380" and .420" to be considered legal.
7. Engine to be checked as raced.





NOTE: All port widths are chord measurements. Maximum difference (blowdown time) from top of highest exhaust port to top of highest transfer port is .420".

617.3 Inlet Opening: .775 ATDC (maximum). See Section 602.3.

617.4 Cylinder Position: It is legal to turn the cylinder and piston 180 degrees on the Yamaha KT100S. Matching of the transfer passages in the case and cylinder is not legal.

617.5 Exhaust Port Opening: Check with dial indicator. Piston travel from top dead center to exhaust opening 1.155 ATDC (minimum). See Section 602.2.

617.6 The Exhaust Port Rule: On old cylinders, one and only one exhaust port opening can be ground upon. This includes bottom, sides and top of that one port opening. The cast iron can be ground on. The other exhaust port opening must be in "as cast" condition on the cast iron. aluminum surface will remain non-tech. Great care must be taken not to remove too much cast iron on the .140" minimum rib width side. Widening of this port is allowed, but 1.551" is the no-go size. New cylinders are still "as cast" in all port areas, including exhaust.

To specify a new type cylinder a boss with 787 and Y3 or Y4 is located between the bottom and first fin approximately in the center of the cylinder. One boss each side.

617.6.1 New Style Y3 or Y4 Tech Procedures: Tech will be done using new dimensions listed and must still follow items 1 thru 7. No grinding on cast iron on these cylinders. Any means taken to revoke or alter identification boss will result in that cylinder being teched as a new style.

617.6.2 Old Style tech will be done using new dimensions listed and must still follow items 1 through 7, with the exception that one exhaust port may have the cast iron ground to bring exhaust measurements closer to specification. The remaining other exhaust port must have unaltered as cast finish on cast iron.

The competitors engine that has been ground **is required** to mark the aluminum surface on top of the cylinder next to the stud located above port altered, with an arrow or an X.

The altered port top must be ground a minimum of 90° to cylinder wall. No chamfer allowed. No freeporting of exhaust ports.

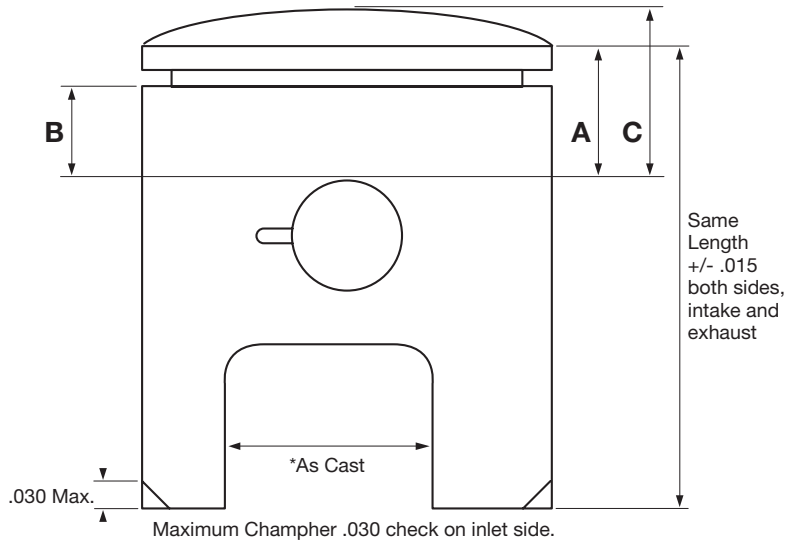
617.7 Cylinder Head: Any machining of the cylinder head or cylinder liner to accept a sealing device is illegal, unless it is stock equipment on the engine Yamaha KT100S. Head locating pins not allowed.

The combustion chamber volume shall be a minimum of 11cc. The IKF 2-Cycle CC Measuring Plug will be used. See Section 602. New die cast head 787-11111-04 is approved. Combustion chamber shape is non-tech.

617.8 Head Gasket Thickness: Yamaha KT100S. Material shall be copper or aluminum. KT100S engine to have a ring type head gasket, and a maximum OD of 2.580.

617.9 Piston: Piston must be an approved single ring only and stock appearing. Legal pistons are Yamaha, Burris, Wiseco, RKE 787, and KSI 2012. All approved pistons should have name cast inside. Bottom of piston should be 90° to sides. Transfer area of piston must be as cast, no scalloping. Piston top must be of dome shape. Burris two ring piston approved (1-dykes + 1 thin). Maximum break on all machined edges .030". Rings must be of magnetic material. See Sect. 504.1.

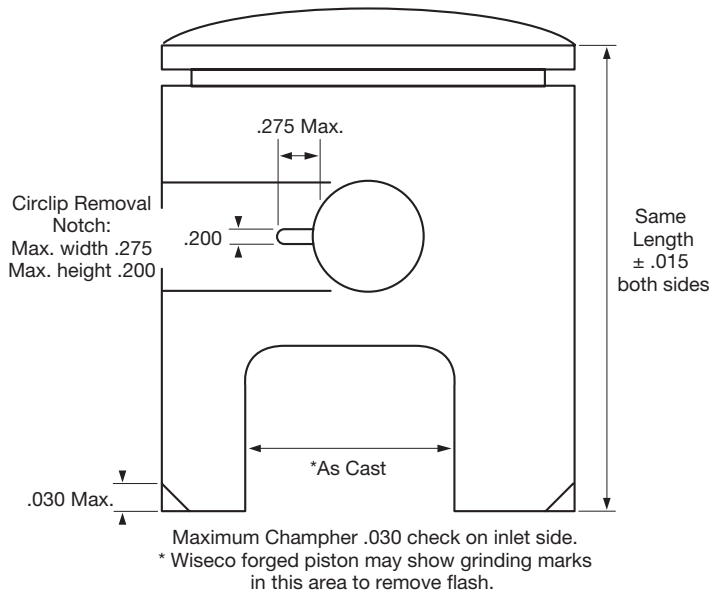
Piston dome must be stock shape and no metal removal. The top of the piston dome to the ring groove will be compared to a known stock piston.



* Wiseco forged piston may show grinding marks in this area to remove flash.

Brand	A	B	C	
Burris	0.633"	0.533"	0.760"	A. Top of piston pin to controlling edge of the piston
KSI	0.629"	0.490"	0.756"	B. Top of piston pin to top of ring groove
KSI 2012	0.609"	0.470"	0.736"	C. Top of piston pin to top of the piston
RKE-787	0.635"	0.489"	0.756"	
Wiseco	0.635"	0.496"	0.760"	
Yamaha	0.635"	0.489"	0.756"	

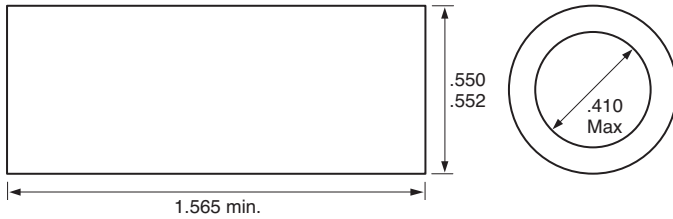
617.9.1 Yamaha engines in all classes except Open: Piston must be installed as factory intended, i.e. ring locating pin must be installed to carburetor side, resulting in wrist pin off set to exhaust side.



Maximum Chamfer .030 check on inlet side.
 * Wiseco forged piston may show grinding marks in this area to remove flash.

617.10 Connecting Rods: Rod must be of original manufacture and stock appearing. Shot peening is allowed. Maximum rod length, center to center: Yamaha KT100S 3.932-3.942 in. No grinding and polishing is allowed. Legal rods 50W-11651-00 (light) and 7F6-11651-02 (heavy duty) are approved.

617.11 Wrist Pin: Stock Type Only - No Tapered Pins - No Coatings.



617.12 Crankshaft: Crank assembly must be original manufacture and stock appearing. Shot peening and polishing is allowed. Outside diameter measurement: Yamaha KT100S 3.410 min. 3.435 max. Concentric bushings may be applied to crankshaft journals to repair worn crankshaft. Bushings may be tack welded to hold in place. Any fastener may be used to retain bushings. No modifications other than listed. No drilling, plugging, etc. May be compared to a known stock part. May be teched by any means at the discretion of the Technical Inspector (weight, dye penetrant, x-ray, etc.).

Crankshaft weight information: Crankshaft assembly with crank savers, medium rod, Yamaha part #7F6-11651-02, ignition half, PTO Half, crank pin and plugs. Maximum weight 1830 grams. Minimum weight 1790 grams. Crankshaft assembly but, with light rod part #50W11651-00 Maximum 1815 grams, Minimum weight 1775 grams. Crankshaft assembly with two ignition side halves 30 grams lighter. The use of two ignition crankshaft halves not legal in 200 Sprint division. Weight without cranksavers deduct 45 grams. If crankshaft assembly does not meet specifications then further investigation is required to determine legality.

617.13 Spacers: The top end of the rod may use two spacers with loose or caged type bearings. Spacer material may be steel, brass or aluminum. The bottom of the rod shall have a caged type bearing.

617.13.1 Bottom location of connecting rod approved with:

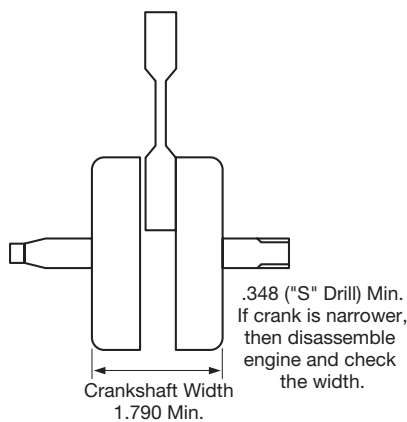
- 2 - 1mm lower washers
- 1 - 13.95mm width lower cage

Must have rod located either top or bottom, but not both.

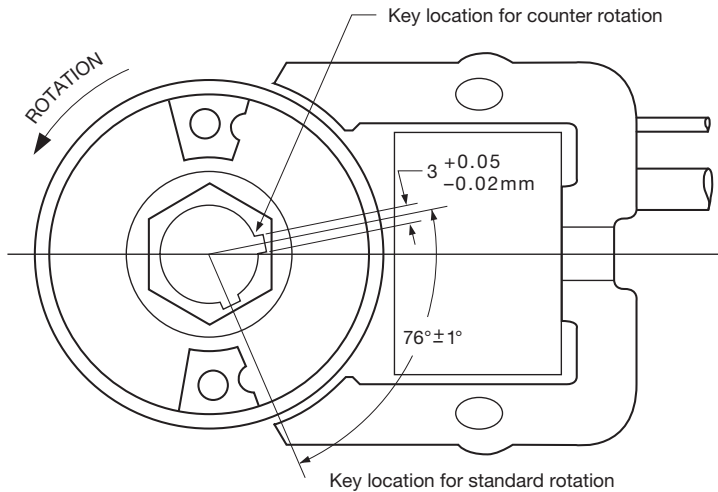
The crankpin shall be hollow and may have two steel plugs in place. Crankpin minimum ID after plug is removed is .400. Plug must be of drillable material and the competitor is responsible for removal of plug in tech.

617.13.2 Note: New crankpin with no plugs approved. Maximum I.D. .425 No-Go.

617.13.3 No coating of crankpin allowed.



617.14 Ignition: Ignition must be of original manufacture and stock appearing. Key is required, but is a non-tech item. Any means taken to alter the coil position is illegal. Machining the shanks of coil hold-down screws to provide additional coil position adjustment is not allowed. Modifying the flywheel in any manner in order to change ignition timing is illegal. Ignition bearing may be removed. Taper bore flywheels have only one keyway and both rotations have the cast side out.



KT-100S COUNTER ROTATION IGNITION ROTOR
787-85551-70 STRAIGHT SHAFT 7F6-85551-50 TAPER SHAFT

617.14.1 New Style Flywheel: 7F6-85551-01 (Std.), 7F6-8555-51 (Rev.) are approved.

Three bosses minimum thickness in boss area .950". Length of boss .750 minimum. Main body thickness .817 minimum. Minimum diameter 2.350".

External coil damage may be repaired with silicone or epoxy.

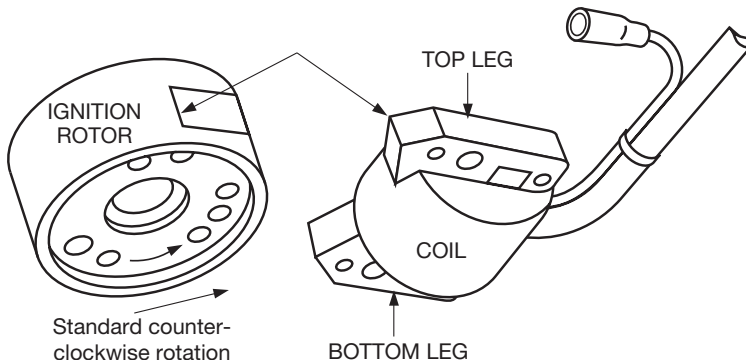
Note: The Atom ignition module is approved for the KT100S.

The PRD T.C.I. ignition is approved for the KT100S. Metal case is stamped with the letters PRD. Only one module may be used.

617.14.2 Old Type Flywheels: Minimum diameter 2.350", Minimum width .827".

617.14.3 New Yamaha ignition coil is approved. "Japan" is stamped on the new coil.

617.14.4 The leading edge of the ignition rotor's magnet must line up with the trailing edge of the ignition coil's leg when the piston is at TDC to .015" BTDC. On clockwise ignitions, the coil's trailing edge is the bottom leg.



617.15 Carburetor: Walbro WB3, see Section 616.7.

617.16 Phenolic Spacer: Hole Size 1.050 maximum, 1.000 minimum. Maximum thickness .484". Straight bore.

617.17 Aluminum Carburetor Mount Plate: Factory stock mount plates only.

Hole (I.D.) size 1.050" maximum, 1.000" minimum. Straight bore.

Diameter (O.D.) 2.360" +/- .020".

Maximum thickness .484".

617.18 Crankcase Pulse Hole: May be relocated to front of engine for use with reversed cylinder. Hole not in use will be plugged. Internal diameter of pulse pipe to be .128" No-Go.

617.19 Inlet Tract: The minimum length of the inlet tract measured from the carb mounting surface (remove carb base gasket) to the cylinder bore diameter:

without restrictor - 2.600" minimum, 2.700" maximum.

with restrictor - 2.650" minimum, 2.750" maximum.

617.19.1 Intake Track Gaskets: For all gaskets in the intake track, maximum .060" thickness at each location, including carb base gasket.

617.20 Crankcase: New Yamaha case approved. Identified by 7ET on bottom of case.

617.21 Old Style Yamaha Cylinders: All Yamaha classes using any type of exhaust or carburetor restriction must add 30 lbs. The cylinder will be identified with a vertical red paint stripe on the outboard side of the cylinder. The competitor will be responsible for having this marking in place prior to pre-tech. This will affect classes using the HPV/KPV/RLV YBX, SSX, SSX-V and SBX mufflers.

618 DAP T-50 PISTON PORT

(Refer to the 2001 IKF Tech Manual for specifications of this engine)

619 TKM BT-82 PISTON PORT

(Refer to the 2002 IKF Tech Manual for specifications of this engine)

620 KPV PISTON PORT

Unless otherwise specified, all parts are to be of the original manufacture and stock appearing.

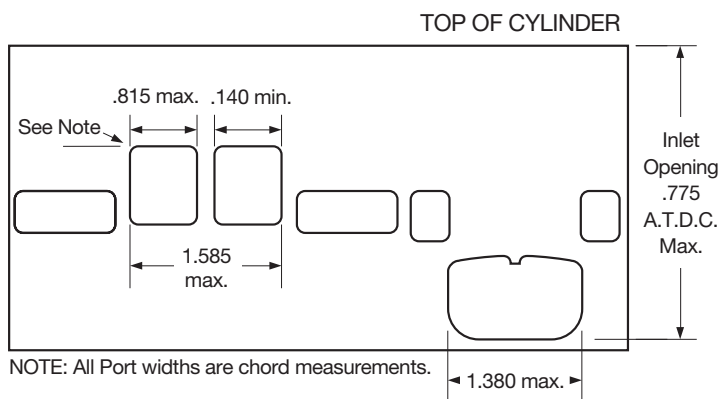
NOTE: IKF recognizes that the HPV engine has been discontinued from manufacture or sale and is being replaced by the KPV engine. KPV specific rules will be published on the IKF website. Generally, the KPV engine will follow HPV rules with the exception of the supplied clutch.

620.1 Displacement:

Maximum Bore 2.085

Maximum Stroke 1.816

620.2 Cylinder: All ports - cast iron liner and aluminum barrel - as cast. No grinding allowed at any location including junction of liner and barrel. The cylinder must be run as supplied by the manufacturer. The liner may not be removed from the barrel and the locking pin must be intact. (Note: iron liner may be notched for rod clearance).



620.3 Exhaust Port Opening: Check with dial indicator piston travel from top dead center to exhaust opening 1.155 ATDC (minimum). See Section 602.2.

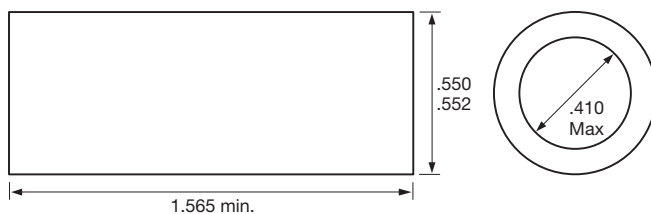
620.4 Inlet Opening: .775 ATDC (maximum). See Section 602.3.

620.5 Cylinder Head: Cylinder head: any matching of the cylinder head or cylinder liner to accept a sealing device is illegal, unless it is stock equipment on the engine. The combustion chamber volume shall be a minimum of 11cc. The IKF 2 cycle cc measuring plug will be used. See Section 602. Combustion chamber shape is non tech.

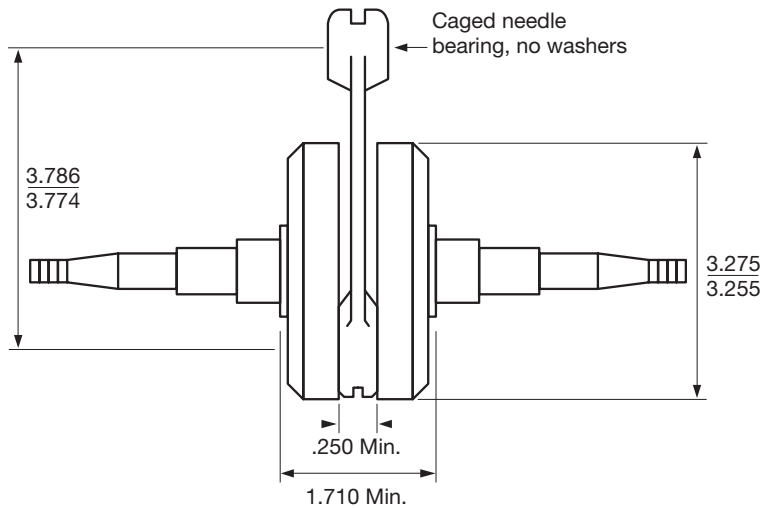
620.6 Head Gasket: Material shall be copper or aluminum. May run without gasket.

620.8 Connecting Rod: Rod must be of original manufacture and stock appearing. Shot peening is allowed. Maximum rod length, center to center: 3.786-3.774. Slotted billet rod.

620.9 Wrist Pin: No Special Alloys. Stock Type Only. No Tapered Pins.



620.10 Crankshaft: Crank assembly must be of original manufacture and stock appearing. Shot peening and polishing is allowed.



620.11 Carburetor: Walbro WB3, see Section 616.7.

620.12 Inlet Tract: The minimum length of the inlet tract measured from the carb mounting surface to the bore diameter is 2.600 minimum, 2.800 maximum. Remove carb gasket when checking.

620.13 Fuel Pump: Illegal.

620.14 Crankcase Pulse Hole: Internal dia. of pulse hole in engine .128 No-Go.

620.15 Phenolic spacer: hole size - 1.040 max., 1.000 min. Straight bore.

620.16 Legal Ignitions: Selletra or new OEM PVL ignition is legal.

620.17 Crankcase: KPV type only as supplied from the factory, no K71. Clutch guard must be in place. No grinding, polishing, or radiusing, etc. Sharp edges may be broken due to normal maintenance and cleaning procedures. No excessive breaks or radiused edges. Maximum break .015".

620.18 Crankshaft: KPV type only, no K71, same as 620.10 except PTO half is large diameter type for outboard drive. EXPD-A clutch.

620.19 Clutch: Komet Piston Port spec drum clutch model #D-71840 is the only legal clutch. It is to be run as manufactured. No modifications allowed. All components are subject to be compared to known stock. Clarification: All components are subject to be compared to known stock. Either the stock 17mm nut or the optional internal hex nut (part number D-75570-US) may be used. No oiling or greasing of clutch. Stall speed not to exceed 5000 rpm maximum.

620.19.1 Clutch Specifications: Maximum ID of clutch drum is 3.360. New drums have three (3) holes and are the only clutch drums allowed. Clutch assembly may be compared to known stock clutch.

Markings as follows:

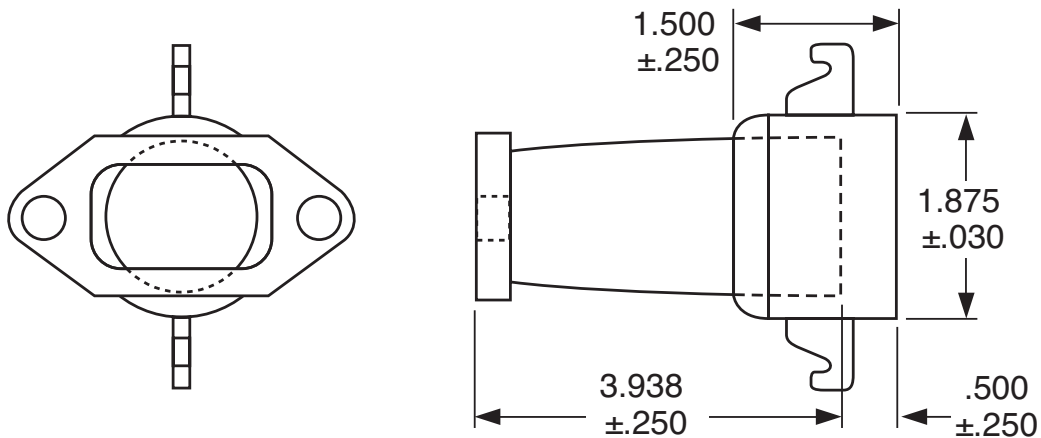
Drum:	IAME KOMET PV P/N D-71550	
Sprocket:	IAME Z10 or Z11	
	10T P/N X30125554-C	11T P/N X30125555-C
	12T P/N X30125556-C	13T P/N X30125557-C
Hub assembly:	D-71840	

620.19.2 KPV Clutch Check: To further validate clutch rule compliance, the clutch stall speed may be subject to tech inspection at any time during an event, including pre and post-race tech, if deemed necessary by the tech officials. Drivers taking the test will be required to drive the rear wheels of the kart over a $\frac{3}{4}$ " by $\frac{3}{4}$ " square tech tool without exceeding the maximum stall test limit of 5,000 RPM. The front tires must be pointed straight ahead and both of the driver's hands must be on the steering wheel. Drivers will be allowed two attempts per test to comply with the rule. Competitors failing the stall speed test will be required to make necessary clutch repairs, and retake the stall speed test and pass the test in order to compete in the remainder of the day's event. The courtesy retest will only be extended if time permits and at the tech officials' discretion.

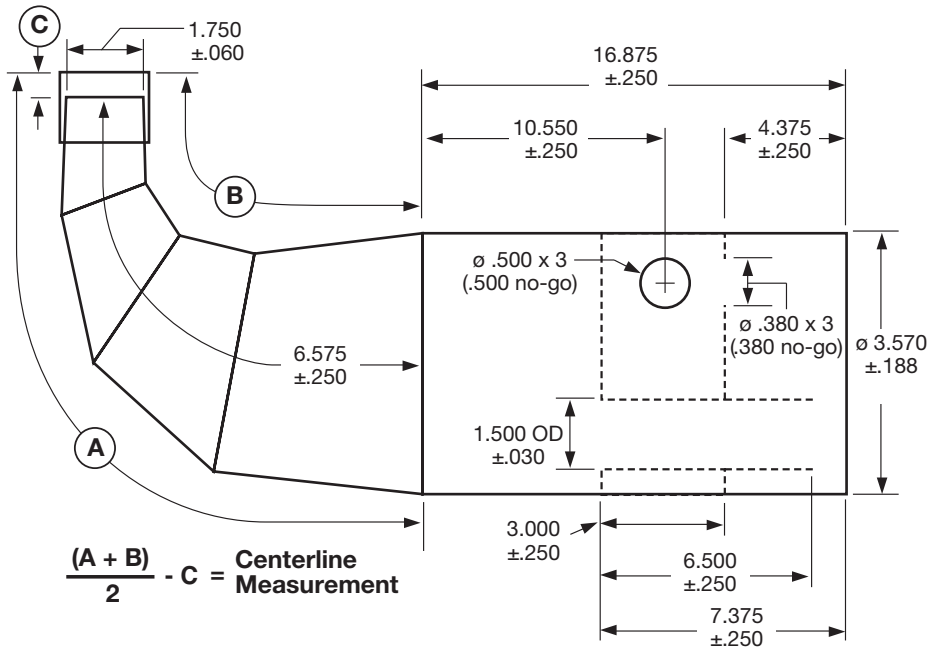
Competitors failing the test for a second time the same day will be disqualified for the remainder of the day's activities including qualifying, the pre-final and the final.

620.20 KPV Header/Flex/Pipes:

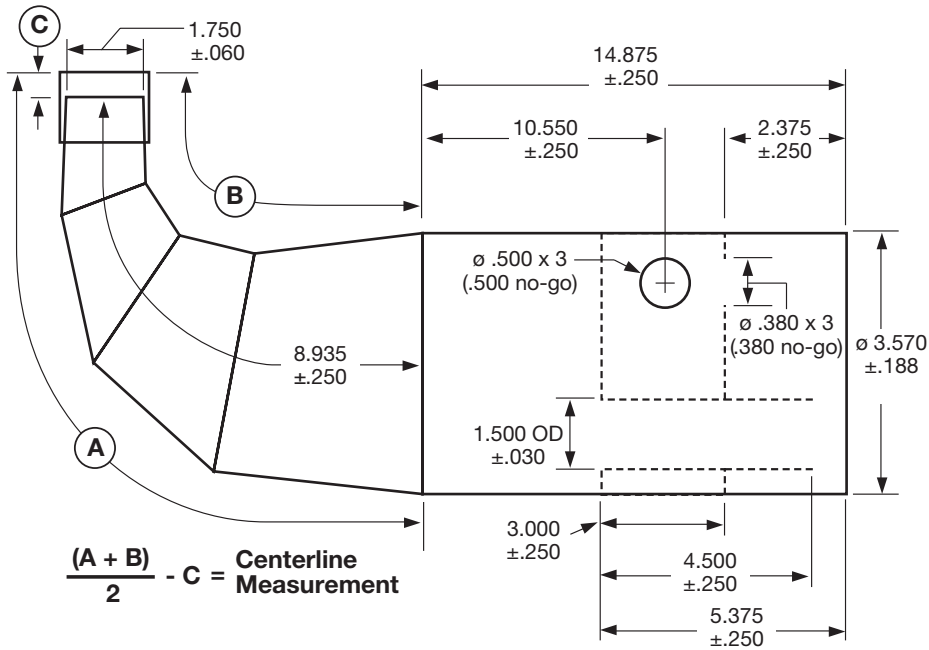
620.20.1 KPV Header/Flex: Header to be as manufactured KPV header. Connector tube to be 1.780" maximum diameter. KPV flex (exhaust connector) must be carbon steel as provided in the KPV kit. This excludes stainless steel, aluminized steel and any type of coated steel. Original flex in kit is black oxide coated to resist rusting. Any other treatment of carbon steel is not permitted. No wrapping of header, flex, or pipe allowed.



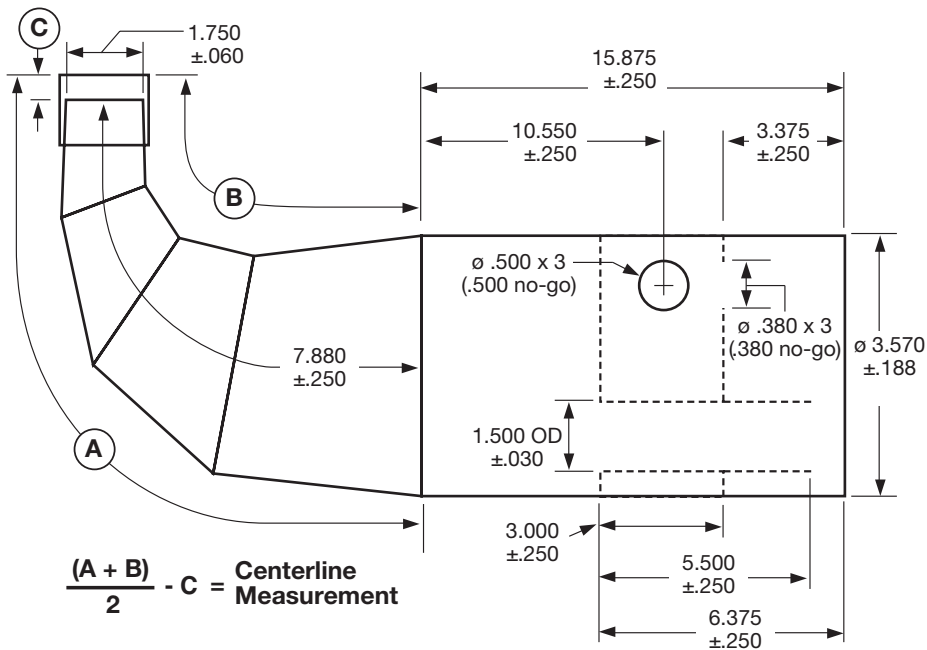
620.20.2 KPV-100 Senior-KPV3: Connector tube length, measuring from the face of the piston to end of connector tube, 11.875 minimum to 12.375 maximum for KPV.



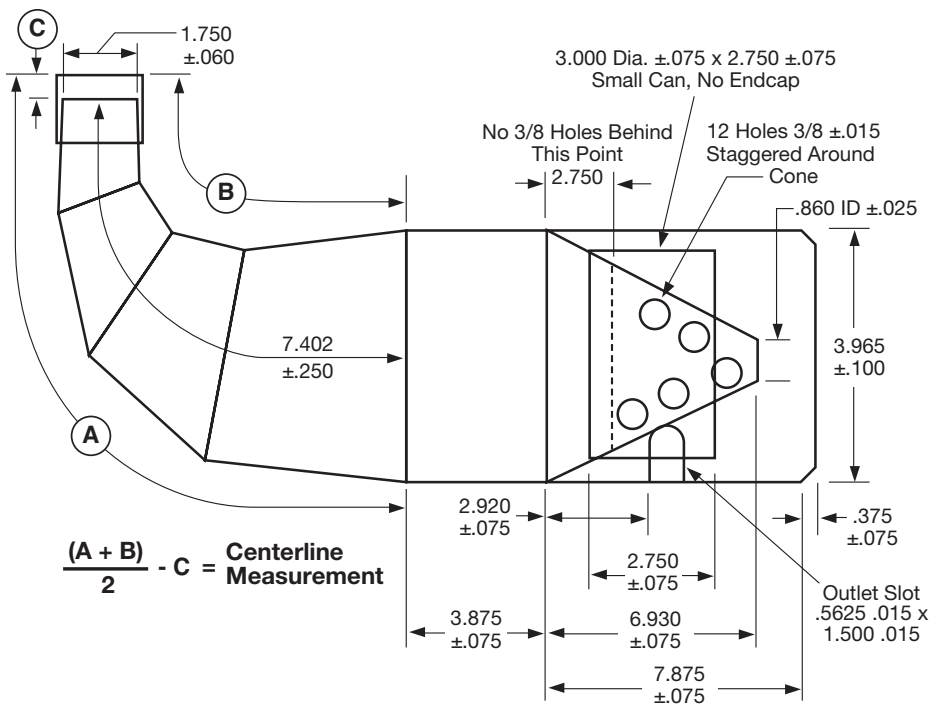
620.20.3 KPV-100 KPV1 Cadet: Connector tube length, measuring from the face of the piston to end of connector tube, 11.875 minimum to 12.375 maximum for KPV.



620.20.4 KPV-100 Junior-KPV2: Connector tube length, measuring from the face of the piston to end of connector tube, 11.875 minimum to 12.375 maximum for KPV.



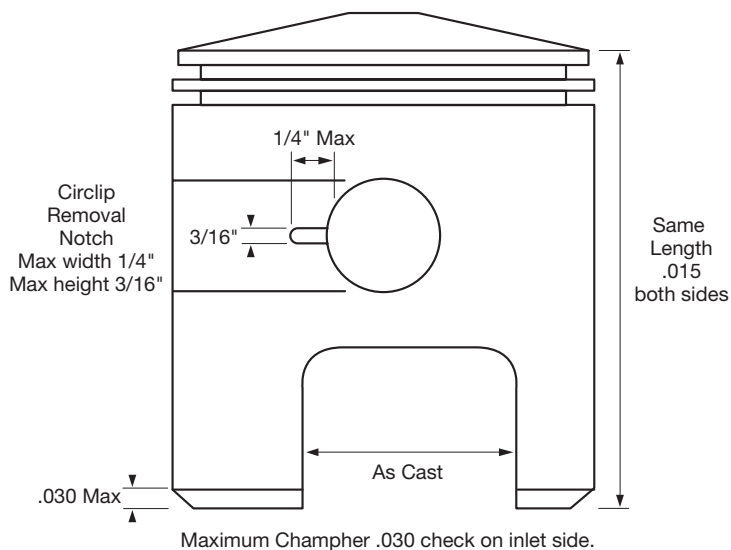
620.20.5 KPV-100 KPV4: Connector tube length, measuring from the face of the piston to end of connector tube, 9.875 minimum to 10.375 maximum for KPV.



620.21 Legal Ignition: Selletra or new OEM PVL ignition is legal.

620.22 Carburetor: Walbro WB3A (see Sect. 616.7) Hi-Lo "T" type adjusters allowed. No remote/trigger carburetor adjusters allowed.

620.23 Piston: Piston must be IAME double ring only and as manufactured with mold number 2802 or 1319 and name cast inside. Maximum break on all machined edges .030" on skirt area only. The bottom ring on the KPV must be in place and is a non tech item. Rings to be of magnetic material.



620.24 Cylinder: KPV100 Main and auxiliary port dimensions: 1) Main transfer port @ .750 in two (2) locations; 2) Auxiliary transfer port @ .650 in two (2) locations.

620.25 KPV 1 Cadet Class Specs:

620.25.1 KPV 1 Carburetor:

Refer to 623.4.2.2 for carburetor drawing and specifications.

Inlet tract length: 2.900" min. 3.100" max.

Carb-to-manifold and manifold-to-block must be sealed to air intake and is subject to tech.

All air and fuel must enter the engine as originally designed.

Pulse hole .085" No-Go.

1 OEM aluminum carb mounting plate, part number 992321 must be straight bore with max. I.D. .630".

Must use KPV phenolic spacer 992305

620.25.2 Exhaust: Must use KPV1 pipe (620.20.3). Header and flex (620.20.1).

621 PCR PP-100 Piston Port

Refer to 1997 IKF Comp. & Tech. Manual

621.1 COMER P50 Piston Port: Refer to 2006 IKF Comp. & Tech. Manual

621.2 FIA/FMK 100cc Piston Port Engines: Refer to 2006 IKF Competition & Technical Manual

622 COMER K-80 80CC PISTON PORT (Gas and Oil Only)

This Section covers stock piston port valve engines under 81cc. Engines to have single cylinder and single stock carburetor. Unless otherwise specified, all parts are to be of the original manufacturer and stock appearing. The following engine has been homologated for this class: Comer K-80.

NOTE: The Comer K-80 two-piece cylinder and head is mandatory. Cylinder must be OEM with IKF or WKA identification. Engine must be run with shroud in place.



622.1 Displacement:

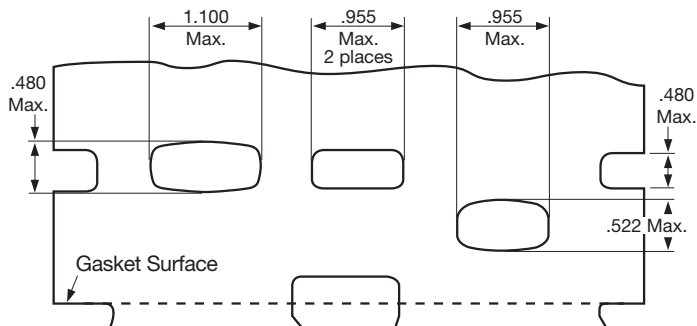
Bore: Max. 2.055 (Chrome Bore)

Stroke: 1.495 min., 1.505 max.

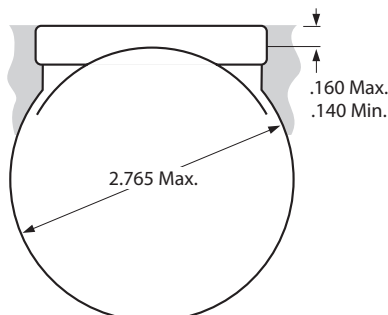
622.2 Non-Tech Items: Unless otherwise specified, non-tech items include gaskets, oil seals, bearings and cages, and fasteners. Bearings are a non-tech item but must be of same internal diameter, width, and outside diameter as original parts. No Ceramic ball or any other type of exotic design main bearings are permitted.

622.2.1 Pressure/Vacuum Leak Test: Engine must pass the tests described in 603.2.19.

622.3 Exhaust, Intake and Transfer Ports: Check port heights and widths per following diagrams. Note all dimensions are to opening and do not include radius allowed for chroming of bore. Ports are not ground or polished. Grinding, polishing, shot blasting are not allowed.



622.3.1 Primary Port Height Check: Will be made by the LAD port gauge and the secondary check will be the Visible Light Check. Using the LAD gauge, exhaust port height is 1.140" minimum and intake port height is .460" maximum. Exhaust port Visible Light Check is .970".



622.4 External Modifications: Those which do not effect a performance gain are legal.

622.5 Engine Additions: Conventional air cleaner and starter nut. Engine must be run with supplied clutch and muffler. Stock muffler only. Original manufacture only. No welding repair. No exhaust leaks permitted. All must be as supplied with engine and all subject to tech. Clutch: 10 tooth/#35 chain or 12 tooth/#219 chain.

622.6 Carburetor: Tillotson HL166A, HL166B, HL166C, or HL395 legal. All HL166 specifications apply. 1. Throttle shaft and butterfly shutter must be stock as factory supplied. Maximum throttle

shaft bore of .223 to allow for wear only. Minimum throttle shaft diameter of .212 to allow for wear only. 2. Butterfly stop pin is non-tech. 3. Only three low speed orifice holes allowed. Hole size is non-tech. 4. Hi and low speed needle seat hole size is non-tech. 5. Hi and low speed adjusting screws are non-tech. 6. Hi speed dump tube may be altered, however ball check must be in place. 7. HL395 supplied without choke assembly or stop pin.

622.6.1 Rookie Comer 80 Restrictor: The restricted air filter/silencer adapter is designed to provide safer racing for drivers racing in this class.

622.6.1.1 The restrictor is available on the IKF website. Restrictor is black anodized, and bears the IKF logo. No alteration allowed. Anodizing must be intact. Passage size is 0.647 No-Go.

622.6.1.2 Install on the intake of the carburetor where airbox is attached. O-ring must be in place.

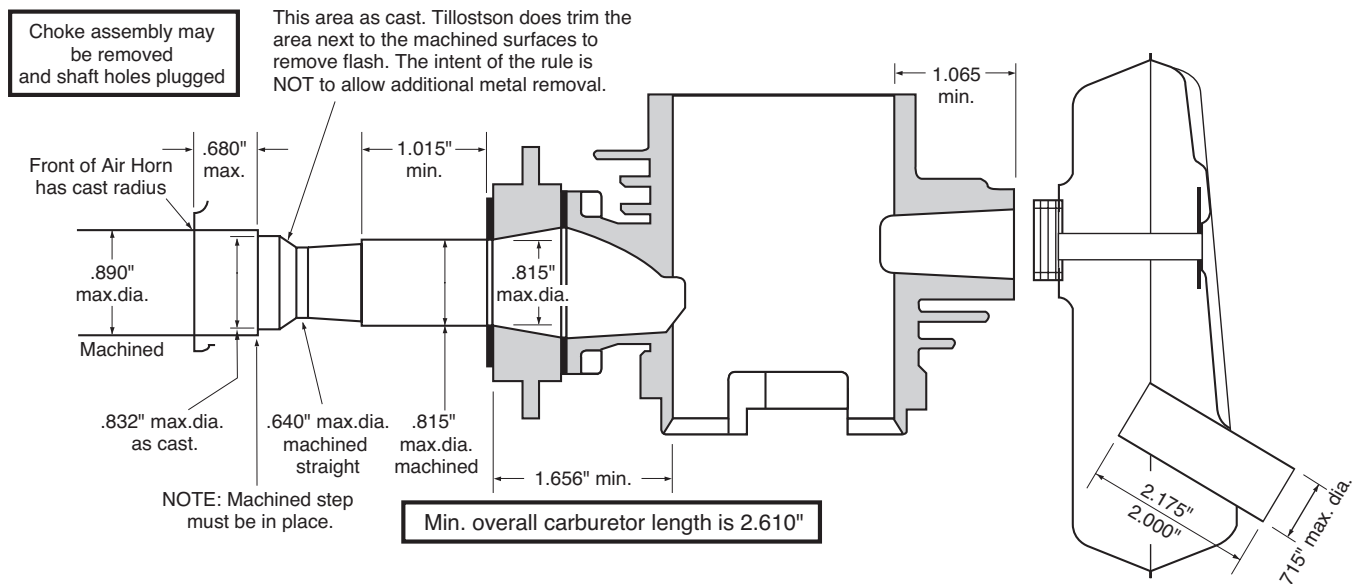
622.6.1.3 Air passageways for the purpose of bypassing the restrictor cup are not permitted.

622.6.1.5 Any competitor found changing or altering the restrictor cup is subject to six (6) months suspension from IKF events.

622.7 Rod Length: 2.683-2.673

622.8 Ignition: Bosch is slotted for adjustment. Adjustment slots are cast in and cannot be machined for more adjustment. Spark plug must be 1/2" reach plug only. Machining the shanks of coil hold-down screws to provide additional coil position adjustment is not allowed.

622.9 Cylinder/Head Volume: Head must have Comer OEM casting identification. O-ring or head gasket may be used. Head gasket to be located with cylinder studs. Cylinder head gasket surface may not be stepped to center or locate head gasket, flat surface area only at gasket surface. The combustion chamber volume shall be a minimum of 8.5cc and spherical in shape. A .200" washer to be used with cc measuring plug. No welding to chamber or spark plug area allowed. Cylinder head cannot protrude into cylinder.



622.10 Base Gasket: .003 minimum.

622.11 Exhaust Gasket: One gasket only, maximum thickness .060. Exhaust gasket must be whole and in place.

622.12 Crankpin: must be hollow with a .240" min. to .270" max. ID. No Drilling, plugging, etc. May be compared to a known stock part. May be teched by any means at the discretion of the tech inspector (weight, dye penetrant, x-ray, etc.).

622.13 Ignition: Flywheel key width shall be .115" minimum thickness. No broken or removed fins from the flywheel.

622.14 Clutch Specifications: Clutch must be run as manufactured. Refer to Section 622.50.17.

622.15 Piston and Crank

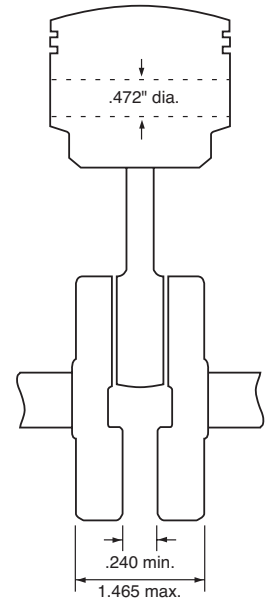
622.15.1 Piston: USA Piston Only (stamped on top). Radius of top of piston curvature: 80mm ± 4mm. Radius must be continuous, no flat spots. Both rings must be in place. Piston skirt length must be same ± .015" both sides.

622.15.2 Crankshaft: Full circle type crankshaft. 2.705" maximum diameter, 2.685" minimum diameter. All other dimensions as shown in diagram.

No drilling, plugging, etc. Polishing is allowed. May be compared to known stock part. May be teched by any means at the discretion of the Technical Inspector (weight, dye penetrant, x-ray, etc.)

622.15.3 Crank Pin: Must be hollow with a .240" minimum to .270" maximum inside diameter.

PISTON AND CRANK



622.51 COMER C51 RULES, Competition Class

622.51.1 Engine specifications: All engines to remain stock, as supplied by the manufacturer. No grinding of parts or aftermarket accessories (including fasteners) except as specifically noted. The intent of this class is to allow beginning drivers (and their parents) the opportunity to learn driving and mechanical techniques. The only changes permitted are those that will promote equality among competitors rather than increasing performance. C-51 series engine has plastic covered on/off switch.

622.51.2 Combustion chamber: OEM shape. CC:8.3 minimum using a .310 thick washer and the IKF CC measuring plug will be used. It is the competitors responsibility that the tool and spacer be installed and properly torqued. Combustion chamber to remain as manufactured. All threads to be intact. If a thread insert is used it must be full length. Any attempt to bypass the intent of the rule is illegal.

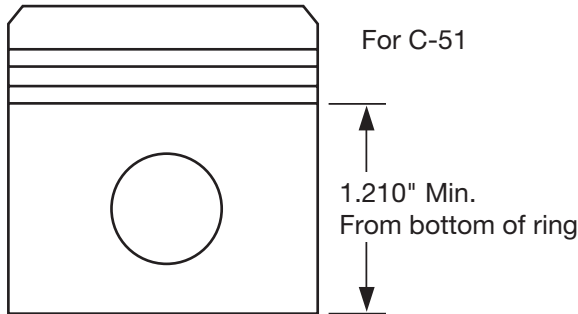
622.51.3 Port height check: Install dial indicator onto cylinder and zero at TDC. Insert 3 mm rod, no longer than 3.00" (76.3mm), approximately 1/4" (6mm) into appropriate port. Rotate piston until gentle contact is made. Release 3mm rod, it is to remain unsupported. Read dial indicator.

Exhaust: 1.200" minimum Intake: 0.370" maximum

622.51.4 Cylinder: Liner and aluminum cylinder "as cast." No grinding allowed at any time.

622.51.5 Ignition: Timing shall be checked with a dial indicator as per published procedure. C50 components may not be used on C51 motors. Ignition key must be in place. Selettra flywheel (code 02.0004.662) weight 378-402 grams marked "Selettra" approved. Only for use with Selettra coil C11. 2007 flywheel (manufacturers code FJ) weight 378-402 grams, approved. Only for use with 2007 coil 88301000343 (also identified with two raised ribs). Coils may NOT be interchanged.

622.51.6 Piston: Must be OEM and stock appearing. Both skirts must be same length +/- .015" both sides. Minimum piston length from bottom of ring land to bottom of piston 1.210". No other modifications allowed.



622.51.7 Rings: Must be OEM rings, max. gap .040". Rings cannot fall through cylinder.

622.51.8 Seals: Must be installed as OEM. Seal brand is non-tech, but no attempt to reduce sealing or drag is allowed. Seal spring must be in place. Evidence of a leaking seal is grounds for disqualification.

622.51.9 Main bearings: Brand is non-tech, but must be of same size and type as OEM except dual row permitted. Ceramic ball or any type of exotic design are not permitted.

622.51.10 Crankshaft Assembly: Crankshaft assembly, including crank pin and wrist pin must remain stock. Total weight of crankshaft with complete piston 669-711 grams. Polishing of journals to allow slip fit in bearings allowed. 2007 crankshaft has machined surface on outer face of flywheels.

622.51.11 Plug boot: Non-tech

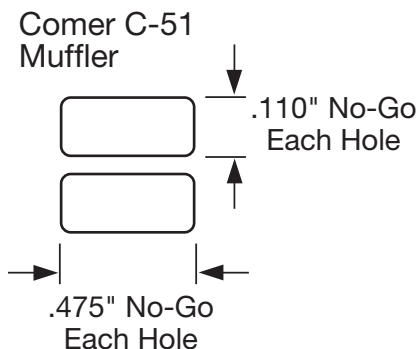
622.51.12 Plug wire: OEM, outer protective shielding allowed.

622.51.13 Plug reach: Plug, non-tech. Reach to be OEM. If plug is run without gasket, it must meet OEM reach dimension.

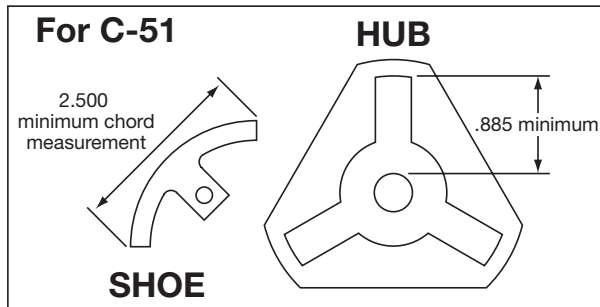
622.51.14 Air filter: K&N #RC-1250 or equivalent. Flange inside diameter 57mm. Filter base diameter 89mm. Filter top diameter 51mm. Filter length 102mm. flange length 16mm. Flange style centered. Filter must remain unmodified.

622.51.15 Carburetor: Model SHA 14-12L Dellorto. All parts "as cast." .475" No-go venturi. No go for jets is .020" to max of .026". No repairs to broken carb bodies. Stripped bolt holes may be repaired with thread inserts or next size bolt installed.

622.51.16 Muffler: OEM C51 only. Holes as per IKF Rule Book Section 622.50.15. Exhaust gasket, one OEM, Bolts must be tight. If safety wired, tech inspector must remove bolts. It is recommended that a "sniffer" be used to determine exhaust integrity. Among acceptable "sniffers" are Robinair Model 14970 (low range), TIF Model 5500 and Snap-On Tools Model ACT5600.



622.51.17 Clutch Specifications: Clutch must be run as manufactured. Numbers provided as reference only. Shoes must have "Comer" name cast into them. Shoes must be stock appearing, no polishing or removal of material. Minimum width of shoes and assembly .650". Shoe length minimum 2.500" chord measurement. Spring maximum diameter .430" and 9 coils. Wire diameter .075" - .080".



622.51.18 Shroud: No taping of shroud allowed. Replacement fasteners allowed.

622.51.19 Base gasket: Must be in place, no maximum thickness.

622.51.20 Chain & gearing: Comer 10T clutch, #219 chain. Rear sprockets 89T.

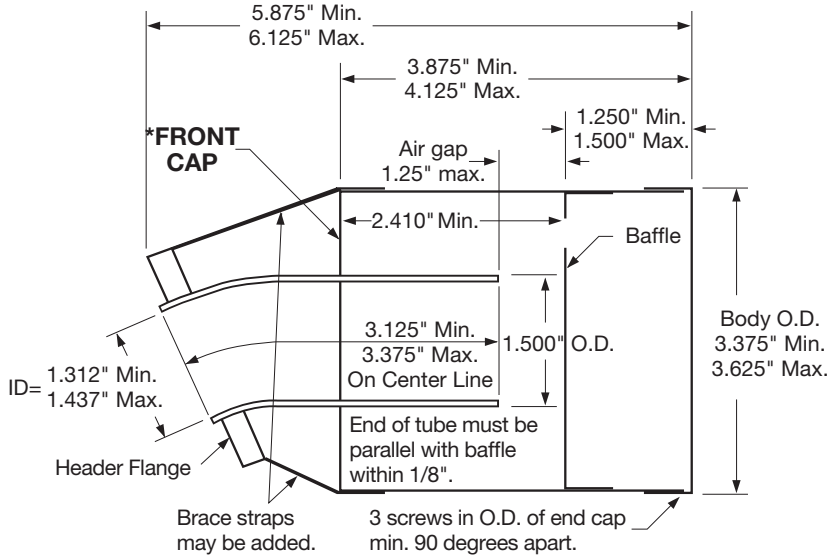
622.51.21 Timing check procedure:

- Remove spark plug
- Remove starter cover
- Install dial indicator in spark plug hole
- 0 dial indicator to TDC
- Rotate flywheel in anti clockwise rotation until the first magnet is exposed to the left of the coil
- Observe mounting lug of coil. Note the bottom of the lug is machined to match the curve of the flywheel. The left hand edge of the lug (nearest to engine center) is the edge we will use to determine ignition timing.
- Rotate the flywheel clockwise to align the right hand edge of the magnet with the left hand of the mounting lug and take a reading. Leading edge (RH) should be .050" to .060".
- Any readings outside these dimensions are illegal.

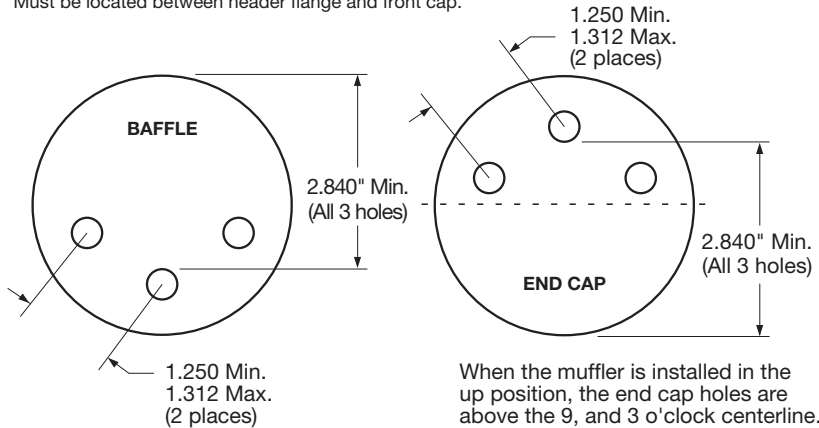
623 INTAKE AND EXHAUST RESTRICTIONS (Jr. and Sportsman Classes)

Any attempt to by-pass the restricted type of muffler is illegal.

623.1 RLV BOX MUFFLER, YBX (Yamaha Box Muffler, Patent # 373,561)



*EGT gauge is allowed. Probe and fitting **MUST NOT LEAK (see section 603.2.14)**. Must be located between header flange and front cap.

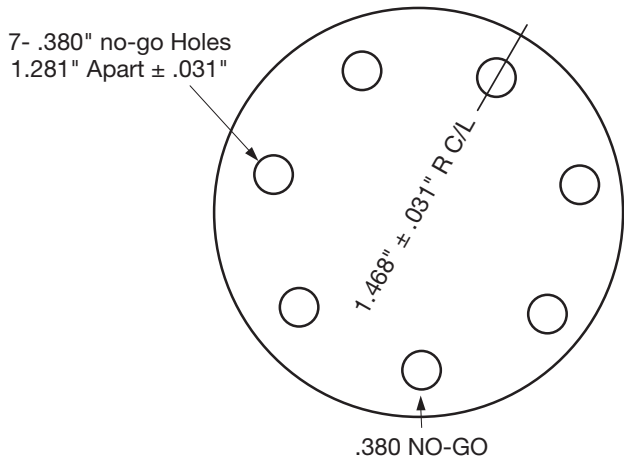
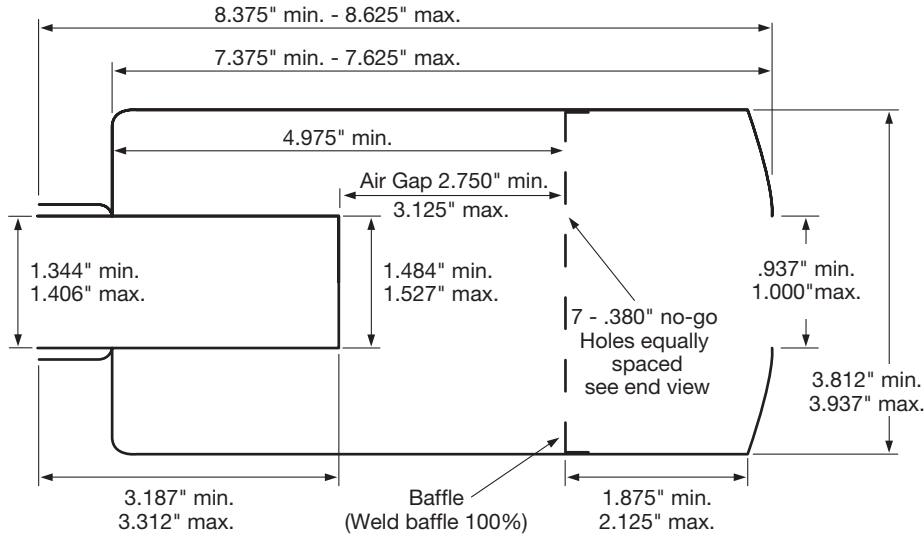


INSIDE VIEW RLV BOX MUFFLER, YBX

Note: End cap must be removable for inspection of baffle with 3 each .380" maximum "No-Go" holes spaced approximately 1.250" apart. End cap to have 3 each .380" maximum "No-Go" holes rotated 180° or opposite baffle exit holes. In operation, end cap and header flange must be securely fastened with no leakage. Must be installed in "up" position. Check of exhaust gas leakage may be made by a gas leak detector. All Yamaha box muffler 2-Cycle classes are only allowed one exhaust port gasket at .200 maximum thickness. Any attempt to by-pass the restricted muffler is illegal. **Re-drilled holes or missing screws are not allowed.**

Clarification: The RLV Yamaha Box Muffler shall be used as manufactured. This is a restricted muffler.

623.2 RLV Box Muffler, SBX (Stock Box Muffler)



623.2.1: Muffler to be run with connector tube length as specified by class rules.

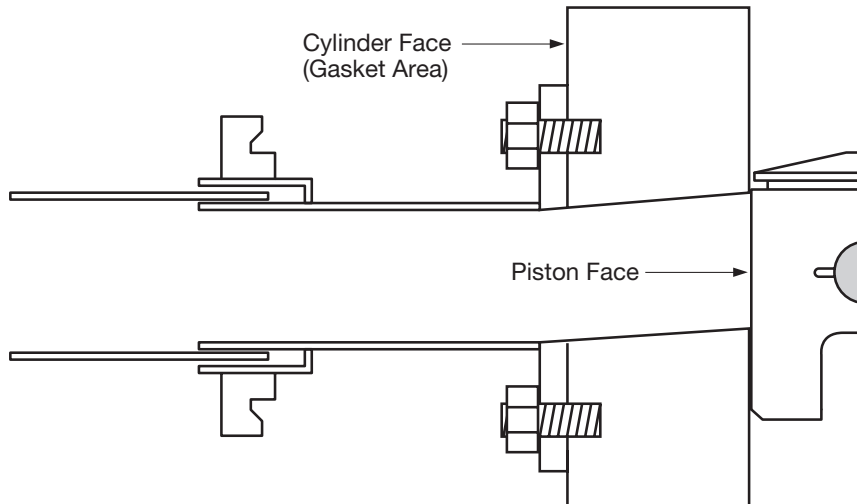
623.2.2 Any attempt to by-pass restricted type muffler is illegal.

623.2.3 Straight, conventional type headers only. No tapered or curved headers allowed. Tube diameter must be same end to end. Maximum header tube ID 1.700" excluding flex cup. Minimum header tube ID 1.350". Maximum header length from flange to outlet end 5 in. Angle header is legal (up or down only, no curve.)

623.2.4 Only solid steel tubing to be used at the connector. No flexible pipe. Minimum tubing ID 1.600". Maximum tubing OD 1.780".

623.2.5 All stock box muffler 2-Cycle classes are only allowed one exhaust port gasket at .200 maximum thickness, steel-wrapped gasket with nonconductive mineral material. Copper gaskets are illegal.

623.3 Exhaust Header/Flex Diameter



For all KT100S and Piston Port stock engine classes the exhaust header, flex, and exhaust pipe, shall be round and 1.780" maximum outside diameter starting at the cylinder face and continuing to a minimum 7" from the piston face for fixed pipes and 5" from the piston face for slippy pipes. For engines with rectangular exhaust ports, the 1.780" maximum diameter will begin a maximum of 1.75" from the **cylinder** face. The transition from a rectangular exhaust port to the round exhaust diameter must be only that required to change from the rectangular port to the round exhaust pipe. There shall be only one exhaust path, no multiple exhaust pipes. The intent of this rule is to eliminate large diameter primary exhaust pipes. Any attempt to circumvent this rule will be deemed illegal.

623.4 IKF Junior Carburetor Restrictor

The piston valve engine may be restricted. The restrictor is to be placed next to the cylinder. The hole is "as punched" with a specified no-go max. .065 maximum thickness material. See particular class for hole size.

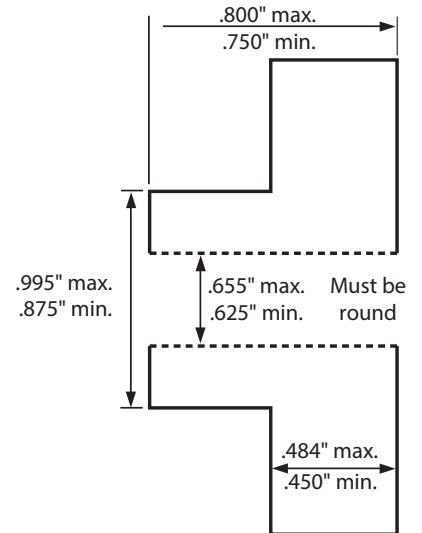
623.4.1 Restrictor hole must be located in center of throttle bore regardless of restrictor shape. Any attempt to bypass restrictor is illegal. Material of construction must be aluminum, minimum thickness .055", maximum thickness .065". No funnel or cone devices may be added. (See sketch.) Hole to be as punched. For all engines using restrictor plates, all gaskets in the inlet tract shall have a maximum sum total thickness of .060", minus carb gasket, and a minimum inlet hole size of one inch. Restrictor to be placed next to the cylinder. At least one gasket(s) required on each side of restrictor.

623.4.2 For .600 restrictor class only, Junior I Sprint can use Walbro WA55B or WA55-1 and IKF legal manifold, with no modifications, or can run Walbro WB3A carburetor with restrictor as in the past.

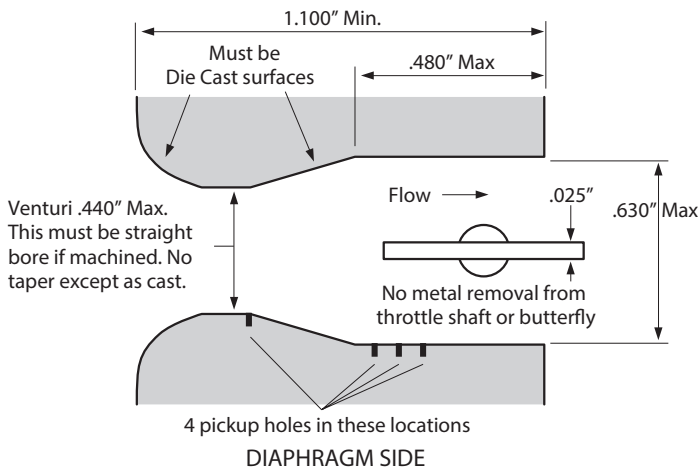
Exception: Rookie Sportsman Sprint must run the Walbro WA55B or WA55-1 and IKF legal manifold.

623.4.2.1 Restricted Manifold for Walbro WA55B Carburetor

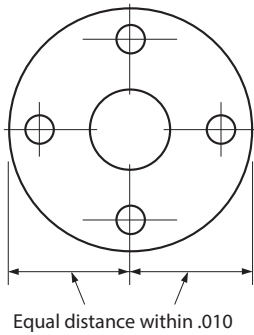
- a) Manifold must be constructed of aluminum and machined in such a manner to prevent any type of air leaks. Air may only pass through carburetor. No leakage allowed. Restricted manifold bolts directly to phenolic spacer (replaces factory aluminum carb. mount).
- b) Inlet Tract: 617.19 applies. The minimum length of the inlet track measured from the carb mounting surface (remove carb base gasket) to the cylinder bore diameter 2.600 minimum 2.700 maximum.
- c) I.D. of air filter .750" minimum, all other adapter rules apply (see 603.1.3).
- d) Both listed diameters must be concentric.
- e) Maximum corner break .030, any area.



623.4.2.2 Walbro WA55B, WA55-1 Jr. Carburetor: Section 616.7 applies. Throttle shaft bore of the carb body to remain stock. Maximum throttle shaft bore of 0.191 to allow for wear only. Minimum throttle shaft diameter of 0.180 to allow for wear only. No metal removal from throttle shaft or butterfly.



For inlet length see 617.19 and 617.19.1.



RESTRICTOR PLATE

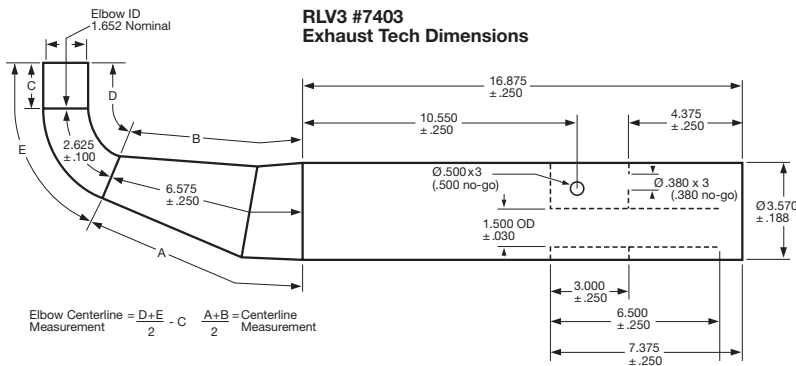
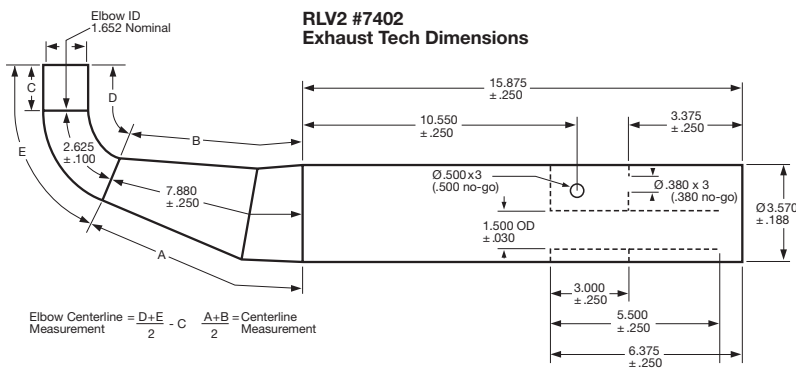
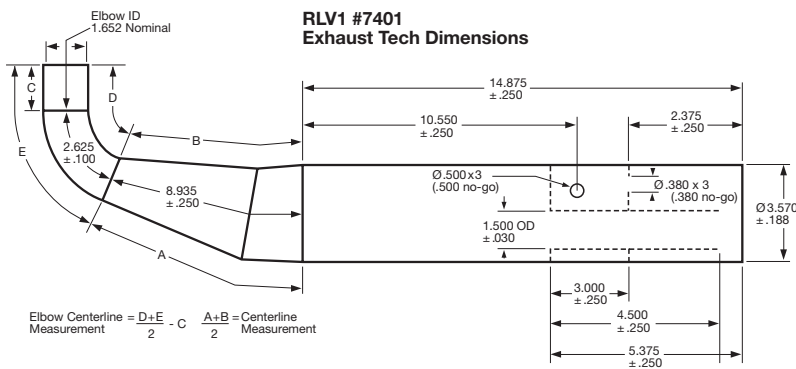
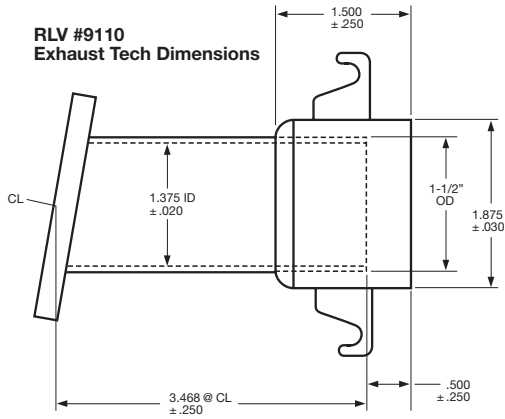
All holes on common centerline, must be round.
 May have 4 holes. 2 for Tillotson, 2 for Walbro.
 Center hole to be as punched.
 No de-burring or polishing.

Max. inlet tract length with restrictor installed 2.750.

623.5 Junior Piston Port: For Junior Piston Port rules see 2007 Competition Regulations and Technical Manual.

623.6 RLV1, 2, 3 Pipes and Header: Exhaust connector shall be solid tube carbon steel. No wrapping of header, flex, or pipe allowed. Connector tube (flex) length is 9.375" to 9.875", measured from the face of the piston to the end of the connector tube.

Exhaust holes shall remain as manufactured, holes may be clogged in any direction. All current pipes are allowed.



623.7 RLV Box Muffler, SSX/SSX-V (Super Sportsman Muffler)

623.7.1 Overall length including header flange and cap is 5.50" \pm .125".

623.7.2 Body (can) overall length including end cap is 4.140" \pm .125".

623.7.3 The inlet tube length including header flange (the average of the long and short sides) is 2.0" \pm .125".

623.7.4 Air gap (from the end of inlet tube to center baffle) is 1.0" \pm .125".

623.7.5 Center baffle to end of the can without end cap is 2.20" \pm .0625".

623.7.6 14 holes centered on baffle plate on a 2.937" hole circle \pm .0625".

623.7.7 The 14 holes in the baffle plate are .380" No-Go.

623.7.8 The four holes in the body are .500" No-Go.

623.7.9 "IKF WKA" and "US Pat. #373,983" are stamped into the body.

623.7.10 The RLV Sportsman Muffler (SSX) must be run/used in the horizontal position.

623.7.11 The RLV Yamaha Super Sportsman Muffler (SSX) shall be used as manufactured by RLV.

623.7.12 This is a restricted muffler and shall not be modified in any way.

623.7.13 Road Race Configurations RLV SSX Muffler:

623.7.13.1 Road race with the holes down and can straight.

623.7.13.2 Road race with the holes up and can in 10°, left hand engine.

623.7.13.3 Road race with holes up and can in 10°, right hand engine.

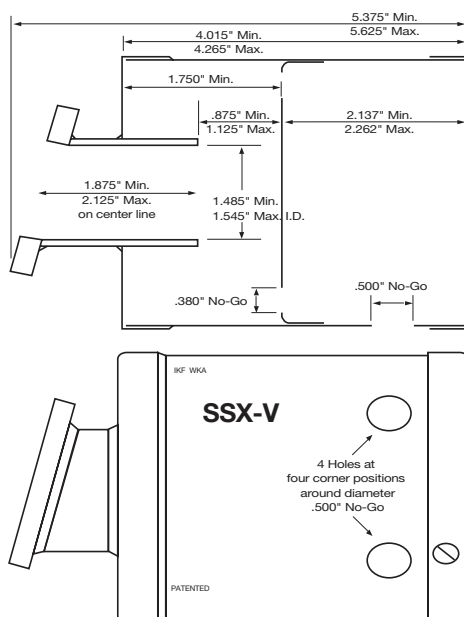
623.7.13.4 Road race with the holes up and can straight.

623.7.14 Road Race Configurations RLV SSX-V Muffler: Road race as manufactured in horizontal position.

623.7.15 Sprint configuration: at four corner position (SSX-V) and can straight. (horizontal).

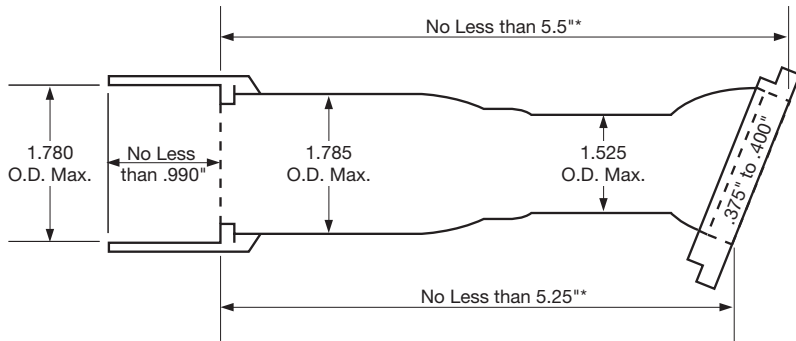
(diagrams shown in the horizontal position)

RLV SSX-V MUFFLER (patent no. 373983)



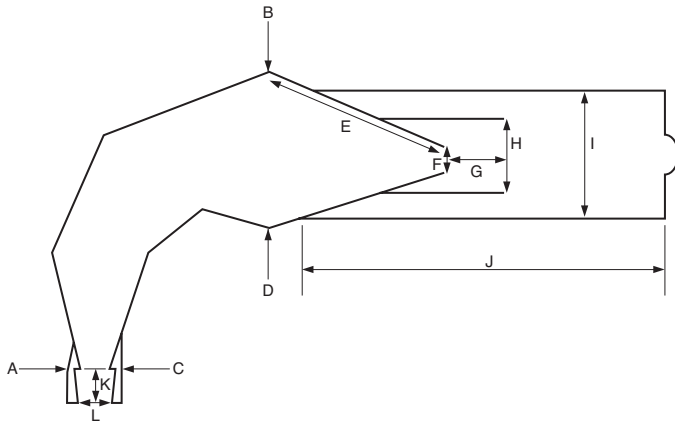
623.8 2-Cycle Speedway KB12 Spec Yamaha Header & Pipe

623.8.1 KB12 Spec Yamaha Header



* If either of these dimensions are less than the listed dimensions, add both dimensions together and divide by 2. The average combined mean distance must be greater than 5.375" or the header will be deemed illegal.

623.8.2 KB12 Spec Yamaha Pipe



623.8.2.1 Total volume from point F to the end of the cup at point L -2, 400cc \pm 50cc.

623.8.2.2 Average combined mean distance between points A & B, and points C & D is 12.0625"

623.8.2.3 Circumference at points B & D - 14.25"

623.8.2.4 E = 8.5" \pm .125"

623.8.2.5 G = 1"

623.8.2.6 H = 2.375"

623.8.2.7 I = 4"

623.8.2.8 J = 11.125"

623.8.2.9 K = No less than .990"

623.8.2.10 L = No greater than 1.780" I.D.

623.8.2.11 Unless otherwise specified, all exhaust pipe measurements shall be \pm .25"

623.8.2.12 EGT gauge is allowed but must not leak. EGT must be located within 1.525 O.D. section of the header. Silencing cans and caps must fit tightly and be in place.

623.8.2.13 Any attempt to modify, bypass, repair, coat or paint the header or exhaust is illegal. The KB12 spec pipe and header shall be used as manufactured.

624 ENGINE & PARTS HOMOLOGATION, 2-CYCLE PROCEDURE

Next open homologation period has been put on hold. Notification will be published when engines will be accepted for homologation, however, major parts will be accepted under the following guidelines. Ignitions not included in major part groups.

624.1 All engines, prototype parts, etc., must be submitted to IKF by April 1st of each year for approval. All approved engines and parts will be legal January 1st the following year. The total number of required parts for homologation must be available by October 1st or homologation will be void. IKF will approve/disapprove all parts/engines on or before June 1st.

624.2 Payment, drawings, and pictures of parts and/or engines must accompany the same when submitted. All payments are not refundable.

624.3 Any expenses incurred to inspect, count parts/engines will be the responsibility of the person(s)/company submitting the same.

624.4 Engines will have major part groups. Any changes of these parts are limited to the original manufacturer of the same. Any changes to any of these groups carries the same requirements or payment and part quantities.

- A.** Crankcase Assembly
- B.** Crank Shaft Assembly (includes crank parts and rod)
- C.** Cylinder Assembly (liner and/or aluminum casting)
- D.** Head
- E.** Any bore, stroke, and/or rod length changes constitutes an engine homologation.

624.5 With the change of any major part, 25% of the finished parts must be replacements, 25% may be in new engines with balance shown by proof of ready available units. In case of off-shore parts proof will be notarized letter from a CIK representative along with picture(s) of the actual finished parts. Only one major part may be submitted on an annual basis.

624.6 All rods must be magnetic material.

624.7 Homologation fees will be reviewed on an annual basis.

624.7.1 Engine fee = \$2000

624.7.2 Major Part fee = \$1000

624.7.3 Minor Part fee = \$100

624.8 All parts submitted for approval must retro fit engine submitted for. (No machine work or modification to existing engine allowed.) Any part submitted may be refused if there is proof of improved performance potential.

624.9 External changes which IKF feels do not in any affect a performance gain, do not need homologation, but must be submitted for the record.

624.10 Number of parts required for approval, 100 units.

624.11 IKF reserves the right to retain all submitted engines and parts.

624.12 Send all parts/engines/drawings, etc. to:

I.K.F., 1609 S. Grove Ave., Suite 105, Ontario, CA 91761.

624.13 New Homologation Parameters

Homologation will be on a three year basis delayed by one year from CIK homologation.

Manufacturers, importers, or individuals will be required to renew each homologated motor annually by August 31st for the following year. Yearly renewal fee, \$750.00 each with included advertising program. Failure to renew will result in motor being removed from the current I.K.F. Tech Manual and submissions for major and minor parts groups for that motor will not be accepted. (Engines remain eligible for competition, however, technical regulations will be referenced back to older tech manuals.)

The availability and distribution of the product may affect the approval process.

Major and minor parts groups may be submitted as currently listed above (624.1 to 624.12).

Annual motor renewal fees must be current for major or minor parts submissions to be accepted (this includes submissions from suppliers other than manufacturers).

Ignitions will not be included in major parts groups.

624.13.1 Engine Homologation Quantities —all engines:

For CIK approved engines: 75. For non-CIK approved engines: 100.

624.13.2 IKF Board of Directors reserves the right to postpone homologation of engines. Notification will be made one year before the presentation opening date as listed under Section 624.

625 homologated engine renewals for 2018 (per 624.13)

The annual engine renewal fees have been paid for the following engines: Yamaha KT100S

626 PURE ENGINE CLASS HOMOLOGATION

626.1 Pure engine class submissions for Regional Championship class approval must include all proposed rules and class guidelines as they pertain to that particular division(s) of karting. The submission must be made to the appropriate divisional technical and/or advisory committee. Committee recommendation for approval will be forwarded to the current IKF President for disposition. The IKF President will have the sole and final authority to approve or disapprove the submission.

626.2 All pure engine class submissions will require a new sample of the engine and all specified components (carburetor, pipe, restrictors, etc.) for all requested class configurations to be sent to the IKF office. If submission is rejected, all items will be returned.

626.3 Pure engine class submissions for Junior classes may require a sample engine(s) for performance testing. Contact the appropriate technical committee chairperson for specific instructions. Samples will be returned after testing.

626.4 Refer to Section 101.3.4 for procedure on how new Regional Championship classes will be developed.

650

SHIFTER TECH SPECIFICATIONS

651 RULES COMMON TO ALL IKF SHIFTERS

651.1 Unless otherwise specified, all major components must be OEM. All references to "Stock OEM" and "OEM" require the parts to be of the same brand and model of the engine, however, the model year may vary.

651.2 Kick starter may be removed and plugged. Case may be modified to accept straight manifold.

651.3 Radiator is open. Radiator must be mounted to left or right side of driver. Coolant may not contain any Glycol based material. Water wetter or other surfactants may be used. Water pump type must be as submitted by engine manufacturer.

651.4 Adequate catch containers are required for carburetor and radiator overflows. Regardless of the presence of a catch container, any kart spilling fluids on the track is subject to disqualification with a mechanical black flag.

651.5 Gas and Oil mix fuel only.

651.6 Engine Substitution: A competitor may elect to change an engine at any time. They may do so at the direction of the head tech official at the event. It must be removed from the kart in the tech impound area and must be held there until the completion of said event. If a competitor's finishing place warrants a tear down motor tech, then both motors must be teched as per head tech official direction.

651.7 Engines: All previously accepted engines are approved through 2001 model year. Effective January 1, 2002, all engine manufacturers/ importers must provide certified documentation of manufacturers producing a quantity of designated "motocross" motorcycles with a minimum of 200 units for the 2002 model year which are available to North American retailers. The use of AMA (American Motorcycle Association) documentation is an acceptable means of verification. If not previously approved by IKF. Manufacturer/importer must provide to the IKF office one complete set of engine design cut sheets showing in detail all part dimensions/specs with listed part numbers. A complete engine will be accepted but may not be returned in accordance with IKF homologation guidelines.

651.8 Exhaust Temperature and Lambda Sensor Fitting: Exhaust temperature and Lambda sensor fitting must be welded or brazed in place. Pipe clamp types are not allowed. If temperature probe is not in place in the fitting, the fitting must be plugged.

651.9 Intake Noise Suppression: Where air boxes are required by local authority, see Sec. 603.1.4 through 603.1.4.7. Where air boxes are required, air boxes shall have a maximum of three 29 mm tubes.

651.10 Hegar 4 Electric Start Kit allowed in all classes utilizing Honda CR125 engines. Kit must be run as supplied with no modification.

652 FORMULA CR80/85 CADET

652.1 Allowed Engine: Honda CR80 or CR85 only.

652.1.1 Top End: Cylinder and head must be OEM CR80 or CR85 and may be altered. Grinding of exhaust ports is open. There will be NO grinding, sandblasting or any treatment of the intake ports, transfer ports or auxiliary ports. These areas are to remain as cast. There will be no grinding at the transition of the transfer ports and to the cases. There will be no addition or deletion of ports and adding of material is prohibited on all ports.

No "O" ringing of the head.

No tech on finish on top of piston.

Head and combustion chamber volume minimum 7.8 cc with I.K.F. tech tool.

652.1.2 Bottom End: Cases must be OEM CR80 or CR85 with no modifications i.e. no cutting, grinding or welding allowed. This includes the case transition area to the cylinder transfers. Case sleeving and squaring allowed. Rod, crank, piston and rings must be stock OEM CR80 or CR85 only. No substituting of parts. Polishing is allowed on the crankshaft journal only to achieve a slip fit for the case bearings. Bearings are non-tech but must be of the same size and dimensions as stock OEM CR80 or CR85. Seals and gaskets are non-tech.

652.2 Intake System: Carburetor must be stock Honda or Mikuni part #13200-033-00 series. Carburetor must be a single venturi, straight bore with a maximum bore of 28.5 mm, float bowl type only. No pumper type carbs allowed. Carburetor air horn must be stock from airhorn face to slide.

Fuel pump must be pulse type, no pump around systems. No axle or electric fuel pumps allowed.

Intake manifold and reed block must be OEM CR80 or CR85, modifications to manifold and reed cage are not allowed. Reeds are non-tech.

652.3 Ignition System: Ignition box is non-tech. Stator, rotor, key and flywheel (including wires and connectors) must be OEM CR80 or CR85. Stator & Rotor must be mounted in stock location, no alteration to stock position is allowed. Ignition system may not control fuel induction system in any manner.

652.4 Exhaust Pipe & Silencer: Pipe to be as manufactured by R.L.V. and carry the part # 6209.

Exhaust silencer is open but will be a minimum of 8" in length, excluding end caps and fittings, and a minimum of 3" in diameter (minus 10% tubing tolerance). The core will be of perforated material with at least the following pattern or larger, minimum 1/8" diameter holes on a 3/16" staggered center pattern. This pattern produces a 41.4% open area. The core must be perforated for at least 6". The core may not exceed 1-1/4" inside diameter and will be wrapped in fiberglass or steel wool.

652.5 Clutch and Transmission: OEM CR 80 or CR85 parts and gear ratios only. No tech on finish. Clutch basket assembly must be OEM CR80 or CR85, no grinding allowed. Friction disc and springs are non-tech.

Aftermarket 3rd gear is allowed. Transmission ratios must remain OEM. After market gear weight must exceed OEM gear weight.

No air or electric shifters allowed

Ignition kill speed shifter not allowed.

653 FORMULA 80/85 - Junior, Senior, Limited

653.1 Sprint/Shifter Racing Engines: The only accepted engines for this class are as follows: Honda CR80, CR85, Kawasaki KX80, KX85, Suzuki RM80, RM85, Yamaha YZ80, YZ85, TM80 MX and TM85 MX. Maximum displacement may not exceed 85.00 cc's.

653.2 Road Race Engines: Accepted engines in this class are restricted to the Honda CR80/CR85, Kawasaki KX80/KX85, Suzuki RM80/RM85, or Yamaha YZ80/YZ85 with no other manufacturers included by design. Maximum displacement is 85.00 cc's.

653.3 Top End: Cylinder and cylinder head must be OEM. Ports may be altered, no addition or deletion of ports allowed. Cylinder head may be modified. Piston assembly open. Aftermarket pistons allowed. Displacement may not exceed 85.00 cc's.

653.3.1 7.8 cc minimum head volume, measured with Marvel Mystery Oil, using IKF adapter tech tool.

653.4 Bottom End: Stock OEM crank and rod assembly, no modifications allowed. Polishing on crankshaft journal only, to achieve a slip fit for the case bearings is allowed. Bearings are non-tech but must be the same size and dimensions as stock OEM. Seals and gaskets are non-tech. Cases must be OEM, modifications allowed.

653.5 Intake System:

653.5.1 Carburetor must be a single venturi 28.5 mm (no-go) floatbowl type. Must be a Mikuni TM, Keihin PE or Keihin PWK series carburetor. No machining of the venturi bore is allowed between the slide and the engine side of the carburetor. No power jets. Floatbowl extensions and modifications are allowed. Carburetor air horn must be stock from the air horn face to the slide. No pumper type carburetors.

653.5.2 Intake manifold and reed block must be OEM. Modifications to manifold and reed cage are allowed. Reeds are non-tech. Manifold Reinforcement Plate, an additional metallic manifold plate, to add support to the thin walled reed cage area of the barrel, is allowed.

653.5.3 Air filters or air box adapters are allowable up to 1.25" in length.

653.5.4 Fuel pump must be pulse type. No axle or electric fuel pumps allowed

653.5.5 Intake Noise Suppression: Air boxes are required when local authority mandates. See Section 603.1.4.

653.6 Ignition System: Ignition box is non-tech. Stator, rotor, and flywheel (including wires and connectors) must be OEM and may not move by any remote device. Ignition system may not control fuel induction system in any manner.

653.7 Exhaust System: Open. Must comply with exhaust noise suppression requirements. Silencer "muffler can" must be a minimum of 2.5" O.D. by a minimum of 8" long, excluding the end caps and fittings. For oval shaped silencer, the average of the wide and narrow sections will be used for the diameter measurement. The perforated noise suppression section of exhaust tubing must be a minimum of 6" in length.

653.8 Transmission: Standard OEM motocross gear ratios only. Transmission and clutch components may be altered but must be OEM except as follows: clutch plates, friction discs, and springs are non-tech items. No axle mounted clutches allowed. One way Sprag type bearings are allowed. No air or electric shifters allowed, however, this restriction may be waived to accommodate special driver needs but must be approved by the IKF Board of Directors.

653.9 Other: OEM water pumps must be retained.

654 FORMULA 125

654.1 ENGINES: All production Moto Cross based, single cylinder, 125.00 cc max. displacement, reed induction engines are legal in this class. Engines must be readily available over the counter to the general public in the

U.S.A. Engines must be normally aspirated, have wet clutch operation, an integral water pump, and one single venturi floatbowl type carburetor.

654.1.1 TOP END: Cylinder and cylinder head must be OEM. Ports may be altered, no addition or deletion of ports allowed. Cylinder head may be modified. Piston assembly open. Aftermarket pistons allowed.

654.1.2 BOTTOM END: Stock OEM Moto Cross crank and rod assembly only, no modifications allowed. Cases must be OEM, modifications allowed to accommodate a straight intake manifold.

654.1.2.1 Both production versions of the TM125MX crankshaft are considered legal. TM crank assembly will be teched per documents provided by TM.

654.2 INTAKE SYSTEM: One normally aspirated, floatbowl type, single venturi carburetor. Pumper carburetors are illegal. No fuel injection allowed. Power jets are legal, but may not be controlled by ignition system.

654.2.1 Size of carburetor, intake manifold, reed cage, reeds are open.

654.2.2 Fuel pump must be pulse type. No axle or electric fuel pumps allowed.

654.2.3 Intake Noise Suppression: Air boxes are required when local authority mandates. See Section 603.1.4.

654.3 Ignition System: Ignition box is non-tech. Stator, rotor, and flywheel (including wires and connectors) must be OEM and may not move by any remote device. Ignition system may not control fuel induction system in any manner.

654.4 Exhaust System: Open. Must comply with exhaust noise suppression requirements. Silencer "muffler can" must be a minimum of 2.5" O.D. by a minimum of 11-1/2" long, excluding the end caps and fittings. For oval shaped silencer, the average of the wide and narrow sections will be used for the diameter measurement. The perforated noise suppression section of exhaust tubing must be a minimum of 10" in length.

654.5 Transmission: Standard OEM motocross gear ratios only. Transmission and clutch components may be altered but must be OEM except as follows: clutch plates, friction discs, and springs are non-tech items. No axle mounted clutches allowed. One way Sprag type bearings are allowed. No air or electric shifters allowed (NOTE: This rule may be waived to accommodate special driver needs but must be approved by the Gearbox committee and/or the IKF Board).

Wet clutch only. No modifications to OEM clutch assembly. Aftermarket discs and plates allowed. Axle clutches are not allowed.

654.6 Other: No axle or external water pumps allowed.

655 ICC (KZ) ENGINES

655.1 All CIK approved ICC (KZ) engines are allowed. CIK rules govern engines. Competitor must bring a copy of his engine homologation papers to tech inspection.

655.1.1 Airboxes: Any current or previously homologated CIK air box is allowed. Two 29 mm tubes.

655.1.2 Exhaust pipe: Must be a current or previous homologation for the brand of motor upon which it is being used.

655.1.3 Exhaust Silencer: Must meet CIK dimensional specifications and IKF noise specifications in Sec. 511.1.8.

SHIFTER ENGINE SPECIFICATIONS REFERENCE CHART								
Class	Engine	Piston	Porting	Cylinder Head Volume	Ignition Box	Timing	Carburetor	Exhaust
Formula CR80 Cadet	Honda CR80/85	OEM	Exhaust Port Only	7.8cc w/IKF Tool	Non-tech	Stock	Stock Honda 28.5mm w/o Pump Around	RLV #6209 with Spec Size Silencer
Formula 80 Junior	Honda CR80/85 Kawasaki KX80 Suzuki RM80 Yamaha YZ80/85 TM80/85 MX	Aftermarket Okay	Open, no addition or deletion of ports	7.8cc w/IKF Tool	Non-tech	Open	Mikuni TM, Keihen PE or PWK	Open
Formula 80 Limited	Honda CR80/85 Kawasaki KX80 Suzuki RM80 Yamaha YZ80/85 TM80/85 MX	Aftermarket Okay	Open, no addition or deletion of ports	7.8cc w/IKF Tool	Non-tech	Open	Mikuni TM, Keihen PE or PWK	Open
Formula 80 Senior	Honda CR80/85 Kawasaki KX80 Suzuki RM80 Yamaha YZ80/85 TM80/85 MX	Aftermarket Okay	Open, no addition or deletion of ports	7.8cc w/IKF Tool	Non-tech	Open	Mikuni TM, Keihen PE or PWK	Open
Formula 125	Honda CR125 Kawasaki KX125 Suzuki RM125 TM125 Yamaha YZ125	Aftermarket Okay	Open, no addition or deletion of ports	Open	Non-tech	Open	Open	Open
ICC / KZ	Per CIK	Per CIK		13.4cc w/IKF Tool	N/A	Open	DellOrto 30.08mm	Per CIK

656 FORMULA 125 LIMITED, FORMULA 125 LIMITED HEAVY for Roadrace

656.1 Engines: Maximum displacement 125.00 cc's.

The accepted engines in this class are restricted to the Honda CR125, Kawasaki KX125, Suzuki RM125, Yamaha YZ125, TM 125MX with no other manufactures included by design.

Intercontinental C -ICC- engines per Sec. 655 are allowed.

656.1.1 Top End: Cylinder and cylinder head must be OEM. Ports may be altered, no addition or deletion of ports allowed. Cylinder head may be modified. Piston assembly open. Aftermarket pistons allowed.

656.1.2 Bottom End: Stock OEM crank and rod assembly, no modifications allowed. Cases must be OEM, modifications allowed.

656.2 Intake System: One normally aspirated, floatbowl type, single venturi carburetor. Pumper carburetors are illegal.

656.2.1 Size of carburetor, intake manifold, reed cage, reeds are open.

656.2.2 Fuel pump must be pulse type. No axle or electric fuel pumps allowed.

656.2.3 Intake Noise Suppression: Air boxes are required when local authority mandates. See Section 603.1.4.

656.3 Ignition System: Ignition box is non-tech. Stator, rotor, and flywheel (including wires and connectors) must be OEM and may not move by any remote device. Ignition system may not control fuel induction system in any manner.

656.4 Exhaust system: Open. Must comply with exhaust noise suppression requirements. Silencer "muffler can" must be a minimum of 2.5" O.D. by a minimum of 11-1/2" long, excluding the end caps and fittings. For oval shaped silencer, the average of the wide and narrow sections will be used for the diameter measurement. The perforated noise suppression section of exhaust tubing must be a minimum of 10" in length.

656.5 Transmission: Standard OEM motocross gear ratios only. Transmission and clutch components may be altered but must be OEM except as follows: clutch plates, friction discs, and springs are non-tech items. No axle mounted clutches allowed. One way Sprag type bearings are allowed. No air or electric shifters allowed, however, this restriction may be waived to accommodate special driver needs but must be approved by the IKF Board of Directors.

656.6 Water Pumps: OEM water pumps must be retained. Catch containers ADEQUATE to contain all carburetor and radiator overflow must be utilized. Cooling system may use only water or water based coolants. No axle or external water pumps allowed.

657 Super Stock CR125

657.1 Conditions and Definitions specific to this class:

657.1.1 This set of rules provides engine rules that can be used in either Road Racing or Sprint.

657.1.2 Guidelines offered in these pages are subject to the term "Spirit and Intent" and apply to the technical aspects of this "Stock" shifter kart class. It is expected that all participants will adhere to the spirit and intent of these rules. These are guidelines for fair and equitable competition. They are not the basis to "read between the lines" in order to circumvent the intent.

Spirit and Intent: "If these paragraphs do not say you can, you can't!"

657.1.3 Stock Defined: All displacements will bear a tolerance that will be defined by specifications deemed as "Factory Stock," in specifications from said manufacturer. All post event technical inspection will rely on published factory specifications and may be compared to known stock parts.

Neither the OEM engine nor any of its auxiliary components may be modified in any way, unless an exception and / or exclusion is specifically noted within the rules. This includes the addition, deletion and / or omission of and / or adjustment to parts and / or materials.

Note: Adjustments to components that are specifically designed for that purpose shall not be construed to be a modification (i.e. Carburetor jets, needles, slides, adjustment screws, spark plugs, exhaust flange spacers, etc.).

657.1.4 OEM Defined: For purposes of defining allowable engine components, OEM will mean parts produced by a particular manufacturer for a particular model. Where OEM parts are called out for example, you may not use Yamaha parts in a Honda engine, or Honda RS parts in a Honda CR engine.

Except where otherwise stated, the year of manufacture is open, provided the parts are commercially available in the U.S. market.

657.2 Engine: Stock 1999 OEM Honda CR125 kit engine.

657.3 Cylinder and Top End: 1997-1999 cylinders are legal. Section 250 Sprint and Section 301 Super Stock Sprint CR125 Classes only, 2000-2002 cylinders also allowed. No modification or machining of the cylinder is allowed such as porting, adding or deleting ports, decking of top or bottom of cylinder, or re-Nikasil. Cylinder mounting flanges may be spot faced in the area where the nut meets the flange only. Some factory grinding is performed prior to the Nikasil process on many cylinders. The Technical Director reserves the right to disapprove any cylinder supplied by Honda and not modified. Some OEM cylinders may not be acceptable for IKF competition.

1997 - 99 engine: Cylinder length is 3.311 - 3.316

2000 - 02 engine: Cylinder length is 3.307 - 3.312

Base gasket must be OEM for the year of cylinder used.

657.3.1 Exceptions: Stock power valves may be removed and after market plugs used, with no filing, welding, or modifying of the cylinder. The power valve actuator rod hole may be plugged. OEM power valve covers may be replaced with aftermarket plates.

657.3.2 Cylinder Head: Head must remain OEM with no modifications or machining of any kind. Head must fit factory profile using the Rocket Racing Products or Shockwave "Stock CR125" profile gauge. Removal of mounting boss and modifications to the water outlets, for the purpose of hose connection, are allowed.

Head gasket must be stock OEM.

Squish or deck height measurement is made through the spark plug hole using .060 solder. Minimum measurements are:

1997 - 99 engine: 0.050"

2000 - 01 engine: 0.045"

This is not intended to be a minimum or maximum dimension. This dimension is a "quick" check to determine if any non-conforming modifications are present.

657.3.4 Piston, Ring, Wristpin: Piston, ring, wristpin and upper rod bearing must be stock OEM. No modifications of any kind. Lapping the bottom of the ring is permitted.

657.5 Intake System:

657.5.1 Carburetor: Box stock PWM or PWK 38mm carburetor. Bore may not exceed 38.6mm in diameter. Carburetor bore measurement will be determined at the engine side of the slide. Bore may not exceed the designated maximum diameter in an area .400" wide measured inboard of the slide.

657.5.2 Fuel Pump: Pump around fuel recirculation system is allowed.

Single, pulse type pump feed system. One (1) feed pump only. Any additional pump must be for evacuation (i.e. pump around system). No electric or belt driven pumps.

Catch containers and / or alternative plumbing are mandatory, to deal with potential carburetor overflow.

657.5.3 Manifold and reeds: Intake manifold must be stock 1999 OEM CR125 (Honda Part Number 16221-KZ4-A10 - marked KZM4) with no modifications. The reed cage must be 1999 CR125 (Honda Part Number 14100-KZ4-J11) After market replacement reeds will be allowed, including mono reeds or stiffeners. This only allows reeds that may be installed without modification to the 1999 reed cage and does not permit multi-stage reeds.

657.5.4 Intake Noise Suppression: Air boxes are required only when local authority mandates. IKF rule 603 applies.

657.6 Ignition System:

657.6.1 CDI: Required Denso part #071000-1410 and coil must be stock 1999 OEM. Note: The wires connecting the coil and stator to the CDI may be lengthened or replaced, to facilitate mounting of the CDI unit. The addition and use of a coil ground cable is recommended. Kill switch, if used, must function only to kill the engine. The spark plug wire and cap are non-tech items.

Note: The events technical director may require a competitor to swap CDI boxes, prior to the start of a race event. Failure to comply will result in disqualification for the day.

657.6.2 Flywheel: The stator and flywheel must be stock 1999 OEM. Only repairs approved by the Technical Director may be done to the wiring. Stock flywheel key must remain in place with no modifications. The left hand lower limiting plate on the stator must be intact, with no modification. Either the factory limiting plate or SKUSA limiting plate (available from SKUSA) may be used. Machined aluminum stator slots, underneath unmodified limiting plates, are allowed at this time. No modification to the hold down bolts is permitted. Static timing must be controlled by the stock stator plate or the SKUSA plate. No modification to any of the components that change the static timing.

657.6.3 The spark plug manufacturer is open, but the plug must be commercially available and measure 18.5mm long by pitch M14 x 1.25. Exception: The spark plug washer may be removed to facilitate the use of a cylinder head temperature sensor and the gap of the electrode may be adjusted.

657.6.4 Timing cover is non-tech.

657.7 Exhaust System:

657.7.1 Exhaust: Only the following exhausts are allowed. No modification of any kind is permitted. Exhaust flange is open, but must meet OEM length dimensions. No spacers allowed between cylinder and exhaust flange except one OEM steel gasket.

- RLV R2 standard stinger (part# 6800)
- RLV R2 w/cross stinger (part# 6800/c)
- RLV R4 (part# 6830)
- RLV R4 2-piece (part# 6820)
- RCE T-3
- SK1

Competitors using either the #6800 or #6800/c pipes are allowed to reduce their minimum weight by 10 lbs.

657.7.2 Silencer: Exhaust silencer body shall be a minimum of 12 inches and a maximum of 14.5 inches in length. Diameter will be at least 3 inches. Factory produced silencers only, no modifications allowed.

657.7.3 O-ringed aftermarket exhaust flange allowed (40mm inside diameter plus or minus 0.5mm). Note: Removal of carbon build-up from the inside of the exhaust flange will not be deemed to be a modification.

657.8 Transmission / Clutch: 1999 Honda CR125 kit engine utilizes a 1997 6-speed transmission. All components must be stock OEM. Exception: Finish on gears is non-tech.

Shifter must be a manual mechanical apparatus.

Note: While air / electric / pneumatic shifters are not allowed, this restriction may be waived to accommodate special driver needs and requires prior written approval.

Use of a sprag axle hub assembly is permitted.

657.9 Cooling System: One of the water outlets in the cylinder head may be plugged. Note: The stock water outlet(s) must remain in the original location, in relation to the exhaust port.

OEM water pumps must be retained. No axle or external water pumps allowed. Cooling system may use only water and / or water based coolants. The size and routing of the cooling hose(s) is open. Catch containers and / or alternative plumbing is mandatory, to deal with potential radiator overflow.

657.10 External Modifications: Cases must be stock OEM. Exception(s): Kick-starter assembly may be removed and the hole plugged. Removal of the kick-starter hump is allowed. The case may be clearanced to accept a larger front drive gear.

657.11 Other: Studs, bolts and washers are non-tech.

Accessory mounting brackets and locations are open.

Chain guards are required (steel is recommended).

658 Formula 80 Stock Road Race

658.1 Allowed engine: Honda CR80

658.2 Top end: Cylinder and head must be OEM CR80. There will be NO grinding, sandblasting, or any treatment of any port. There will be no addition or deletion of ports and addition of material is prohibited.

No "o-ringing" of head.

Piston/Rings: OEM with stock finish on piston.

Head/combustion chamber volume minimum 8.0cc with IKF tech tool.

658.3 Bottom end: Cases must be stock CR80 with no modifications.

Rod and crank must be stock CR80. Polishing is allowed on crankshaft journal only to achieve slip fit in bearings.

Bearings: Non Tech but must be same style and dimensions as stock.

Gaskets and seals: Non tech,

658.4 Intake system: Carburetor must be stock Keihin or Mikuni with maximum bore of 28.5mm. Float bowl type only, no pumper type carbs allowed. Carburetor air horn must be stock from air horn to face of slide.

Fuel pump: Must be pulse type only, pump around systems allowed.

Intake manifold/reed block: OEM CR80, no modification allowed.

Reeds: OEM only

658.5 Ignition system: CDI box, stator, rotor, key and flywheel and all wires and connectors must be stock CR80. Stator and rotor must be installed in stock location.

658.6 Exhaust pipe and silencer: Pipe and header open. Silencer to same specifications as 653.7

658.7 Clutch and transmission: OEM CR80 parts and gear ratios only. Aftermarket 3rd gear is allowed. Surface finish of gears is non-tech. Clutch basket, friction discs, floaters and springs are non-tech.

No air or electric shifters allowed. No Ignition kill speed shifters allowed.

One way Sprag type bearings are allowed.

658.8 Other: OEM water pumps must be retained without modification.

659 80 Laydown

Spirit and Intent: IF THESE PARAGRAPHS DO NOT SAY YOU CAN, YOU CAN'T!

659.1 Allowed Engine: Honda CR80

659.2 Stock Defined: All displacements will bear a tolerance that will be defined by specifications deemed as "OEM", in specifications from said manufacturer. All post event technical inspection will rely on factory specifications and may be compared to known stock parts.

Neither the OEM engine nor any of its auxiliary components may be modified in any way, unless an exception and/or exclusion is specifically known in the rules. This includes the addition, deletion and/or omission of and/or adjustment to parts and/or materials.

Note: Adjustments to components that are specifically designed for that purpose shall not be construed to be a modification (i.e. Carburetor Jets, needles, slides, adjustment screws, Spark plugs, exhaust flange spacers, etc.).

659.2.1: "OEM" Defined: For purposes of defining allowable engine components, OEM will mean parts produced by the manufacturer.

659.3 Top end: Cylinder, head, and all components must be OEM CR80. There will be NO grinding, sandblasting, or any treatment of any port. There will be no addition or deletion of ports, and addition of material is prohibited. Pulse fittings allowed. No "o-ringing" of head. Piston/Rings: OEM with stock finish on piston. Spiral locks allowed. Head/Combustion chamber volume minimum 8.0 cc using LAD tool. Head Gasket must be stock OEM. Base gaskets of varying thickness may be utilized to obtain the target 8.0 ccv. Total base gasket shall be a minimum of 0.015 inches and maximum of 0.025 inches.

659.3.1 Cylinder may be honed, but may not be repaired (replated) if damaged.

659.4 Bottom End: Cases must be stock CR80 with no modification. Exception: to allow for larger drive gear. Removal and plugging kick start allowed. Rod and Crank must be stock CR80. Polishing is allowed on crankshaft journal only to achieve slip fit in bearings. Bearings stock OEM, Exception Crank, main, rod, wristpin bearings non tech but must be same style dimension as stock. No ceramic bearings.

659.5 Intake System: Carburetor must be stock Keihin PE, Mikuni TM, or Keihin PWK with maximum bore 28.5mm. Float bowl type only, no pumper type carbs allowed. Carburetor air horn must be stock from air horn to face of slide. Fuel pump. Must be pulse type only. Pump around systems allowed. Intake/reed block: OEM CR80, no modification allowed. Reeds OEM only. Catch containers and/or alternative plumbing are mandatory, to deal with potential carburetor overflow.

659.6 Ignition System: CDI box, stator, rotor, key, and flywheel and all wires and connectors must be stock CR80. Stator, trigger, and rotor must be installed in stock location. Repair with aftermarket connectors allowed.

659.7 Pipe And Silencer: Open. Must comply with current exhaust noise suppression requirements. Silencer "muffler can" must be a minimum of 2.5" O.D by a minimum of 8" long, excluding the end caps and fittings. For oval shaped silencer, the average of the wide and narrow sections will be used for the diameter measurement. The perforated noise suppression section of exhaust tubing must be a minimum of 6" in length.

659.8 Clutch and transmission: OEM CR80 part and gear ratios only. Aftermarket 3rd gear is allowed. Clutch Basket assembly, Clutch Plates, friction discs, and springs, OEM

659.9 Water Pump: OEM water pump must be retained without modification.

675

TAG ENGINE TECH

These rules apply specifically to the engines used in IKF Competition. These rules may vary from other organizations' rules. Please check, carefully, that your motor complies with these rules before entering IKF Competition.

Motors approved are for a three year period, thru the year 2017.

Any changes or improvements must be submitted prior to introduction and approved by the IKF TaG Committee Chairman before use at any IKF race. These submittals must be made in writing and must be from the importer or manufacturer only. All TAG engines are to be used the way the manufacturer submitted them for approval.

The intent of these rules is to run the motor as delivered from the factory. Any specifications not specifically covered in these rules will be governed by the principle of "May be compared to a known stock part" for final determination of legality.

For reference on TaG motors, see the IKF website: www.ikfkarting.com under Rule Updates.

675 General IKF TAG CLASS engine specifications

675.1 Where discrepancies in tolerance specifications are found between like components on different engines, the more liberal tolerance will apply.

675.2 AIR BOX: Must be pre-2004 CIK homologated (or registered), K&N with rigid internal filter or RLV with two inlet tubes not to exceed 23.0mm and 95.0mm minimum length. Air boxes may not be modified although the rubber flange may be trimmed on the inside of the air box to the flange lip. Aftermarket internal foam air filters are allowed as long as no modification is made to the air box itself. The position of the air box is non-tech. Rotax air box must remain as per RMC rules. On Parilla Leopard and BM Jaguar only intake silencer adapter 10771-C is permitted. Part #10770 is not permitted.

Airbox must be in place at post race technical inspection.

Other engines using bolt on inlet silencer adapters must also conform to Section 603.1.3. See Section 603.1.4 through 603.1.4.7.

675.3 CARBURETORS/MANIFOLDS: OEM as supplied from the engine manufacturer, open jetting. Must use OEM needle jets but washers may be added for the purpose of tuning. How the throttle cable connects to the arm and the bracket that holds the cable are non-tech. The manifold and carburetor may not be modified. The arm, throttle shaft and butterfly are OEM with no modifications. The slide assembly is included in jetting but must retain OEM replacement parts. Throttle shaft screw must remain stock. Fuel may only pass through stock metering orifices. Any means taken to bypass fuel to the engine in any other manner is not allowed. Any components not specified herein must be stock. Surface finish of venturi and bore must remain as manufactured. Engine must be equipped with carburetor as specified by the engine manufacturer. See carburetor dimensions as listed on TAG Carburetor Quick Reference Specifications (PDF) on the IKF website: www.ikfkarting.com under Rule Updates.

675.3.1 BUTTERFLY CARBURETORS: Inlet springs are non-tech item. Machine work to the throttle shaft is not allowed. All pumper style carburetors are single-pumpers with plastic fuel cap. Fuel adjustment needles must be stock from the needle top to the "O" ring step. Needles may be modified beyond the "O" ring step to attach needle extensions. No remote carb adjusters or triggers.

675.3.2 SLIDE CARBURETORS: Must remain stock as supplied by the manufacturer.

675.4 REED CAGE/REEDS: No polishing or grinding of reed cage allowed. Resurfacing of rubber contact surface area to reeds and gasket surface area is allowed. Removal of excess loose rubber at manufacturing parting lines is allowed. No machine work, polishing or metal removal, or addition, to manifold is allowed. Reed attachment screws are non-tech.

675.5 FUEL PUMPS: must be of diaphragm pulse type, manufacturer and location open.

675.6 IGNITION SYSTEM: must be OEM as supplied by the engine manufacturer. Leopard Digital K ignition is approved. Static timing must be at factory settings, key must be in place. No modifications are allowed. Ignition system must be used as supplied in its entirety. Spark plug is open, but must be same reach as stock.

675.7 PISTON/RINGS: OEM as supplied by engine manufacturer.

675.8 BEARINGS: Must be of original type as per engine manufacturer's specifications; i.e.: 6205. No dual-row, ceramic ball, or other exotic bearing allowed.

675.9. INTERNAL MODIFICATIONS: No internal engine modifications are allowed including the addition or deletion of any parts, i.e., gaskets, nuts, bolts, etc.

675.10 SEALS: Must be of original type and size per manufacturer's specifications with no modifications. No trimming or spring removal. Must be installed as manufacturer intended, i.e. not reversed.

675.11 GASKETS: Gaskets must be in place, thickness and manufacturer are open.

675.12 EXHAUST SYSTEM: Exhaust system and silencer must be stock OEM as per engine manufacturer. Exhaust system components must be intact and in place for post race technical inspection

675.12.1 Exhaust connector pipe: Exhaust connector pipe must be flex tubing (except PRD which will use OEM solid connector pipe). Connector pipe length is non tech, but overall length of exhaust system must conform to manufacturers' specifications.

675.12.2 Header and pipe: Must be used as supplied by manufacturer. No plating or ceramic coatings permitted. Exhaust system must start and complete race intact as intended for use by the manufacturer. Addition of exhaust gas temperature lead is allowed. Exhaust temperature fitting must be welded or brazed in place. Pipe clamp types are not allowed. If temperature probe is not in place in the fitting, the fitting must be plugged.

675.12.3 Solid connector pipe is allowed for **Road Race only**.

675.12.4 In Road Race only, minimum flex length for Sonik VX is 3.125" (3-1/8"), for Sonik TX minimum flex length is 3.625" (3-5/8").

675.13 CLUTCH: OEM as per the engine manufacturer. Must be single disc or shoe type only. Slip must not be adjustable. Clutch engagement, for engines listed in Tag Engine Specification chart except Mini/Micro Swift, and Mini ROK, must not exceed 6000 rpm, checked with procedure specified in Sec. 620.19.2. Excessive oil or grease may not be present.

675.13.1 CLUTCH TEST PROCEDURE FOR MINI/MICRO SWIFT AND MINI ROK: Follow procedure below and engagement reading cannot exceed 5000 RPM:

- Place kart on stand in a safe location with axle free to turn with no obstructions.
- Start engine.
- Apply throttle a few times to ensure response.
- Holding throttle and brake on at same time, apply full throttle against full braking without tire rotation.
- It may require a few attempts to get a clean pull.
- Read either competitor's gauge or have a clip-on tech gauge to read RPM at highest reading.
- RPM's exceeding 5000 are non-compliant.

675.14 COOLING SYSTEM: Radiator is open. Radiator must be mounted to left or right side of driver. Coolant may not contain any Glycol based material. Water wetter or other surfactants may be used. Water pump type must be as submitted by engine manufacturer. **Exception: Rotax Max must use radiator as supplied with motor.**

675.15 PORTS: The intent is that the ports remain as manufactured. Note: Research has shown that all manufacturers use some hand grinding to remove casting imperfections as part of their manufacturing process. However, every effort will be made to distinguish between factory grinding and that done to improve performance by the engine builder or owner.

675.16 CONNECTING ROD: Rod must be of original manufacture. No modification or metal removal allowed.

675.17 CYLINDER HEAD: Cylinder head must be stock, as manufactured part. Cylinder head must be stock appearing in combustion area. (ie. If head comes with a step at gasket surface to squish area, the step must remain visible.) Each engine will have a specific minimum squish area to be checked parallel to the wrist pin with approximately 1/16" solder, checked one side at a time. Should an engine check on one side less than the minimum allowed, the other side is to be checked and the average of the two dimensions will determine the actual squish number. To check the squish, insert the solder and rotate the engine one revolution in the direction that the engine runs. Do not use electric starter. Each engine has its own specific cylinder head combustion chamber volume specification. (Refer to the specification chart.) Engine combustion chamber volume will be checked with head installed and as raced. Fluid level to the top of the spark plug hole. No modifications to circumvent engine cc requirements. (See spark plug.)

675.18 BORE AND STROKE: Measurements are taken from engine as raced and will be plus or minus .2 mm (.008). Refer to chart for all bore and stroke measurements.

675.19 CRANKSHAFT: Must be of original manufacture. No counterweight plugging is allowed. No metal removing, shot peening or polishing is allowed. Any rod bearing is permitted. Crankshaft stuffing material may be aluminum or plastic as supplied by manufacturer. Crankshaft must be of the same manufacture as the engine brand as approved by IKF. No interchange between engine brands is permitted. Crankshaft stuffers must be used as approved by IKF. See stroke chart.

675.20 CRANKCASES: Must be as manufactured no polishing or metal removal, other than a break at machine junctions for purpose of deburing. Exception: Main bearing pockets may be repaired but may not be relocated in the process.

See exception for TaG Enduro, Sonik powered laydown karts only, at 302.15.1.1.

675.21 ROTAX MAX: Rotax Max engines used in IKF TAG classes or in Local/Regional option classes are to be run under United States Rotax Max Challenge (USRMC) rules.

Oil ratio for these engines only is to be per current USRMC rules

675.22 OTHER:

Motor mounts are non-tech.

No additional painting, plating or ceramic coatings of any component permitted.

Some engines have been approved with anodized components, which are acceptable.

TAG ENGINE PACKAGE SPECIFICATIONS CHART

ENGINE NAME	STROKE	MAX BORE	ROD LENGTH	PISTON TYPE	PORT HEIGHT ¹ Max Degrees	PORT HEIGHT LAD Tool	CYLINDER HEAD VOLUME	MIN SQUISH	REED THICKNESS	IGNITION	TIMING	CLUTCH	CARBURETOR
Motori Seven TAG	54.40 mm	54.08 mm	110 mm	Single Dyke Ring	182	1.350"	9.5 cc	0.025"	0.012"	Selletra or PVL	see note ⁴	3 Shoe with or without springs	Dell'Orto VHSH30CS
Parilla Leopard	54.00 mm	54.30 mm	102 mm	Single Dyke Ring	171	1.380"	9.5 cc	0.026"	0.012"	Selletra 4 pole or Digital K	Fixed	3 Shoes no springs	Tillotson 334A AB or AA
Parilla Leopard MY09	54.00 mm	54.30 mm	102 mm	Single Dyke Ring	171	1.380"	9.5 cc	0.026"	0.012"	Selletra 4 pole or Digital K	Fixed	3 Shoes no springs	Tillotson 334A AB or AA
X30	54.00 mm	54.28 mm	102 mm	Dykes	177.5	TBD	N/A	0.039"	0.012"	Fixed	"C"	3 Shoes no springs	Tryton 27
X125T	54.40 mm	54.07 mm	104 mm	Dykes	180	TBD	11.0 cc	0.033"	0.010"	PVL	Open see note ⁵	3 Shoes no springs	See note ⁴
PRD TAG Controlled ²	54.00 mm	54.30 mm	100 mm	Single Rail Ring	174	1.355"	10.0 cc	0.028"	0.011"	OPPMA PVL	see note ⁴	3 Shoes w/ springs	Tillotson HL166 or HL395A ARV
PRD Fireball 20083	54.00 mm	54.30 mm	100 mm	Single Dyke Ring	174	1.385"	10.0 cc	0.028"	0.011"	OPPMA PVL	see note ⁴	3 Shoes no springs	Tillotson 360A
Rotax Max FR 125	Use United States Rotax Max Challenge (USRMC) Rules												
Vortex Rok TT	54.00 mm no stuffers	54.28 mm	102 mm	Single Rail Ring	173	1.370"	10.8 cc	0.038"	0.008"	Selletra	.070" to .085" BTDC	3 Shoes no springs	Tillotson 360A
Mini/Micro Rok	43.10 mm	42.10 mm	90 mm	N/A	156 Exhaust 118.5 Transfer 144 Intake	1.235"	7.5 cc	0.032" (1/16" solder)	N/A		N/A	84.6 mm maximum drum	18 mm
Mini/Micro Swift	43.15 mm	42.07 mm	88 mm	N/A	155.5 Exhaust 115.5 Transfer 143 Intake	1.230" Exhaust 0.585 Intake	N/A	0.025"	N/A		N/A	84.6 mm maximum drum	17.5 mm Vent 22.10 mm Bore

¹Check using 0.2mm shim, instructions on IKF website.

²See PRD TAG Controlled rules on IKF website

³2008 PRD Fireball identified by black anodized cylinder head and machined ports.

⁴Check PDF on IKF website

⁵Rev limiter at 15,500 rpm

Combustion chamber volume to be checked to top of spark plug hole with head on engine as raced without LAD tool.
Carburetor venturi diameter checked at narrowest point of venturi.

676 IAME CUP RULES

Parilla Leopard, original and 09, are the only engines allowed in this class. All motor rules are the same as 675 for the Parilla Leopard motor.

700

4-CYCLE TECHNICAL INSPECTION

700.1 Header and Muffler RLV B-91 Series muffler will be required in all classes.

700.1.1 Muffler must extend past fuel tank but may not extend past rear bumper. Exhaust must exit to rear of driver.

700.1.2 Exhaust header end may not protrude inside of exhaust port except in World Formula and Animal classes.

700.1.2.1 World Formula header to be as supplied by B&S.

700.1.2.2 For Animal classes (715, 716, 718) pipe may extend into port to fit the pocket cast into head. When measuring the overall length of Animal class pipes, the length that protrudes under flange, into port, will be subtracted from overall length.

700.1.3 Bolts or studs securing header must be safety wired. Muffler must be safety wired through a hole in the header brace. Safety wire should pass through the perforations on the end of the muffler or through factory welded cable attachment on muffler. Do not weld on the muffler or drill holes in the muffler.

Header or muffler supports or braces required. Bracket to support header or muffler allowed, except in Briggs Blue Wazoom (712) and Senior Sportsman (713). Bracket may not be secured under more than 4 head bolts.

700.1.4 Block saver/ exhaust rotator is allowed on flathead classes except Blue Wazoom (712), Senior Sportsman (713). Rotator not allowed on Animal classes or World Formula.

700.1.5 No "slippy" pipes. Must be fixed position pipe.

700.1.6 No extra tubes to, in or through header pipe allowed.

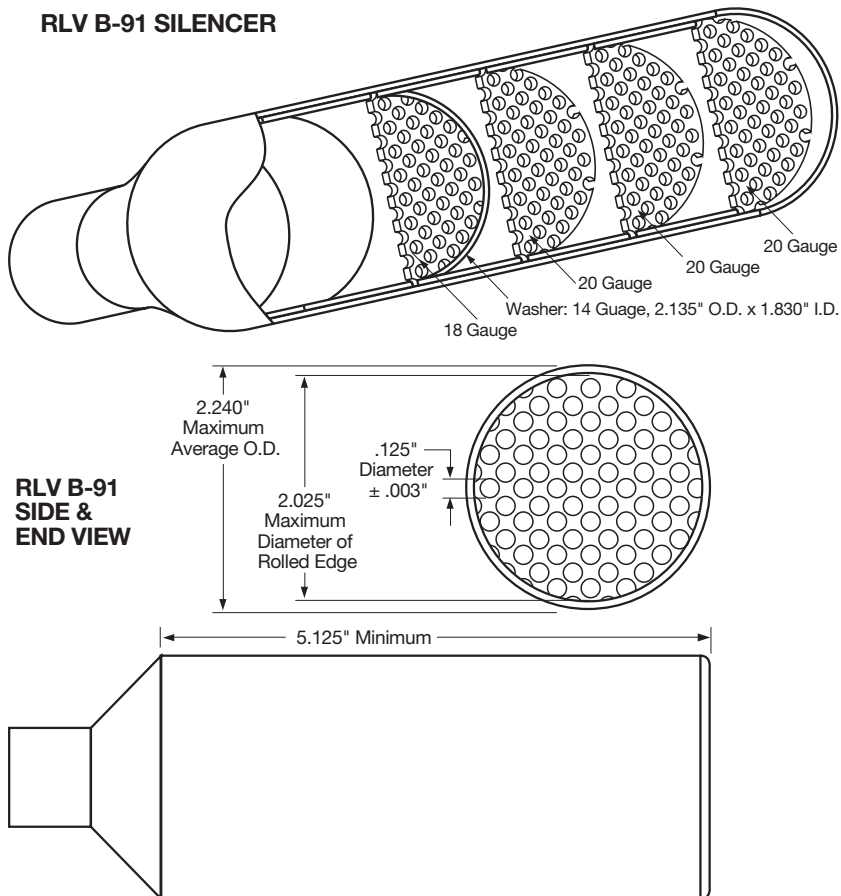
700.1.7 Hole for exhaust thermocouple allowed. Thermocouple must be in place or hole otherwise plugged. Exhaust temperature sensor not allowed in Animal Sportsman (715) or World Formula (717) classes.

700.1.8 The header and silencer must be completely intact and operational throughout the event and shall be grounds for disqualification if not intact. Muffler must be clamped to header.

700.1.9 Muffler must be removeable from header for tech.

700.1.10 Muffler may not be painted, plated, coated, or wrapped.

RLV B-91 SILENCER



Note: B91-MO discharge baffles, round hole: #10 drill blank No-Go (.01935"), square hole: 13/64" drill blank No-Go (.2031"). B91-MO muffler allowed only in Ltd Modified (706), Modified (707), Open (708), Star (709), and IKF Spec Ltd. (711).

700.2 Special Notes

700.2.1 The intent of these rules is that the motors be run as supplied from the manufacturer. Unless there is specific mention made in these rules, modifications are not allowed. If a surfaced is machined from the factory, it may be re-machined to meet a listed dimension unless prohibited. **Do not assume** any item is legal because specific reference is not made in the "Tech Manual". Ask your state representative. He will obtain an official answer from the IKF 4-Cycle Committee.

700.2.2 Pressure fuel tanks are illegal in all classes.

700.2.3 Aftermarket crankcase breathers are not legal in any stock class.

700.2.4 Oil catch container overflows are mandatory in all 4-Cycle classes, except OHV, at any IKF race. Tubing must run from crankcase breather to catch can. No tube allowed from can to carb. The hole in carburetor may be plugged. Overflow system subject to tech.

Oil catch container may not be attached to the rear bumper. Competitor must ensure that catch container has sufficient capacity. Karts leaking fluid on to the track may be given the Mechanical Black flag and/or penalized up to two (2) positions in the finishing order.

700.2.5 Peening of side cover or block side cover gasket surface allowed.

700.2.6 No titanium parts allowed unless otherwise specified.

700.2.7 Tach and temp gauges are subject to tech inspection and are legal in all classes except Senior Sportsman (713).

700.2.8 Any part may be teched against known stock part.

700.2.9 Unless otherwise noted no sealer or paint may be used on any gasket or sealing surface except in IKF Spec. Ltd., Limited, Open, Briggs Modified and Star classes. Sealer may be used as or on exhaust gasket in all classes.

700.2.10 Engine will be teched the day it is raced.

700.2.11 Any replacement bolt or fastener except rod bolts, head bolts and carb butterfly screw permitted as long as original diameter is used. Any screw fastener that is the same diameter and thread pitch is allowed to hold the butterfly in place on Tillotson and Zama carburetors, except Briggs Blue Wazoom. Bolt used to secure cylinder shroud to PTO side of block may be replaced with larger diameter bolt.

700.2.12 When teching, engine oil and light carbon may be wiped from the head or piston top with a clean rag before measuring. Hard carbon may not be scraped or sanded before teching, unless specifically allowed by class rules.

700.2.13 Engines may be checked for air leaks with a plugged jet or ether sprayed around carb flange and intake port area. Caution should be used when using ether or any flammable material.

700.2.14 There is no tech on the quantity of holes in the flywheel screen but if there are holes their quantity or size may not be adjusted while on the track. Adjustment may be made in the pits only.

700.2.15 Normal paint sealing for tech is the following: carb flange bolt, head bolt, crankcase cover bolt, shroud bolt, carb pump cover bolt, air filter adapter.

700.2.16 In Briggs "flathead" classes, replacement of valve seats with original Briggs part is allowed. Seats must retain original factory location and height. Seat may be peened with a maximum of 12 center punch marks within .125" of seat O.D.

700.2.17 Heat treating of stock crankshafts legal in all classes using stock crankshafts.

700.2.18 No-Go: Cannot enter the hole. When checking chamfered or angled holes, the gauge may not be self-supporting itself at any angle. No gauge holders allowed.

700.2.19 CIK approved air box are not allowed in all 4-Cycle classes except during a sprint division rain race per 210.5.2.

700.2.20 No remote clutch adjusters. Mechanical centrifugal type clutches only. No axle clutches allowed.

700.2.21 Chain guards are required on all karts. This is a safety tech item. Clutch must be covered when viewed from above. No void between seat and chain guard large enough for any part of the drivers body to inadvertently pass through shall be permitted. Guard must be designed in such a way that it must protect the driver in the case of a clutch or driveline failure.

700.2.22 Stock type gaskets allowed in all flathead classes.

700.2.23 Repair of flywheel shroud tabs on block is allowed and may be welded.

700.2.24 Sleeving of cylinder block is permitted in all Briggs and Stratton flathead engine classes. Coating or plating materials such as Nikasil are prohibited. Sleeve must be ferrous material, and installed concentrically to stock bore.

700.2.25 The top of the valve spring area in the block may be counter bored to accept and locate the valve springs. Applies to Briggs flathead classes only. Top of valve spring area may be sealed with epoxy materials to prevent leaks, but may not be welded.

700.2.26 Devices to create vacuum in crankcase (pcv valves, ARC valve chamber cover) are legal in all classes not requiring stock valve spring chamber cover.

700.2.27 Stop switch and wiring may be removed, all classes, except World Formula.

700.2.28 Cracks in coil air vane may be repaired. Air vane may be attached with washers to prevent cracking.

700.2.29 Scatter shroud made by W.E. Chapps may be used in any Briggs class not required to use a billet flywheel.

700.2.30 **Any spacer, sleeve or washer** installed on the clutch side of the crankshaft must be radially symmetrical within .010" and must not weigh more than 4 oz. Total weight of all such parts must not exceed 8 oz.

700.2.31 Starter Nut: 4-Cycle starter nut must be radially symmetrical within .005", and weigh no more than 8 oz.

700.2.32 Painting or plating of engine sheet metal, blower shrouds, head shrouds, cylinder shield and valve rocker covers is allowed in all classes.

700.2.33 Magnetic crankcase drain plugs are allowed in all classes.

700.2.34 Ceramic Bearings: Ceramic bearings are prohibited in all classes, unless supplied as original equipment.

700.3 Junior Restrictor Plates: This plate is designed to provide slower and safer racing in Junior classes.

700.3.1 The restrictor plate is available from your local kart shop and manufactured by Target Distributing. See Section 209 and 403 for appropriate class restrictor.

700.3.2 Install between the engine block and carburetor with flange into intake port. One gasket is required on each side of the plate. Caution: Engines may be shipped from Briggs with two gaskets that appear as one.

700.3.3 APS/IKF logo is clearly visible above carburetor when installed correctly.

700.3.4 Air passageways for the purpose of bypassing the restrictor plate are not permitted.

700.3.5 Any competitor found changing or altering this plate is subject to six (6) months suspension from IKF events.

700.3.6 Procedure for inspecting Junior class restrictors.

700.3.6.1 Restrictor sizes specified in Sections 209 and 403 are No-Go sizes. Go/No-Go gauges are Blue Restrictor .440" and Red Restrictor .530".

700.3.6.2 Racer or his representative must be allowed to remove the restrictor from motor if it is stuck to the gasket. It is recommended that tech inspector mark the restrictor before competitor is allowed to handle it.

700.3.6.3 Visually inspect mounting holes and restrictor bore for alteration. Anodizing must be intact in restrictor bore. A maximum of 8 caliper knife edge marks from measuring bore are allowed but anodizing must not be removed.

700.3.6.4 No disqualification for visual reasons is allowed after any thing has been inserted into the restrictor bore.

700.3.6.5 Do not check No-Go size until restrictor has reached ambient temperature. Restrictor must measure no more than 5 degrees warmer than No-Go gauge, or must be removed from motor and placed out of the sunshine for 10 minutes, or must be immersed in cool water and dried before checking.

700.3.6.6 Check No-Go dimension with a steel plug gauge clearly marked with the appropriate size. Gauge may be blade type. Blade may be no less than .125" thick. Gently place restrictor onto gauge so that gauge is entering squarely in the direction of airflow. Repeat procedure several times, lifting and rotating restrictor each time. Restrictor will be illegal if both sides of gauge enter hole and restrictor is retained on the gauge when gauge is held horizontally.

700.3.6.7 Restrictor is not to be subjected to repeated checks. If it is legal upon the first check, it is deemed legal and must be returned to the competitor, immediately.

700.3.7 Animal Restrictors:

700.3.7.1 Restrictors must be run as manufactured by Target Distributing. No alteration of any kind.

700.3.7.2 Restrictor must be installed between carburetor and intake manifold. Must use carburetor O-ring. Must have gasket between restrictor and manifold. Maximum thickness of gasket to be .070".

700.3.7.3 Restrictor must be installed with two holes on top. Tab must be on the right when viewing from carb toward head.

700.3.7.4 "Rookie" restrictor to have 3 holes for air passage, each hole to be .246" No-Go when round gauge is presented to holes from the manifold side.

700.3.7.5 "Junior" restrictor to have 3 holes for air passage, each hole to be .309" No-Go when round gauge is presented to holes from the manifold side.

700.3.8 Clone Restrictors:

700.3.8.1 Restrictors must be installed between carburetor and intake manifold. Must have a gasket on both side so restrictor. Maximum thickness of each gasket is 0.070".

700.3.8.2 Junior I (Green) restrictor to have one hole, 0.425" when No-Go is presented to hole from manifold side.

700.3.8.3 Junior II (Blue) restrictor to have one hole, 0.550" when No-Go is presented to hole from manifold side.

700.3.9 Junior I or Junior II Throttle Slides: Animal and LO206 Throttle Slides for use in Junior I or Junior II Briggs Animal & Briggs LO206 classes must be unaltered (as supplied by Briggs) when compared to a known legal slide with the same part number. Slide cut-away to be measured on a flat surface, not to exceed .075 No-Go for all Briggs slides. Prior to racing, all karts equipped with a restricted slide must have unaltered, installed and operational, a carb-lock (part #555726). The carb-lock is to be painted prior to racing so that slide opening cannot be tampered with or changed.

Current slides available through Briggs: Red (part #555733), Blue (part #555734) Gold/Yellow (part #555741) Purple (part #555735) Green (part #555740)

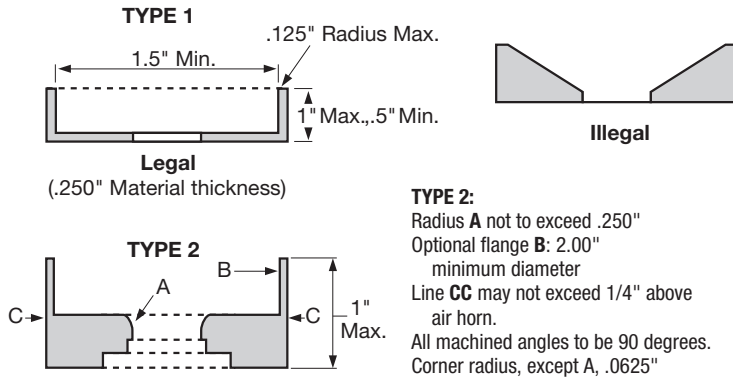
700.4 Stock Class Air Filter Adapter:

700.4.1 Adapter may not be run without filter.

700.4.2 Filter may not be run without an adapter.

700.4.3 This rule does not apply to classes with Tillotson or Zama carbs.

700.4.4 See drawings below. Either Type 1 or Type 2 may be used, combination of both not allowed. May not be funneled or tapered.



700.4.5 Filter adapter must be centered on, and concentric with carb air horn.

700.4.6 OD of adapter may be grooved to grip filter.

700.4.7 Silicone may be used as sealer between adapter and carb.

700.4.8 Up to 2 stock type gaskets may be used between adapter and carb.

700.5 Fuel and Oil

700.5.1 Any competitor spilling oil or fuel on the track will be subject to suspension for the entire event.

700.5.2 No additives allowed in fuel. Fuel must be 100% methanol or 100% gasoline per class specifications. Gasoline requirement for Briggs & Stratton 4 cycles is 87-93 Octane (R+M/2).

700.5.3 Fuel may be pumped around or tested by hydrometer, electronic, chemical test, water test, or any method determined fair by IKF. At Grand National events, fuel must be pumped around or, preferably, a Spec fuel provided for all classes.

700.5.4 Each competitor is allowed one courtesy fuel check of the contents of his kart's tank.

700.5.5 The official can and should, disqualify any competitor in violation of fuel rules.

700.5.6 Flammable and dangerous additives to the oil are not permitted. Subject to flash test, chemical test, electronic test, and laboratory analysis. Violators may be suspended.

700.5.6.1 Crankcase contents are subject to test, at any time, for dangerous, oxygen bearing or flammable vapor producing substances, which are prohibited. Crankcase contents are subject to flame test, chemical test, electronic "sniffer" test, and laboratory analysis. Among acceptable "sniffers" are Robinair Model 14970 (low range), TIF Model 5500, Snap-On Tools Model ACT5600.

A recommended Flame Test procedure is as follows:

- a. Drain about one fluid ounce of crankcase oil into a large steel spoon or ladle.
- b. Apply heat to the bottom of the spoon with propane torch while checking the surface temperature of the oil with an infrared temperature gun.

- c. When the oil temp. is between 250°F and 300°F maximum, pass the flame 3 times over the oil approximately 1 inch above the surface. Do not touch the flame to the surface of the oil.
- d. If the oil ignites and continues to burn when flame is removed, it is illegal. If the oil flashes and the flame goes out, immediately when the torch is removed, the oil is legal.

Modifications of this method are acceptable if the following points are observed: Oil temp never exceeds 300°F. The flame source does not touch the surface of the oil. Continued burning of the oil is necessary for illegality.

700.6 Fuel Tech Procedures

There are two field tests of checking methanol. Either or both may be used. For all gas classes, please refer to Section 601.1.2 Fuel Tech Procedures for use with racing fuel; Section 601.2 Fuel Test for Events not using spec fuel.

700.6.1 In a clean bottle (baby bottle okay) add 1/2 fuel and 1/2 distilled water. Mix and let set. A legal sample will mix and become clear almost immediately. If the sample turns milky or is contaminated by foreign material it is considered illegal.

Note: If the methanol is old, has set in a high humidity environment, or is kept in a container that has previously held other substances, the test sample may test slightly cloudy or hazy. The test sample must be clear to be legal. It is the competitor's responsibility to have clear, non-contaminated fuel.

700.6.2 Specific gravity. Check the specific gravity of the methanol using the following chart + or -.003 specific gravity acceptable variation.

FUEL TEMP	SPECIFIC GRAVITY	FUEL TEMP	SPECIFIC GRAVITY	FUEL TEMP	SPECIFIC GRAVITY
35	0.809	58	0.797	80	0.785
38	0.807	60	0.796	83	0.783
40	0.806	63	0.795	85	0.782
43	0.804	65	0.794	88	0.779
45	0.803	68	0.793	90	0.778
48	0.802	70	0.792	93	0.776
50	0.801	73	0.789	95	0.775
53	0.799	75	0.788	98	0.773
55	0.798	78	0.786	100	0.772

701 STOCK BRIGGS & STRATTON ENGINE RULES

Technical Inspection Procedure 130202, 130232, 131232, 132232, 133230, 135230

701.1 Remove clutch, chain guard, oil, fuel and motor mount.

701.2 Check tech/paint seals. Remove air cleaner (if used) - modifications to direct the flow of air not allowed. Filter may not act as ram tube (top must be of equal or more dense material than sides.) A ram tube shall be defined as anything designed, built or installed in such a manner to deliver air to the engine air intake above the pressure or flow that there would be without it present. Check for legal air cleaner adapter (see 700.4). Filter (if used) must be used with adapter. Adapter may not be used without filter. Silicone may be used as sealer between adaptor and carb. Up to two (2) stock type gaskets may be used.

701.3 Remove exhaust - inspect for protrusion into port and extra holes in pipe.

701.4 Remove flywheel shroud - inspect for flywheel screen or cover, head shroud, and cylinder shroud. Coil Air Vane is optional. (Any screen or cover that fully covers the flywheel fins is allowed. Screen may be on the flywheel or on the shroud. Recoil may or may not be on the engine. Cutting of the shroud for tire clearance is permitted.) Third bearing supports are not allowed. Check for flywheel shield, if factory installed. Stock Briggs flywheel washer allowed. When used with the starter installed, an optional shroud mounted screen may be installed between the shroud and the starter. After market starter nut allowed. Screen teched per 700.2.16 special notes Section.

701.5 Remove and tech coil, 2,000 ohms minimum, 6,000 ohms maximum. Resistance in new style coil, part #379358, must be checked from the kill switch terminal to the spark plug connector. Two-legged Animal coil without trigger between legs is legal. Briggs magnetron ignition only. Any plug connector, allowed. Ohms must remain within specifications with connector installed. No point ignition allowed. Plunger hole must be plugged. There must be resistance from ground to plug connector. Silicone may be used on low tension wires to prevent breakage from vibration.

701.6 Remove fuel tank - inspect internal bowl for position. Check for one or two stock type gaskets. Briggs tank insert part number 555220 is allowed. Bracing of tank and repairing for leaks permitted. Cutting of tank for tire clearance permitted. Old style tank may not be used on new style carb.

701.7 Remove and inspect gas cap for stock Briggs part. Cap splash shields are not permitted.

701.8 Remove carburetor and inspect as follows:

Note 1: Carb to be stock. Unless specifically identified, alterations not allowed.

Note 2: Some carburetors have been delivered from B&S with a chamfer at the intersection of the carb bore and the air horn. These carbs are not legal for use in IKF racing. The intersection of the horizontal bore and vertical air horn must always be a sharp edge as in the past.

701.8.1 Inspect for one or two intake gaskets. No sealer or paint. Intake gasket surface may be surfaced if carb bolt flanges become bent. Original angle of carb must be maintained. Any carb that has had gasket surface machined will be checked against an unmachined carb by placing flanges against a flat surface and visually checking angles. Remember, there is some variability between stock carbs.

701.8.2 Inspect swirl, if installed, for position, then remove and inspect for alterations.

701.8.3 Tech carb bore - .695" No-Go. .695" max straight bore, surface finish on .695 area non-tech. Airhorn and counterbore surface finish is tech item. No funneling, tapering, etc. Late model engine has counter bore at flange, .726" No-Go. The .726" counter bore area is to be checked with a round No-Go only. The surface of this area is to remain untouched and as cast. No metering hole protrusion into the bore allowed. Some carbs are coming from factory with protrusions from metering holes, be sure they are removed before racing. A .696" No-Go, when inserted into the back of the carb bore, may not touch the throttle butterfly when it is opened.

701.8.4 Inspect butterfly shaft. Disassemble if necessary. Back of shaft must be .086" min. Front of shaft must be .040" min. Check measurements using micrometer, set to correct number as a No-Go. Shaft surface may be machined to spec, but must remain in stock configuration. Throttle shaft seal and either foam or felt gasket must be in place.

701.8.4.1 Butterfly screw must be stock, minimum length .322".

701.8.4.2 Butterfly must be unaltered, where butterfly mates with shaft shall have a minimum dimension of .056". Minimum ramp thickness at thickest point .101".

701.8.5 Inspect choke assembly. Late model carb may have choke removed. If installed, the choke assembly must be stock and unaltered. Choke must operate. Rubber band or spring may be used to hold choke open.

701.8.6 No drilling of holes anywhere in the carburetor.

701.8.7 All parts under diaphragm cover must be installed as supplied from factory. Remove diaphragm cover, inspect cover, diaphragm, spring and cup. After-market, stock shape diaphragms are legal. Diaphragm cover plate can be surfaced to ensure seal. No silicone or other material may be applied to diaphragm or gaskets. No resurfacing of diaphragm area of body allowed.

701.8.8 Remove and inspect needle assembly, one or two washers allowed, and inspect jet. Needle may have remote tuner, washer or penny crimped on for adjusting. (Jet may have recess or be flat back, hole in jet non-tech.) Jet must be installed as supplied from factory.

701.8.9 Tech idle hole - .028" No-Go. No funneling, tapering, oblonging, or angling of hole, from either side allowed.

701.8.10 Tech high speed hole - .062" No-Go. No funneling, tapering, oblonging, or angling of hole, from either side allowed.

701.8.11 Inspect short pickup tube. Remove and inspect for steel winding if necessary. Hole size in short tube to be .066" max., to be checked with a #51 drill blank, drill cannot pass completely through tube when checked from either end.

701.8.12 Filter stud screw hole must remain 1/4-28 and may not be stripped. New carbs from factory have no hole.

701.8.13 No one piece brass tube. Screen optional and non-tech.

701.8.14 Inspect carb body for alterations, extra holes or passages, etc. (After market device to reinforce a broken ear on carburetor permitted.) Sealer allowed on short pickup tube and end Welch plug.

701.8.15 Air horn - no machining allowed. Maximum dimension is 1.011. No-go to be checked in the machined area from the top or start of the machined area to the bottom of the eyebrow. No-go may not enter air horn when inserted into the vent area when pulled upwards from the bottom.

701.8.16 Silicone may be used to plug the breather tube hole or choke hole in the carb but it may not enter the bore area of the carb. Use caution.

700.8.17 Carb saver brackets allowed. If head to carb type is used, the bracket and or filter adapter must remain lower than the top edge of the carb inlet (type 1 adapter.) Bracket may not alter tech dimensions (type 2 adapter.)

701.9 Remove and inspect valve cover breather. (Disassemble if necessary.)

701.10 Remove and inspect headbolts. (Headbolts must be stock - any location, either length.)

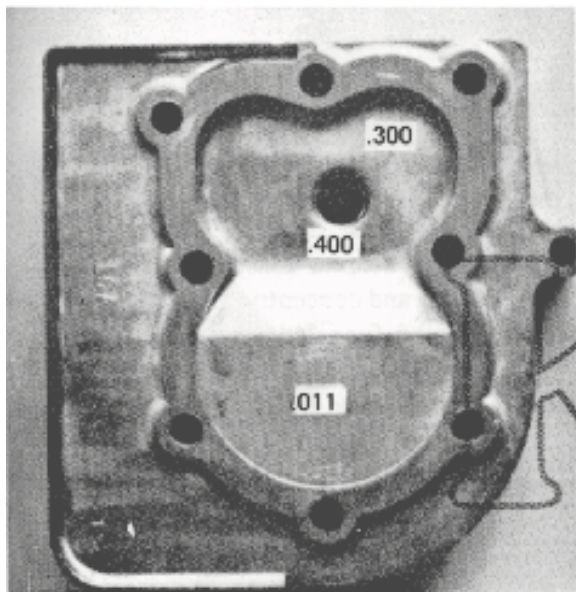
701.11 Tech head gasket for .043" minimum thickness. (Check halfway between headbolt holes. No coatings or sealers.) New and old style factory head gaskets and after market (of same size and material) head gaskets are permitted.

701.12 Briggs or Burris Head BSF-301-00 allowed. Check three places on head - .011", .408", .300" minimum/.315" maximum. (See photo D.) No blueprinting other than gasket surface. Bolt mating surface may be machined. Bolt hole size to be .3480" max. Bead blasting or sand blasting of head is allowed.

Thread insert may be installed in case of pulled spark plug threads. Insert must be installed in stock location and angle. Combustion chamber side of insert may be machined to contour of head.

701.13 Check cylinder deck height - piston .015" out of hole maximum at TDC. (check at wrist pin centerline). Deck must remain above top of valve seats. Deck must be machined as flat, single plane surface.

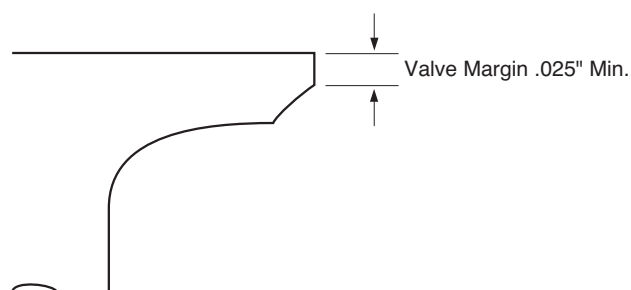
701.14 .050 over maximum piston allowed. Maximum bore 2.620. Briggs and Stratton or Burris piston allowed. Burris wrist pin is not legal.



(Photo D) HEAD: Stock 5hp head, as shipped from the factory. Machining of gasket surface is permitted. Complete area of flat surfaces (.300 and .011) to be checked.

701.15 Tech stroke from BDC to TDC - 2.4270" to 2.4470".

701.16 Remove intake valve - tech for 30 degrees face, 1.115" minimum diameter, and inspect for lightening, modifications, polishing, etc. Minimum margin width is .025" (See Diagram A.)



(Diagram A)

701.17 Tech intake spring for 1.240" maximum length. Exhaust valve spring, per 701.22, may be substituted on intake side.

701.18 Tech upper retainer (if installed) for maximum lip thickness of .058". Backfacing of upper portion of valve chamber to stabilize valve spring retainers and prevent bind is allowed.

701.19 Inspect for stock Briggs lower retainer.

701.20 Tech for stock intake valve seat, 30 degree angle, one angle, 1.005" ID No-Go, .994" ID minimum. There must be a flat top surface at the edge of the seat from which to measure valve seat height. Valve seat insert must

remain unaltered and untouched. No addition of material allowed. Port inlet .880" max No-Go. Port may be pressure tested if necessary.

701.21 Remove exhaust valve, tech 45 degree face, .990" minimum diameter and inspect for lightening, polishing, etc. Minimum margin width is .025". (See Diagram A.) IC block must run cool bore valve, spring and retainer.

701.22 Spring must be of magnetic material. Tech valve springs for 1.500 maximum length, 1.300 minimum length, .088 minimum wire diameter, .092 maximum wire diameter, .625 minimum ID coil diameter, .640 maximum ID coil diameter. .624" round gauge must pass through spring. .641" round gauge must not pass through spring.

701.23 Tech upper retainer (if installed) for max. lip thickness of .058".

701.24 Inspect for stock Briggs lower retainer.

701.25 Tech for stock exhaust valve seat, 45 degree angle, one angle and .880" ID No-Go. There must be a flat top surface at the edge of the seat from which to measure valve seat height. No addition of material allowed. May be pressure tested if necessary. Port outlet 1.005" max. No-Go. Valve seat insert must remain unaltered and untouched.

701.26 Stacking of stock type valve guides allowed. A 0.242" diameter rod (size C drill rod) must pass through both the valve guide, whether or not there is an insert, and then through the lifter bore, whether or not there is an insert. Test both valves.

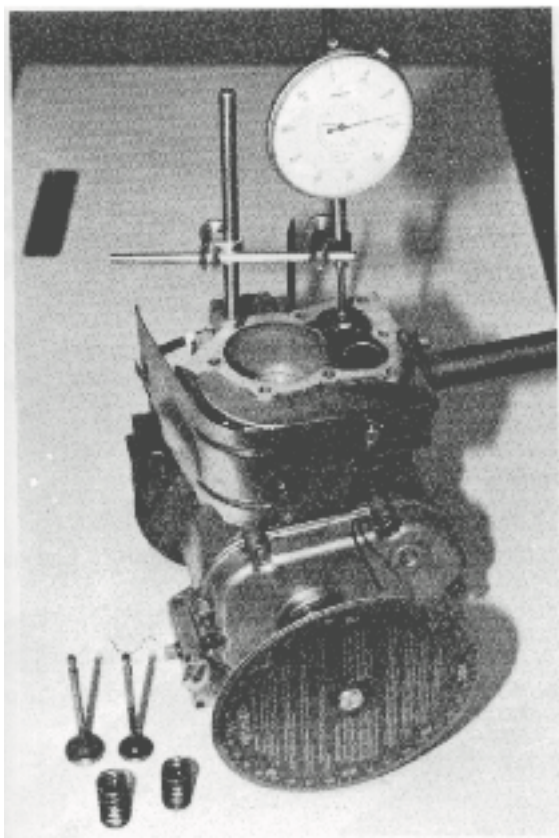
701.27 Flywheel: ARC Billet Flywheel part #6620 will be the only flywheel allowed. Non adjustable, with minimum weight of 4 lbs. Any flywheel key or no key is permitted. Flywheel key slot and crank key slot must not be altered and must remain in stock location. The old Briggs Part #555657 is no longer legal.

701.28 Set up degree wheel, pointer, dial indicator, and prepare to profile cam. (See photo E.) Zero degree wheel with positive stop method.

CAM PROFILE

EXHAUST		INTAKE	
0.05	38 - 33 BBDC	0.05	7 BTDC - 0 TDC
0.1	21 - 16 BBDC	0.1	10 - 17 ATDC
0.15	2 BBDC - 3 ABDC	0.15	29 - 36 ATDC
0.2	21-31 ABDC	0.2	55 - 64 ATDC
max.	.233"	max.	.233"
0.2	76 - 65 BTDC	0.2	43 - 33 BBDC
0.15	48 - 40 BTDC	0.15	13 - 6 BBDC
0.1	28 - 21 BTDC	0.1	6 - 13 ABDC
0.05	10 - 4 BTDC	0.05	23 -31 ABDC
E-Z Start	45 - 60 ABDC		
E-Z Lift	.013" minimum		
E-Z Lift	.019" maximum		
E-Z Duration	30 degree minimum at .001" drop		

Note: All cam profile readings must be taken with zero valve lash. When checking cam profile, rotate engine in the direction it runs only. Valves should have no clearance and no spring tension when checked.



(Photo E) CAM CHECKING: This procedure checks the Profile, E-Z Spin, and Lift on the camshaft.

701.28.1 Attach degree wheel, pointer, and dial indicator in normal manner.

701.28.2 Set the engine at top dead center with dial indicator. Set degree wheel at "0" TDC using positive stop method.

701.28.3 Set dial indicator on the valve to be checked with piston at TDC and no clearance in the valve. Be sure that engine is positioned on the compression stroke. Set dial indicator to "0". Indicator should be set up in a vertical position, to the valve.

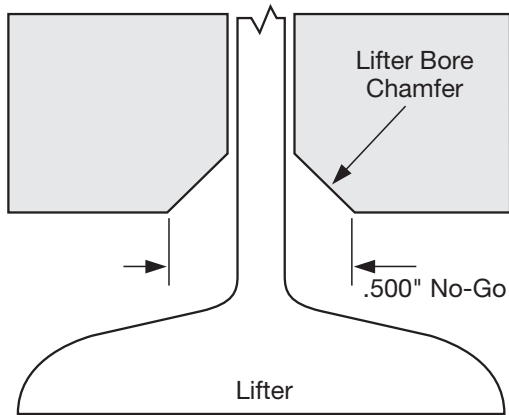
701.28.4 Rotate the engine in the direction it turns.

701.28.5 Cam profile readings must fall within the limits shown at check point.

701.28.6 Cam profile readings are taken with the valve springs removed.

701.29 Briggs or Burris side cover BSF 107-00 allowed. Remove side cover and inspect for at least one gasket, and stock factory alignment. Any bearing of the original dimensions, with or without shields, plastic or steel separators. Must not be self aligning.

701.30 Remove and inspect camshaft. No visual check on the lifter surface of the cam. Cam must remain stock other than the lifter surface. Cam block boss outside diameter (OD) and finish are non-tech items. Camshaft may have lathe centers drilled in each end.



701.31 Remove and inspect lifters for alterations and reworking - no extended or adjustable lifters. Surface finish non-tech. The lifter must be constructed of ferrous materials. The head of the lifter must have a min. dia. of .982". The stem must measure between .245" and .250". The max. overall length is 1.606". It is legal to chamfer or radius the the cam side of the lifter bore. Maximum diameter of the chamfer is .500" No-Go. All Briggs classes except IKF Briggs Gas Class and Senior Sportsman classes, see Section 713.

701.31.1 Check Seat Height: Install a .500 inch rod in place of the cam and replace side cover. Measure through the valve guide from top edge of .500 rod to the top surface of the intake or exhaust seat. Minimum length is 5.485 inches. Maximum length is 5.520.

701.32 Remove piston-rod assembly from cylinder. Piston must have compression top ring, middle ring with groove down and oil ring.

701.33 Remove wrist pin, inspect for stock circlips and separate from rod.

701.34 Any unmodified, series produced aluminum alloy rod that is available to the karting industry is allowed. Rods, other than the Briggs factory rod, may be no lighter than 135 grams with bolts and inserts, if used. Rod length, from bottom of wrist pin hole to top of crank hole must measure between 3.1200" and 3.1433".

701.35 Check dimensions of piston, rings, wrist pin. All components must meet the following specs without alteration.

Piston, Ring, and Wrist Pin Dimensions

	RAPTOR II	RAPTOR III
Min. piston length	1.869	1.673
Piston top to wrist pin top	0.937	0.937
Wrist pin length		1.732 ±.005
Wrist pin ID	.290 max.	.291 max.
Wrist pin OD	.490 max.	.490 max.
Top ring land		.060 - .061
Top ring thickness		.058±.005
Top ring width	.095 min.	.090 min.
Middle ring land		.060 - .061
Middle ring thickness		.058±.005
Middle ring width	.095 min.	.090 min.
Oil ring land		.102 - .103
Oil ring thickness		.100±.005
Oil ring width	.085 min.	.070 min.

701.35.1 No alteration or reworking of piston allowed except bottom of Raptor III piston skirt may be radiused. Raptor III piston may be installed with arrow in either direction. Steel bore block may run cool bore piston.

701.35.2 Single piece rings only. No expanders allowed. Stock type only, no IC rings allowed. Inside of rings non-tech. Rings to be ferrous, with non-overlapping gap. Inside chamfer on top ring only.

701.35.3 Rings may be of any manufacture. Rings must meet all provisions of 701.36 thru 701.36.2.

701.36 Remove crankshaft from block and inspect for alterations, lightening, balancing, polishing or reworking. Heat treating of stock crankshafts legal. (Some timing marks on 130232 engines are being drilled instead of punched. Bushing type PTO journal crankshaft may be turned down to allow the use of bearing. Late model engines have a removable, slip fit, cam gear. The gear must be in place on an unaltered key.) Extra hole 1/8" diameter may be drilled on flywheel side of block at crankshaft bushing to better lubricate crankshaft. All classes.

701.37 Inspect block (other than port area) for alterations and reworking. Inspect for stock Briggs bushing #399268 or #297565, if installed, on flywheel side. Blocks repaired for broken rods are okay if not used to disguise modifications. Minor welding to lower exhaust bolt hole is allowed for repair, weld cannot protrude into exhaust port. Removal of governor mandatory. PEER 6205-14 or equivalent 9 ball, steel separator, ball bearing allowed on flywheel side of ball bearing cranks. This bearing is used without sleeve. Reinforcement or repair of lifter boss area is allowed. The addition of a valve guide in the lifter bore is allowed, but the original centerline must be maintained. Block may be relieved for rod clearance.

701.38 Resurfacing of factory machined gasket surface is permitted, unless otherwise specified. Surfaces must be kept at angles as factory intended.

701.39 Coating or plating of internal engine parts is prohibited.

702 TECUMSEH CONTROLLED STOCK ENGINE RULES

(IKF Regional Championship class) Please refer to 1996 IKF Competition Regulations and Technical Manual for these rules.

703 TECUMSEH CONTROLLED STOCK TECH INSPECTION PROCEDURE

(IKF Regional Championship class) Please refer to 1996 IKF Competition Regulations and Technical Manual for these procedures.

704 IKF BRIGGS GAS CLASS

(Regional Option Class Only)

This class shall be run under Section 701 rules, except that the following rules replace the correspondingly numbered rules in Section 701.

704.18 Tech upper retainer (if installed) for maximum lip thickness of .058". Backfacing is not allowed.

704.20 Tech for stock intake valve seat, 30 degree angle, one angle, and 1.005" ID No-Go. No addition of material allowed. No punching or dimpling allowed. May be pressure tested if necessary. Port inlet .880" No-Go. Valve seat insert must remain unaltered and untouched.

704.23 Tech upper retainer (if installed) for maximum lip thickness of .058". Back facing is not allowed.

704.25 Tech for stock exhaust valve seat, 45 degree angle, one angle .880" No-Go. No addition of material allowed. No punching or dimpling allowed. May be pressure tested if necessary. Port outlet 1.005" No-Go. Valve seat insert must remain unaltered and untouched.

704.28 Set up degree wheel, pointer, dial indicator, and prepare to profile cam. (See photo E., page 99) Zero degree wheel with positive stop method.

CAM PROFILE

EXHAUST		INTAKE	
0.02	50 - 45 BBDC	0.02	17 - 14 BTDC
0.05	38 - 33 BBDC	0.05	7 BTDC - 0 TDC
0.1	21 - 16 BBDC	0.1	10 - 17 ATDC
0.15	2 BBDC - 3 ABDC	0.15	29 - 36 ATDC
0.2	21 - 31 ABDC	0.2	55 - 64 ATDC
max.	.233"	max.	.233"
0.2	76 - 65 BTDC	0.2	43 - 33 BBDC
0.15	48 - 40 BTDC	0.15	13 - 6 BBDC
0.1	28 - 21 BTDC	0.1	6 - 13 ABDC
0.05	10 - 4 BTDC	0.05	23 - 31 ABDC
0.02	3 - 6 ATDC	0.02	41 - 44 ABDC
E-Z Start	45 - 60 ABDC		
E-Z Lift	.013" minimum		
E-Z Lift	.019" maximum		
E-Z Duration	30 degree minimum at .001" drop		

Note: All cam profile readings must be taken with zero valve lash. When checking cam profile, rotate engine in the direction it runs only. Valves should have no clearance and no spring tension when checked.

704.31 Remove and inspect lifters for alterations and reworking, no extended or adjustable lifters. Surface finish non-tech. The lifter must have a minimum diameter of .982". The stem must measure between .245" and .250". The maximum overall length is 1.606". It is NOT legal to chamfer or weld bores.

704.37 Inspect block (other than port area) for alterations and reworking. Inspect for stock Briggs bushing #399268 or #297565, if installed, on flywheel side. Blocks repaired for broken rods are allowed if repair is not used to disguise modifications. Removal of governor is mandatory. PEER 6205-14 or equivalent 9 ball, steel separator, ball bearing allowed on flywheel side of ball bearing cranks. This bearing is used without sleeve. Welding or other reinforcement of lifter boss area is NOT allowed. Addition of valve guides in lifter bore area is NOT allowed.

704.38 Class Rules:

- a. Gasoline only, no additives allowed.
- b. Engine monitoring instruments may be used during competition.
- c. Spark plug type is optional.
- d. Exhaust rotators are NOT allowed.
- e. Clutch required. Must be drum style clutch.
- f. Drive system must be #35 or #219 chain.

- g. Junior I Gas Class: Minimum weight 225 lbs., must use Horstman .425 restrictor per Section 700.3, age 8-11. This is an entry level class and a driver racing Junior I can not move back to Junior I Gas.
- h. Senior Class: Minimum weight 350 lbs., ages 16 and up.

705 SUPER STOCK ENGINE RULES

Please refer to 2008 IKF Competition Regulations and Technical Manual for these rules.

706 LIMITED MODIFIED ENGINE RULES

Please refer to 2008 IKF Competition Regulations and Technical Manual for these rules.

707 BRIGGS MODIFIED ENGINE RULES

(IKF Regional Championship class) Please refer to 2000 IKF Competition Regulations and Technical Manual for these rules in addition to this change.

707.7 Billet flywheel required. Stock Briggs and Stratton flywheel not allowed. See sect. 706.4. Any ignition using stock flywheel diameter is allowed.

708 OPEN ENGINE RULES

(IKF Regional Championship class) Please refer to 2000 IKF Competition Regulations and Technical Manual for these rules.

709 STAR CLASS

Please refer to 2008 IKF Competition Regulations and Technical Manual for these rules.

710 TECUMSEH MOTORSPORTS H-50 "STOCK"

(IKF Regional Championship class) Please refer to 2000 IKF Competition Regulations and Technical Manual for these rules.

711 I.K.F SPEC LIMITED RULES

Please refer to 2007 IKF Competition Regulations and Technical Manual for these rules.

712 BRIGGS BLUE WAZOOM RULES

Please refer to 2007 IKF Competition Regulations and Technical Manual for these rules.

713 SENIOR SPORTSMAN

(IKF Regional Championship class) Please refer to 2001 IKF Competition Regulations and Technical Manual for these rules.

714 HONDA GX140, GX160, AND GX160K1 ENGINE RULES

(IKF Regional Championship class) Please refer to 1999 IKF Competition Regulations and Technical Manual for these rules.

715 ANIMAL SPORTSMAN RULES

Please refer to 2005 IKF Competition Regulations and Technical Manual for these rules.

716 BRIGGS ANIMAL 8001/2 RULES

- for Methanol fuel classes
- Electric start Animal is legal in all Animal classes.

Briggs & Stratton (B&S) Model 124-432 Type 8001/2

All parts must be B&S factory production parts unless otherwise noted in these rules. No machining or alteration of parts is permitted unless specifically noted in these rules. All parts are subject to comparison to a known stock B&S part.

716.1 Shrouds & Covers: Engine shroud, covers and control bracket must be intact and not modified, except control cover may be modified to attach fuel pump. Alternatively, Briggs & Stratton panel #555699 may replace plastic control cover and control cover bracket. Shroud with cut-out for electric starter must have B&S part 555702, Mike's Kart Stands part KS06FC, or the starter motor in place. Bracket attaching flywheel shroud to control cover bracket may be removed from flywheel shroud. Taping of flywheel screen allowed, Fixed screen must be affixed to shroud to cool air intake area. Any bolt, except head bolts, used to secure sheet metal shrouds and covers may be replaced with a larger diameter bolt. Cylinder shield may be trimmed for CHT sensor installation and header flange clearance. Cylinder shield may be notched to clear gusset on new block (#555687) which is now legal.

716.2 Header and Silencer: Per Sec. 700.1 with the following special conditions:

716.2.1 Header shall have a maximum length of 24" to be measured in the ID using a 1/4" wide steel tape measure. Loop pipes, 360° turns, are not allowed.

716.2.2 Silencer must be RLV B91 with round baffle holes only.

716.2.3 Gasket and/or silicone allowed to seal header to head.

716.2.4 Studs or bolts allowed to fasten header to head. Bolts or nuts must be safety wired. Header support brace is mandatory.

716.2.5 Pipe may extend into port (a maximum of 5/8") to fit the pocket cast into head. When measuring the overall length of Animal class pipes, the length that protrudes under flange, into port will be subtracted from overall length.

716.2.6 Wrapping the header with material to protect participants from heat is mandatory in exposed area of pipe which includes from just above the flange to where the header falls below the rocker cover. Wrapping the full length of the header is encouraged. Muffler may not be wrapped.

716.3 Air Filter: Air cleaner not required. Any air cleaner permitted. Must be installed directly to carb. No filter adapters allowed. Filter may not be used as an air ram and must filter from all areas as raced. Any open areas in filter must be covered with a filter sock.

716.4 Carburetor: The B&S stock carburetor part #555658 is the only carburetor permitted. 'Walbro', 'Briggs' diamond logo and/or #590890 etched in the body are additional visual indicators. Must be stock as from the factory except those parts inside the float bowl that can be removed through the float bowl are non-tech items, with the exception of the fuel discharge nozzle height in the venturi. This is a tech item for height only. The end of the nozzle may be modified. The end of the nozzle may not protrude into the venturi area more than 0.060".

Throttle cable housing and top of throttle slide are subject to inspection for combustible or other foreign substances on grid or pre grid. Light oil or grease on slide is allowed.

Any 6mm or 1/4" bolts allowed to attach carb to Intake Manifold. No studs allowed. Carb to intake manifold seal is by O-ring only, no sealer allowed. Air must enter carb at air horn only. Choke must be as stock from the factory. Choke may be secured in the open position.

716.4.1 Throttle bore I.D. is .874" No-Go. Must be as cast.

716.4.2 Choke bore I.D. is 1.149" No-Go. Must be as cast.

716.4.3 Venturi: Vertical dimension is .794" No-Go. Horizontal dimension is .615." No-Go. When .615 No-Go is inserted horizontally into the filter side of the venturi, it may not pass into the slide area. When the .615" No-Go is inserted horizontally in the manifold side of the venturi, it may not enter the venturi section at all. When 602" gauge is inserted horizontally; it may not pass into slide area at the narrow point formed by the overlap of the two venture circles. No machining allowed.

716.4.4 Air pick off hole is .062" No-Go.

716.4.5 Throttle slide: Throttle slide must be unaltered B&S only. Slide cut away to be measured on flat surface, not to exceed 0.075 No-Go.

716.4.6 Needle Jet: Needle jet shall have an overall length of 1.677" min. to 1.692" max. Taper on needle must remain stock as from factory. Needle diameter must not be less that .070" at .500" from the tip.

716.4.7: It is recommended, but not required, that the carb bowl overflow be directed to a catch container.

716.5 Intake Manifold

716.5.1 Length: 1.740" minimum to 1.760" maximum. Machining of gasket surface to meet dimension is allowed.

716.5.2 Inside Diameter: .885" must-go minimum, .905" No-Go maximum. Clarification: Minimum I.D. to be checked from the carb end of the manifold. If I.D. meets minimum, except for a burr at the cylinder head end, it is legal.

Fuel pump must be mounted on engine. Pulse line from crankcase to fuel pump not to exceed 15". Fuel pump pulse line must be standard 1/4" inch or smaller inside diameter fuel or braid reinforced plastic line. Single diaphragm type fuel pump only. No double or triple diaphragm pumps allowed.

716.5.3 Manifold to block gasket thickness is .070" maximum.

716.5.4 Diameter of bolt holes for attaching manifold to head is .328" No-Go.

716.6 Fuel Pump: Auxiliary pulse type pump required. Pump must be pulsed only from crankcase side cover top oil fill cap only. No hoses or tubes to or from intake.



Fuel line must be 1/4" inch or smaller ID. Fuel lines must be run by the most direct route with no excess line anywhere in the system. Fuel lines must be secured at all connecting points with approved fasteners such as safety wire or cable ties. Return line from carb fuel inlet line back to tank is allowed.

716.7 Valve Cover: Stock valve cover from factory.

716.7.1 Valve cover gasket must meet stock configuration. No sealer allowed.

716.7.2 Filter or tubing may be fitted to outlet. No welding or tapping of valve cover allowed.

716.7.3 Tube to catch can is recommended but not required. However, karts leaking fluid on to the track or following karts may be given the mechanical black flag and/or be penalized up to two position in the finishing order when violation is detected at the scale. Penalty to be determined by Race Director or his appointed representative.

716.8 Rocker Arms: Must be unaltered from stock. Rocker arm must be stock B&S part #555711 (US) or #797443 (Metric) and may not be altered in any way. Briggs Logo must be present.

716.8.1 Minimum length to be 2.820".

716.9 Camshaft: Maximum valve lift of 0.257 taken directly off the valve spring retainer at zero lash. With the motor at TDC and both valves closed, place the dial indicator on the valve keeper, then tighten the ball rocker until you see the dial indicator move, this will assure all of the lash is taken out of the valve. Set dial indicator to zero and check lift. When checking lift off of the valve keeper, the indicator must move parallel to the valve stem, not at an angle.

All cam profile readings must be taken with zero valve lash and degree wheel at top dead center (TDC) of compression stroke by positive stop inserted through the spark plug hole. Readings shall be measured from push rods. Set dial indicator at zero and do not reset during the profile process. Only stock factory camshaft cores from Briggs & Stratton are permitted, part numbers 555532 and 555584. Lobes may be ground, but not to exceed 0.870 base circle. Mechanical compression relief is non-tech. Camshaft lobes must remain flat and of original width.

716.9.1 Camshaft profile limits

EXHAUST LOBE		INTAKE LOBE	
Lift, in inches	Degrees	Lift, in inches	Degrees
0.020	61 - 55 BBDC	0.020	18 - 12 BTDC
0.050	44 - 40 BBDC	0.050	0 TDC - 4 ATDC
0.100	27 - 23 BBDC	0.100	16 - 20 ATDC
0.150	11 - 7 BBDC	0.150	33 - 37 ATDC
0.175	1 BBDC - 3 ABDC	0.175	42 - 46 ATDC
0.200	10 - 14 ABDC	0.200	53 - 57 ATDC
0.225	24 - 28 ABDC	0.225	67 - 71 ATDC
Min lift is .252"		Min lift is .252"	
Max lift is .257"		Max lift is .257"	
0.225	78 - 74 BTDC	0.225	39 - 35 BBDC
0.200	64 - 60 BTDC	0.200	25 - 21 BBDC
0.175	53 - 49 BTDC	0.175	15 - 11 BBDC
0.150	43 - 39 BTDC	0.150	5 - 1 BBDC
0.100	27 - 23 BTDC	0.100	12 - 16 ABDC
0.050	10 - 6 BTDC	0.050	28 - 32 ABDC
0.020	5 - 10 ATDC	0.020	44 - 49 ABDC

716.10 Ball Rocker: must be stock

716.10.1 Diameter 0.590" No-Go to 0.610" must-go.

716.11 Push rods: Must be stock.

716.11.1 Diameter is .185" - .190".

716.11.2 Length is 5.638" No-Go to 5.658" must-go.

716.12 Head Bolts: Four stock head bolts are mandatory.

716.13 Head Gasket: Must be of stock configuration. B&S "Fire Ring" head gasket is legal. After (date TBD) B&S head gasket with logo is required.

716.13.1 Minimum thickness allowed is .042", measured with micrometer from inside cylinder hole of gasket. B & S Fire ring gasket is measured only on the metal fire ring. Non fire ring gasket is measured between the head bolt holes.

716.14 Cylinder Head Plate: Cylinder head plate gasket must be stock with maximum thickness of .060". Rocker arm stud plate must be bolted to the head with one, OEM stock B&S gasket only – no alterations. Rocker plate to head fastener holes must remain stock, .289" Maximum.

716.15 Rocker Arm Studs: Must be stock. Studs must be installed as per the factory, 90 degrees to the plate surface. Rocker studs must be stock, unaltered B&S part # 694544 US (1/4-28 thread) or #797441 Metric (M8x1.00 thread) and in stock location.

Rocker arm #555711 (US) must be used with rocker stud #694544 (US).

Rocker arm #797443 (Metric) must be used with rocker stud #797441 (Metric).

716.16 Valves: Stock valves only. Must be one angle. Valves may not be polished or lightened. If the valve is cleaned, no material may be removed from the valve. No alterations to surface finish or shape allowed. Tip of valve must be at 90 degrees to stem. Keeper groove location must remain stock.

716.16.1 Intake Valve: 45 degrees face. Head diameter is 1.055" No-Go - 1.065" must-go. Depth of dish in valve 0.099" - 0.119".

716.16.2 Exhaust valve: 45 degree face. Head diameter is 0.935" No-Go - .945" must-go. Depth in dish in valve 0.084" - 0.104".

716.16.3 Valve Length: Minimum intake and exhaust valve length 3.250".

716.17 Valve Springs: Maximum valve spring length is 0.940" No-Go. Wire diameter is 0.103" to 0.107", measured in three places on spring. Inside diameter of spring 0.615" minimum, 0.635" maximum. Must be identical in appearance to factory part and have 4 to 4.75 coils in stack.

716.18 Valve Spring Retainers and Keepers: Valve Spring Retainers and Keepers: Stock as from the factory. Thickness of retainer lip must be .055" to .075".

716.19 Cylinder Head: Stock B&S as shipped from factory is only configuration approved. Heads with heat disperses are allowed. Head gasket surface may be machined. Dimensions must be maintained. Bosses on back of head, just below valve cover gasket surface may be tapped for attachment of header supports.

716.19.1 Depth of head at shallow part is .011" minimum. Depth at floor of head is .319" minimum.

716.19.2 Depth to top of valve seats is .335" minimum, .360" maximum.

716.19.2.1 RT-1 Head Depth to top of valve seat is .320" minimum to .360" maximum.

716.19.3 Combustion chamber must remain as cast.

716.20 Valve Seats: Must be one 45° angle only on valve seats. Stock B&S seats are mandatory.

716.20.1 Intake seat inside diameter, 0.966" must-go - 0.972" No-Go.

716.20.2 Exhaust seat inside diameter, 0.841" must-go - 0.850" No-Go.

716.21 Ports: Must have stock configuration. No porting or modifications of any kind allowed. No machining of ports allowed, no sanding, buffing, bead blasting or alteration of surface finish or any port dimension. No deburring anywhere inside intake or exhaust ports. Ports are to remain AS CAST.

716.21.1 Intake Inlet Port: .918" No-Go. When checking 90° to line between center of studs, no-go will be straight. When checking on line with center of studs, No-Go will set on floor of port at bottom and stop at upper edge of port on top.

Intake Port: Sox tool #AT339 is not a go/No-Go tool, but should be used as a visual assist to be sure port has not been altered. 0.860 end of tool should touch intake valve guide when inserted into intake port. 0.864 end of tool should not touch valve guide when inserted into port.

716.21.2 Exhaust Outlet: .980" No-Go. No go is to be inserted at 12-6 and 9-3 o'clock positions only. Smaller diameter, below port liner area, is .855" No-Go.

716.21.3 Valve guides must be stock as supplied from factory. Maximum depth from the head gasket surface to the intake valve guide is 1.255". Replacement of valve guides with B&S factory part 555645 is allowed.

716.23 Deck/Piston Clearance: Machining of deck surface is permitted. Piston pop up cannot exceed .005" above block surface in the center of the piston. When measuring piston pop up, set bar stock across piston parallel to wrist pin. Use dial indicator to check pop up in this area.

716.24 Cylinder Bore: No circular or machined grooving of cylinder is allowed.

716.24.1 Stock bore is 2.690". Over boring permitted up to maximum of 2.725" , approximately .035 over.

716.25 Stroke: maximum stroke is 2.204". Push piston down to take up rod play. Check stroke from BDC to TDC.

716.26 Ignition: Unaltered stock B&S coil or B&S PVL 4 legged coil is legal. PVL coil must be used with PVL flywheel). Attachment bolts must not be altered.

716.26.1 Spark plug connector must be stock factory type.

716.26.2 Rubber plug boot is allowed.

716.26.3 For 2 legged coil, there must be resistance from plug wire to ground. Resistance must be between 3000 ohms, minimum, to 6000 ohms, maximum. Coil resistance may be rechecked after a minimum of 10 minutes if correct reading is not attained upon first check.

716.26.4 Coil air gap is non tech.

716.26.5 Any commercially available spark plug allowed. Spark plug must be stock except plug sealing ring may be removed.

716.27 Starter: Recoil starter may be retained as produced and intact. If recoil is removed, starter cup must also be removed. Any style starter nut is allowed for electric start.

716.28 Flywheel: B&S JR Racecar billet flywheel with plastic fan or B&S PVL steel center, aluminum rim flywheel with plastic fan allowed. (PVL flywheel must be used with PVL coil). Plastic fan is mandatory. No machining, glass beading, sandblasting, painting or coating of flywheel is allowed. Minimum factory overspray is allowed.

716.28.1 Any flywheel key or no flywheel key is allowed.

716.28.2 Any screen or guard, fixed to the blower housing, that completely covers flywheel is allowed. No revolving screens.

716.28.3 Minimum weight of JR Racecar flywheel with fan and bolts is 4 pounds, 8 ounces. Minimum weight of PVL flywheel with fan and bolts is 4 pounds, 1 ounce.

716.28.4: PVL flywheel with ring gear attached is legal.

716.29 Crankcase Side Cover: Must remain stock, except fuel pump must be pulsed from upper oil fill hole on front of cover.

716.29.1 After market gasket, of same size and material as stock, are approved. One or two gaskets are required.

716.31 Valve Lifters: Must be stock.

716.31.1 Head of lifter 0.820" No-Go - 0.860" must-go.

716.31.2 Length of lifter 1.515" No-Go - 1.525" must-go.

716.32 Connecting Rod: Any aluminum rod allowed with or without bearing insert. Rod may not be lighter than a known stock Briggs rod, part number 555626. No under-sizing of rod is permitted. Rod may be clearanced providing the rod is in stock configuration with no dimpling or media blasting. Rod ends must be concentric with wrist pin and crank journal. The use of Briggs hex head bolts, part number 555654 is allowed. There may be a minor grinding of the cylinder for clearance of these bolts. Minimum weight is 130 grams.

716.32.1 Rod length, measured from bottom of wrist pin hole to top of crank journal hole, is 2.414" minimum to 2.429" maximum.

716.32.2 Oil hole opening is .185" No-Go.

716.33 Wrist pin: Only B & S wrist pin allowed.

716.33.1 Maximum id is .414".

716.33.2 OD is .624"-626".

716.33.3 Minimum length is 1.901".

716.34 Piston rings: Three rings mandatory. Top compression ring must have chamfer or O toward top of piston. Second scraper ring must be installed with inside chamfer down and O toward top of piston. Oil ring must be installed as from factory. No alteration of rings allowed except end gapping and lapping. Rings must be in one piece when removed from block. Excessive gapping of rings is not allowed.

716.34.1 Minimum width of top two rings is .095".

716.34.2 Thickness of top two rings is .059" - .064".

716.34.3 Minimum width of oil ring is .065". Ring groove must be present. Expander must be installed. Ends of expander may be clipped.

716.34.4 Thickness of oil ring is .098" - .102".

716.35 Piston: Stock B&S or Burrell Piston model 202- allowed. Arrow must point toward flywheel. New style pistons with circlip on both sides is allowed.

716.35.1 Minimum from top of piston to top of wrist pin on circlip side is .658".

716.35.2 Minimum piston length is 1.762".

716.36 Crankshaft: Stock B&S crankshaft with stock timing gear installed in stock location only. No alteration in any manner allowed. Offset crankshafts not permitted. After market bearing of non self aligning type, with or without shield, is permitted.

716.36.1 Shim(s) must be installed as from factory.

716.36.2 Crankshaft journal diameter is 1.094" - 1.100".

716.37 Block: Must be stock with no alterations, except blocks may be repaired from broken rod damage, providing that repair does not constitute of functional modification of original block. No welding is permitted from

the cooling fins upward. The repair of one coil post is allowed, as long as the remaining post is unaltered. No knurling of guides allowed.

716.38 Clutch: Engine mounted dry clutch is mandatory.

717 IKF BRIGGS WORLD FORMULA ENGINE

All parts must be B&S factory production parts unless otherwise noted in these rules. No machining or alteration of parts is permitted unless specifically noted in these rules. All parts are subject to comparison with a known stock part.

717.1 Shrouds and covers: All shrouds and covers must be run as supplied. Alternatively, Briggs & Stratton panel #555699 may replace plastic control cover and control cover bracket. Bracket attaching flywheel shroud to control cover bracket may be removed from flywheel shroud. Cylinder shield may be bent slightly around spark plug hole to allow fitting cylinder head temperature lead. Starter recoil starter must be retained, as produced and intact. Recoil may be rotated. Specifically, the recoil, shroud, etc may not be taped. See also 700.2.16.

Cylinder shield may be trimmed for CHT sensor installation and header flange clearance. Cylinder shield may be notched to clear gusset on new block (#555687) which is now legal.

Bolts used to secure sheet metal or plastic covers may be replaced with bigger diameter bolts.

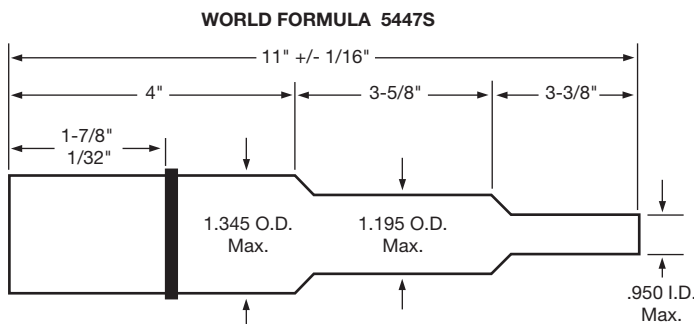
Breather by-pass (555688) is allowed. Aluminum tube may be replaced with longer tube. Tube may be secured to rubber fittings with hose clamps, ty wraps, or double wire wrapping. Tube must be supported by bracket, any bracket allowed.

717.2 Header and silencer

717.2.1 Factory header is required to be run as supplied with factory paint or no paint, may not be repainted, coated, plated, etc. Wrapping of the header from just above flange to the welded on braces is required. Do not wrap silencer. Tech personnel may require wrapping to be removed at any point in the event. Any exhaust gasket or no exhaust gasket allowed. Sealer allowed on header. Header nuts are not required to be safety wired. If a bolt or bolts are used to attach header, bolts must be drilled and wired around the header. Bottom braces must be bolted to head.

717.2.2 Exhaust gas sensor is not allowed. Exhaust gas sensor fitting is not allowed, even if plugged.

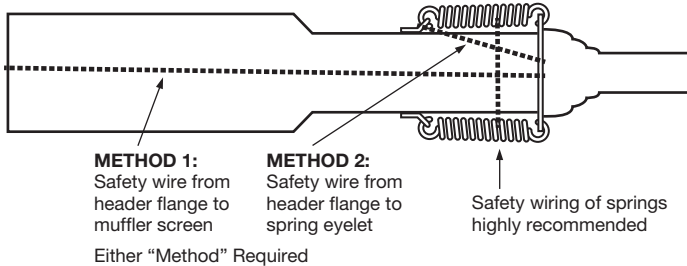
717.2.3 RLV pipe #5447S required, tech per following diagram.



717.2.4 RLV Silencer #4108 required, tech Silencer baffles per drawing in Sec 700.

717.2.5 Springs attaching Silencer to header are highly recommended to be safety wired. Silencer must be safety wired to header (see diagram).

MUFFLER SAFETY WIRING



717.2.6 Silencer must be supported from kart frame or bumper.

717.3 Electric starter: Starter motor must remain on motor. Starter motor must remain complete and intact as delivered. Briggs & Stratton bracket #557119 must be installed on side cover and starter.

Starter motor and bracket may be removed only if starter is replaced with an approved cover. Approved covers are Mike's Kart Stands part #KS06FC and B&S part #555702.

Use of battery for starting is not required. Battery need not be carried on kart. If battery is on kart, it must be of sealed AGM, gel or dry cell design. Battery must be securely mounted to frame or floor pan, no mounting to bumpers or nerf bars.

717.4 Air filter, if used, must be Green Brand 40 X 75 filter. Pre-filter may be used, must not constitute a scoop.

717.5 Spark plug: Any commercially available, 10mm thread, 3/4" reach, spark plug allowed. Spark plug must be stock. Indexing washers allowed.

717.6 Fuel Pump and Lines: Fuel pump must be Briggs & Stratton part 557033/808656. Pump must be pulsed from intake manifold only. Pump must not be altered from stock. Pulse line must be 1/4" only and must not exceed 15" in overall length.

Fuel line must be 1/4" inch or smaller ID. Fuel lines must be run by the most direct route with no excess line anywhere in the system. Fuel lines must be secured at all connecting points with approved fasteners such as safety wire or cable ties. Return line from carb fuel inlet line back to tank is allowed.

Refer to photo shown at 716.6

717.7 Clutch: Clutch must be as supplied by Premier. Any Premier springs allowed. May use #219 or #35 sprocket. No additional grooving, dimpling or texturing of shoes or drum allowed.

717.8 Rev Limiter: Rev limit is 7100 rpm +/- 100 rpm. Rev limiter may be checked at any point in the race program. Rev limit will be checked with a suitable memory capable tachometer attached to the plug lead and the motor accelerated until the rev limiter begins to function. All rev limiters must function within 100 rpm when checked with the same instrument. Each competitor is allowed one courtesy check of the rev limiter with the instrument to be used at the event.

717.9 Fuel: Fuel to be gasoline with no additional additives. Fuel may be checked by any means. Each competitor is allowed one courtesy check of fuel in his tank with the method to be used at the event. Each event is encouraged to designate a common source of gasoline for the class. Compliance with the common source will be determined by zeroing a Digatron gas meter in a sample of source gasoline and allowing each competitor deviation of + / -5 points from zero.

717.10 Carburetor, Spacer, Manifold: Stock Walbro PZ Model 26 carburetor only, no alterations allowed. Stock, unaltered carburetor spacer only, Briggs & Stratton part 557130. Stock, unaltered intake manifold and pulse line only, part 557009.

717.10.1 Carb bowl overflow must be attached to catch can.

717.10.2 Slide must remain unaltered. Minimum Length: 1.310" measured from cutout to top of slide with dial caliper, or 1.309" No-Go tool. Stock needle marked CDB is required.

717.10.3 Choke lever may be fastened open with spring or rubber band.

717.10.4 Unaltered Idle Jets marked 36, 38, 40 are allowed. Maximum I.D. is .0165" No-Go.

717.10.5 Unaltered main jet required. Hole size required is .034" go, to .041" No-Go.

717.10.6 Venturi measurement

717.10.6.1 Vertical .9902" max

717.10.6.2 Horizontal .7382" max

717.10.7 Idle air jet, left side, is .0495" No-Go. Main air jet, right side, is .0345" No-Go.

717.10.8 Brass fuel nozzle id is .1040" No-Go. Minimum length is .450".

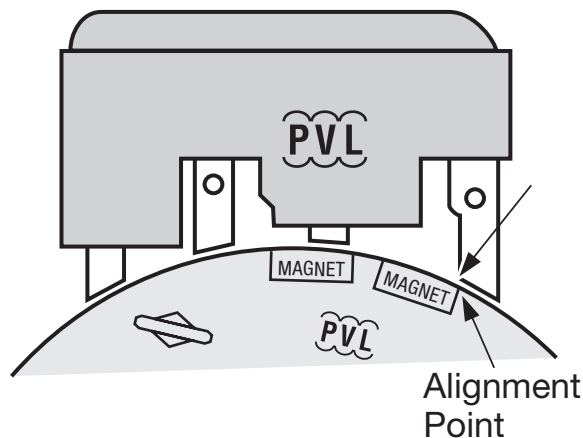
717.11 Camshaft and Ignition Timing: First camshaft check will be taken at the valve spring retainers. With the lash set at zero, the movement of the valve spring retainer may not exceed .3085".

Camshaft must be as supplied with compression relief.

717.11.1 Install degree wheel, using positive stop method.

717.11.2 Check Ignition Timing for PVL coil and flywheel: With the left edge of the right coil leg aligned with the right edge of the right magnet, the motor must be from 23 degrees BTDC to 27 degrees BTDC. See Fig. 717.11.2.

Figure 717.11.2 PVL Coil Diagram



717.11.3 Tech camshaft at pushrods. Push gently down on dial indicator stem to ensure that there is no lash when pushrods are going down.

EXHAUST LOBE	LIFT	INTAKE LOBE
75-71 BBDC	0.020	34-30 BTDC
57-53 BBDC	0.050	18-14 BTDC
39-35 BBDC	0.100	2BTDC-2ATDC
25-21 BBDC	0.150	13-17 ATDC
9-5 BBDC	0.200	29-33 ATDC
12-16 ABDC	0.250	49-53 ATDC
25-29 ABDC	0.275	63-67 ATDC
0.303	MIN	0.303
0.3085	MAX	0.3085
70-66 BTDC	0.275	31-28 BBDC
57-53 BTDC	0.250	18-14 BBDC
37-33 BTDC	0.200	2-6 ABDC
21-17 BTDC	0.150	18-22 ABDC
6-2 BTDC	0.100	33-37 ABDC
11-15 ATDC	0.050	49-53 ABDC
29-33 ATDC	0.020	66-70 ABDC

717.11.4 Push Rods: Must be stock. Diameter is .185"-.190". Length is 5.638"-5.658".

717.12 Deck/Piston Clearance: Machining of deck surface is permitted. Hard carbon may be scraped from piston crown before measuring pop up. Piston pop up minimum 0.010" and maximum 0.025" above block surface in the center of the piston. When measuring piston pop up, it should be accomplished with bar stock on a parallel with the piston wrist pin and, using a dial indicator, check the piston pop-up in this area.

717.13 Bore: Maximum bore 2.725". Factory oversize pistons allowed.

717.14 Stroke: Maximum stroke is 2.204". Push piston down to take up rod play.

717.15 Head Gasket: Stock B&S head gasket only. B&S "Fire Ring" head gasket is legal.

Minimum thickness allowed is .042", measured with micrometer from inside cylinder hole of gasket. B&S Fire ring gasket is measured only on the metal fire ring. Non fire ring gasket is measured between the head bolt holes.

After (date TBD) B&S head gasket with logo is required.

717.16 Head: Head with heat disperser at exhaust side front head bolt area is legal.

717.16.1 Rocker Arms / Rocker Arm Studs / Push Rods / Cylinder Head Plate: All must be as produced. Rocker arm minimum length to be 2.820". Pushrod length is 5.638" No-Go to 5.658 must go. Pushrod diameter is .185" to .190".

- a. Rocker arm must be stock B&S part #555711 (US) or #797443 (METRIC) and may not be altered in any way. BRIGGS LOGO must be present.
- b. Cylinder head plate gasket must be stock with maximum thickness of .060". Rocker arm stud plate must be bolted to the head with one, OEM stock B&S gasket only – no alterations. Maximum thickness of gasket is .060 inches. Rocker plate to head fastener holes must remain stock, .289" Max.

- c. Rocker studs must be stock, unaltered B&S part # 694544 US (1/4-28 thread) or #797441 Metric (M8x1.00 thread) and in stock location.

Rocker arm #555711 (US) must be used with rocker stud #694544 (US).

Rocker arm #797443 (Metric) must be used with rocker stud #797441 (Metric).

717.16.1.1 Valve Caps: Unaltered Briggs Part #557016 Valve caps required. Minimum diameter 0.594". Minimum overall thickness 0.201". Minimum thickness valve insertion point 0.055".

717.16.2 Rocker Ball: Must be stock. Diameter to be .590" - .610".

717.16.3: Cylinder head gasket surface may be machined. Depth from gasket surface to head surface between valves must be a minimum of .319". If gasket surface is machined, the section of the head directly over the piston must be machined to the same plane. Hard carbon may be scraped off before measurement is made.

717.16.4 Combustion chamber must remain as cast.

717.16.5 Ports

717.16.5.1 Intake port

Maximum diagonal measurement is 1.101".

Maximum vertical measurement is 1.044".

Intake port has a machined chamfer where the bottom of the intake port intersects with the bowl cut for the valve seat. Chamfer does not reach iron seat. May be checked against a known stock part.

717.16.5.2 Exhaust port: Maximum I.D. of shoulder in bottom of exhaust port is .854"

717.16.6 Valve seats - one 45° angle only

717.16.6.1 Intake valve seat diameter is .966" must-go to .972" No-Go.

717.16.6.2 Exhaust valve seat diameter is .841" must-go to .850" No-Go.

717.16.6.3 Hard carbon may be removed from inside diameter of valve seat before seat diameter is checked.

717.16.7 Valves

717.16.7.1 Intake valve head diameter is 1.055" - 1.065".

717.16.7.2 Exhaust valve head diameter is .935" - .945".

717.16.7.3 Valve stem diameter is .247" ± .002".

717.16.7.4 Valve face must have one 45° sealing surface only.

717.16.7.5 Intake and exhaust valve length is 3.372" + or - .010".

717.16.8 Valve springs

717.16.8.1 Dual valve springs as supplied by factory are required.

717.16.8.2 Inner spring wire diameter is .066" - .068".

717.16.8.3 Outer spring wire diameter is .112" - .114".

717.16.9 Valve Guides: Replacement of valve guides with B&S factory part 555645, is allowed.

717.17 Ignition: Unaltered stock B&S PVL 4 legged coil is required. PVL coil must be used with PVL flywheel. Attachment bolts must not be altered.

717.17.1 Spark plug connector must be stock factory type.

717.17.2 Rubber plug boot is allowed.

717.17.3 There must be resistance from plug wire to ground.

717.17.4 Coil air gap is non tech.

717.17.5 Spark plug wire may be wrapped to protect from rubbing.

717.18 Flywheel: B&S PVL flywheel is required. PVL flywheel must be used with PVL coil. No machining, glass beading, sandblasting, painting or coating of flywheel is allowed. Minimum factory overspray is allowed.

717.18.1 PVL flywheel: Plastic fan is required. Fan must be attached with 2 shoulder bolts. Must have starter ring gear. Minimum weight is 4 pounds 1 ounce.

717.18.2 Stock flywheel key is required. Width to be .1825" - .1875".

717.19 Crankcase Cover: One or two crankcase gaskets are required.

717.20 Valve Lifters: Must be stock.

717.20.1 Lifter head diameter must be .953" No-Go to .995" must-go.

717.20.2 Length of lifters must be 1.515" to 1.525".

717.21 Connecting Rod: Stock B&S part #557005 rod only. Rod may not be altered. Rod may be clearanced providing that it is in stock configuration and finish, with no dimpling or media blasting. Rod ends must be concentric with crank journal and wrist pin with no chamfer or breaking of edges. Use of B&S factory supplied Torx head or hex head rod bolts is allowed. Hex head bolts may require minor clearancing of bottom of cylinder which is allowed.

717.21.1 Rod length, measured from bottom of wrist pin hole to top of crank journal hole, is 2.419" minimum to 2.429" maximum as measured with caliper at narrowest point on jaws.

717.21.2 Oil hole opening is .185" No-Go. Crank end of oil hole is chamfered.

717.22 Wrist pin:

717.22.1 Maximum I.D. is .414".

717.22.2 O.D. is .624" - .626".

717.22.3 Minimum length is 1.901".

717.23 Piston rings: Three rings mandatory. Top compression ring must have chamfer or "O" toward top of piston. Second scraper ring must be installed with inside chamfer down and "O" toward top of piston. Oil ring must be installed as from factory. Rings must be self supporting in the cylinder bore of the engine being inspected. Ends of ring must remain flat. Excessive end gapping of rings is not allowed. Maximum end gap of 0.050". Rings must conform to all listed factory specifications and be of stock configuration. Known standards for piston/ring configurations are Briggs & Stratton factory approved parts. No alteration of rings allowed except lapping and end gapping. Rings must be in one piece when removed from block.

717.23.1 Minimum width of top two rings is .095".

717.23.2 Thickness of top two rings is .059" - .064".

717.23.3 Minimum width of oil ring is .065". Ring groove must be present. Expander must be installed. Ends of expander may be clipped.

717.23.4 Thickness of oil ring is .098" - .102".

717.24 Piston: Stock "kidney bean" piston required. Arrow on piston must point to flywheel side.

717.24.1 Piston dome may be machined to achieve correct piston pop-up. A resemblance of the dome on the piston must still be present. Pop-up must be no less than .010 and no more than .025 as measured with a bar centered over and parallel to the wrist pin.

717.24.2 Factory oversize World Formula pistons are allowed.

717.25 Crankshaft: Stock B&S crankshaft with stock timing gear installed in stock location only. No alteration in any manner allowed. Offset crankshafts not permitted. Stock bearings required. Ceramic bearings are not allowed.

717.25.1 Shim(s), if used, must be installed as from factory. B&S part 555652.

717.25.2 Crankshaft journal diameter is 1.094" - 1.100".

717.26 Block: Must be stock with no alterations, except blocks may be repaired from broken rod damage, providing that repair does not constitute a functional modification of original block. No welding is permitted from the cooling fins upward.

717.27 Breather: Briggs and Stratton breather assembly 555688 from rocker cover to upper fill hole on crankcase cover is allowed. Aluminum tube may be replaced with a longer tube. Tube may be secured to rubber fittings with hose clamps, cable ties or double wire wrapping. Tube must be supported by bracket, any bracket allowed.

718 BRIGGS GAS ANIMAL RULES FOR GASOLINE FUEL CLASSES

To be run exactly as B&S Stock Animal rules (716) with the following exceptions:

718.1 Carburetor: All parts of the carburetor including nozzle, emulsion tube, main jet, and pilot jet must be stock as from factory. Fuel shall be gasoline only. Any jets from stock factory gasoline jet kit #555536. Needle jet - BGB set at any notch, Pilot jets - #30, #32, #34, No-Go .014". Main jets - #93, #95, #96, #98, #100, No-Go .040".

718.2 Experts: Experts may run this class.

718.3 Hard carbon may be scraped from piston crown before measuring pop-up.

718.4 Combustion chamber may have cleaning marks, i.e., from scotchbrite pad.

718.5 Hard carbon may be removed from inside diameter of valve seat before seat diameter is checked.

719 IKF LTD MOD BRIGGS ANIMAL

Briggs & Stratton (B&S) Model 124-432 Type 8001/2

All parts must be Briggs & Stratton factory parts unless otherwise noted in these rules. No machining or altering of parts permitted.

719.1 Shrouds & Covers: Engine shroud must be the Heavy gauge one from B&S. Taping of flywheel screen allowed. Plastic cover & mounting bracket may be removed. Bracket attaching flywheel shroud to control cover bracket may be removed from flywheel shroud.

719.2 Header & Silencer: Any header may be used, silencer must be RLV B91MO Modified Muffler. Studs or bolts allowed to fasten header to head. Must be safety wired at head and muffler header brace mandatory.

719.3 Air Filter: Filter & adaptor non-tech.

719.4 Carburetor: Any HL Tillotson or Zama WIT820 carb with butterfly throttle assembly. Venturri .900" No-Go. Carb must be stock appearing with single or double pump stacks of original style on top of carb. Auxiliary full ring not allowed. Fuel Pump must be vacuum operated.

719.5 Intake Manifold: non tech, except no atomizer intakes.

719.6 Ignition: Stock electronic ignition only. There must be resistance from plug wire to ground. Resistance must be between 3000 ohms min. & 6000 ohms max. Resistance must be checked after 10 minutes if correct reading is not attained on first check. (PVL ignition is legal when it becomes a production item.)

719.7 Starter: Recoil or starter nut allowed. Starter cup must be removed if recoil is removed.

719.8 Flywheel: B&S Billet flywheel or PVL flywheel with plastic fins only permitted. No cast flywheels allowed. Any key or no key is allowed.

719.9 Camshaft: Any camshaft, lifters, retainers, valve springs, keepers allowed. Max lift .310". Maximum valve lift .307" taken directly off the valve retainer at zero lash. Max Duration at .050" – 248 degrees. Max duration at .200" – 153 degrees with zero lash.

719.10 Ball Rocker: must be stock, diameter .600" +/- .010".

719.11 Push Rods: must be stock. Dia. .185" to .190" Length is 5.638" to 5.658".

719.12 Head Bolts: Four and only four stock head bolts mandatory.

719.13 Head Gasket: Stock B&S or aftermarket composite material allowed. B&S Fire ring head gasket is allowed. No aluminum, copper, or O-ring gaskets allowed.

719.14 Cylinder Head Plate: must be stock, bolt on reinforcement plate allowed. No welding on stock plate allowed. Large bolts may be used to attach replacement plate.

719.15 Rocker Arm Studs: must be stock. Top of stud may be cut off. Top of studs may be tied together above the rocker ball.

719.16 Rocker Arms: Stock Animal or World Formula rocker arms only – no modification allowed. Minimum length 2.825".

719.17 Valves: Stock Animal or World Formula valves, one angle only, no polishing or lightening.

719.17.1 Intake: Valve 45° face, head diameter 1.055". 1.065" depth of dish in valve .099" - .119".

719.17.2 Exhaust valve: 45° face, head diameter .935" – .945" depth of dish in valve .084" - .104".

719.18 Cylinder Head: Stock Animal head as shipped from B & S factory only. Head gasket surface may be machined. Minimum depth to floor of head - .310". Heat disperser (555690) at exhaust side front is allowed.

719.19 Valve Seats: Stock B&S seats mandatory.

Int. Seat Diameter: .966" - .972"

Exh Seat Diameter: .844" - .850"

719.20 Ports: Porting allowed but no welding or additional material in ports. Stock inlet and valve seat diameters must be maintained. Valve guides may be replaced with bronze inserts.

719.20.1 Intake inlet port: .918" No-Go.

719.20.2 Exhaust outlet: .980" No-Go.

719.21 Deck/Piston Clearance: Pop out max .010" at center of piston parallel to wrist pin.

719.22 Cylinder Bore: No circular or machined grooving of cylinder is allowed. No plating allowed.

719.22.1 Bore Diameter: 2.690" to 2.725", approximately .035"over.

719.23 Stroke: Max stroke 2.204"

719.24 Piston: Any flat top piston & wrist pin allowed. No dome piston allowed. For the purposes of this class the Briggs & Stratton World Formula pistons are flat top pistons.

719.25 Connecting Rod: Any rod allowed.

719.26 Crankshaft: Stock B&S crank with stock timing gear installed in stock location only. Minor grinding for clearance of camshaft allowed. No other alterations allowed.

719.26.1 Crank Journal diameter: 1.094" to 1.100".

719.27 Block: Must be stock with no alterations. May be repaired from broken rod damage, providing the repair does not constitute a functional modification of original block. No welding from cooling fins upward.

719.28 Breather Assembly: Briggs & Stratton breather assembly #555688 from rocker cover to upper oil fill hole is allowed. Aluminum tube may be replaced with longer tube. Tube may be secured to rubber fittings with hose clamps, ty wraps, or double wire wrapping. Tube must be supported by bracket, any bracket allowed.

720 BRIGGS ANIMAL BLUE WAZOOM RULES

This engine is to be run as originally manufactured by Uncle Frank's (UF) in Omaha, Nebraska with no modifications of any kind.

In order to assure that no modifications are performed, the side of the engine is sealed along with the head. Both side cover and head seals are required in order for the participant to be allowed to race. No tampering of any kind is allowed. The seals are not to be re-used.

The following specifications are to aid the Tech personnel in determining whether the engine has been altered after original manufacture. In no way do these specifications constitute a need for, nor permission, for additional blue printing. Any other method of determining the legality of the engine is OK.

Tech gauging is available from Uncle Frank's upon request. After an engine is re-built, it must be re-checked and re-sealed by an Authorized Service Center. Most items are stock, un-altered parts from Briggs & Stratton. Most parts can be compared to known Briggs & Stratton stock parts. Those parts that are not Briggs & Stratton parts can be compared to known stock parts from Uncle Frank's.

720.1 Technical Procedure: Engine to be run as supplied from UF factory. No blue printing allowed. Check side cover and head seals for tampering. Any part or parts may be removed from motor for inspection and measurement.

720.2 Carburetor, Manifold, Air Filter Adapter, Air Filter

720.2.1 Zama .820 Carburetor with butterfly throttle assembly. Venturi, .820 No-Go. Carb must be stock with single pumper stack of original style on carburetor.

720.2.2 Inspect carburetor for "as cast" venturi surface.

720.2.3 Inspect dump tube for original installation.

720.2.4 Check for additional holes, or enlarged holes in carburetor.

720.2.4.1 Hi-speed needle seat .070" No-Go.

720.2.4.2 Lo-speed needle seat .070" No-Go.

720.2.4.3 Inlet needle seat .055" No-Go.

720.2.4.4 Tillitson carburetor HL334 WX602 may also be used with the following specs:

a. Venturi Bore .820" No-Go

b. Hi-speed needle seat .095" No-Go

c. Low-speed needle seat .070" No-Go

d. Inlet needle .095" No-Go

e. Carb to be run in as cast condition and may be compared to a known stock part

720.2.5 Remote carb needle adjusters are allowed.

720.2.6 Inspect manifold for angle cuts and offset bolt pattern.

720.2.6.1 Manifold bore, block end: .950" No-Go, at carburetor end: 1.000" No-Go,

720.2.6.2 Manifold length, 1.680" to 1.700".

720.2.7 Air filter adapter to measure less than 1.00" long, tapering to 1.070" small I.D., no radius allowed. May use air filter adapter EC-306 on Tillitson Carb only.

720.2.8 Inspect air filter. Modifications to direct the flow of air are not allowed. Filter may not act as a ram tube (top must be of equal or more dense material than sides.) A ram tube shall be defined as anything designed, built or installed in such a manner to deliver air to the engine air intake above the pressure or flow that there would be without it present.

720.3 Header

720.3.1 Header must be stock from Uncle Frank's, no tampering. Minimum length 12", Maximum length 13" when measured with a 1/4 inch wide steel tape in the bore of the header.

720.3.2 Header may be wrapped. Exhaust gas thermocouple allowed. If header is run without temp probe, mounting hole must be sealed.

720.3.3 Unaltered RLV muffler #4102 is required. Muffler may not be wrapped, painted, coated or otherwise altered.

720.3.4 May use unaltered RLV header pipe part #5506 with RLV muffler part #4106.

720.4 Flywheel Cover

720.4.1 Cover must be stock from B&S factory.

720.4.2 Uncle Frank's supplied flywheel screen only. No alteration to flywheel screen. Taping of screen is permitted.

720.4.3 Sheet metal may be repainted or plated.

720.5 Fuel Pump: Inspect for one single fuel pump.

720.6 Rocker Cover

720.6.1 Rocker cover must be stock from UF. No modifications of any kind allowed.

720.6.2 Rocker cover gasket must meet stock configuration. No sealer allowed.

720.6.3 Filter or tube may be fitted to outlet. No welding or tapping of valve cover allowed.

720.6.4 Any breather lines used on engine must be run to a catch can.

720.7 Camshaft Profile: Must be taken before head is removed.

720.7.1 Max lift allowed is .286" measured at the valve spring retainers with lash set at zero.

720.7.2 Cam Profile, taken off valve spring retainers with lash set at zero and with TDC set by positive stop method.

720.7.2.1 Intake, as valve is opening, is to reach 7 degrees ATDC before .100" lift.

720.7.2.2 Intake, as valve is closing, is to reach 37 degrees ABDC after .100" lift.

720.7.2.3 Exhaust, as valve is opening, is to reach 52 degrees BBDC before .100" lift.

720.7.2.4 Exhaust, as valve is closing, is to reach 20 degrees BTDC after .100" lift.

720.8 Cylinder Head

720.8.1 Head bolts must be stock from B&S. Dowel pins must be present.

720.8.2 Check for one head gasket. Gasket must be in stock configuration. Gasket material non-tech.

720.8.3 Head must be stock from Uncle Frank's. Spark plug non-tech. Bead blasting is allowed to remove carbon.

720.8.4 Combustion Chamber must remain as cast. Check width of combustion chamber at the widest part across the valve seat area with a 2.640" No-Go.

720.8.5 Depth at the floor of the head is .300" minimum.

720.8.6 Rocker Arms must be stock from Uncle Frank's. No modifications allowed.

720.8.7 Ball Rocker: Must be stock from B&S. Diameter .600" +/- .010".

720.8.8 Ports must be stock from UF. No additional porting, polishing or dimpling allowed.

720.8.8.1 Carb inlet port: .950" No-Go when checking 90 degrees to line between center of studs, No-Go will be straight.

720.8.8.2 Exhaust outlet port: 1.000" No-Go. Check for a machine cut chamfer at header flange surface.

720.8.9 Push Rods must be stock from B&S.

720.8.9.1 Diameter is .185" - .190".

720.8.9.2 Length is 5.638" – 5.658".

720.9 Valves, Valve Springs, Valve Seats

720.9.1 Valves must be unmodified stainless steel from Uncle Frank's. Only one 45 degree face allowed.

720.9.2 Tech for single valve springs. Maximum length allowed is 1.250". Keepers and retainers are non tech. Retainer between spring and head surface, if installed, maximum lip thickness of .085".

720.9.3 Valve Seat

720.9.3.1 Seats must be stock from B&S. Must be one 45 degree angle only on valve seats.

720.9.3.2 Intake Seat diameter is .966" - .972". Check for machined chamfer into port.

720.9.3.3 Exhaust Seat diameter is .844" - .850". Check for machined chamfer into port.

720.10 Deck and Pop Up

720.10.1 Only single plane machining of deck surface is permitted.

720.10.2 Piston pop up cannot exceed .015" above block surface in the center of the piston. When measuring piston pop up, set bar stock across piston parallel to wrist pin. Use dial indicator to check pop up in this area.

720.11 Cylinder Bore and Stroke

720.11.1 Stock bore is 2.690". Over boring permitted up to maximum of 2.725". No re-sleeving allowed. No circular or machine grooving of cylinder is allowed.

720.11.2 Maximum stroke is 2.204". Push piston down to take up rod play. Check stroke from BDC to TDC.

720.12 Flywheel

720.12.1 PVL Flywheel must be stock from Briggs. No modifications allowed. Plastic fan must be intact.

720.12.2 Flywheel key must be stock B&S straight key only. Width to be .1825" - .1875".

720.12.3 Aftermarket starter nut allowed.

720.13 Ignition Coil

720.13.1 Coil must be stock PVL from B&S. Attachment bolts must be stock from Uncle Frank's.

720.13.2 Stock from B&S supplied spark plug connector only. Boot allowed.

720.13.3 There must be resistance from plug wire to ground.

720.14 Crankcase Cover, Camshaft, Rod and Piston

720.14.1 Shims, if used, to be installed as from B&S.

720.14.2 Inspect for stock camshaft alignment.

720.14.3 Camshaft must be stock from Uncle Frank's with stock alignment as supplied from Uncle Frank's.

720.14.4 Inspect Lifters. Must be stock from B&S.

720.14.4.1 Lifter diameter to be .820" minimum to .860" maximum.

720.14.4.2 Overall length of lifter to be 1.515" minimum to 1.525" maximum.

720.14.5 ARC #6247 Billet Rod required. No modifications allowed.

720.14.6 Inspect for unaltered Wiseco #4839 series piston or B&S Animal piston or Burris Animal BSA-202 series piston.

720.14.7 Inspect for B&S Animal or Total Seal rings.

720.14.8 Inspect for stock B & S wrist pin, part #499423.

720.14.9 Crankcase cover must not be modified. PCV valve required on top, front oil fill hole. There must be a tube from PCV valve to catch tank.

720.15 Crankshaft must be stock as from B&S.

720.16 Block: Must be stock from Uncle Frank's with no alterations, except blocks may be repaired from broken rod damage, providing that repair does not constitute a functional modification of original block. No welding is permitted from the cooling fins upward.. The repair of one coil post is allowed, as long as the remaining post is unaltered.

720.17 Chain Guard/Clutch Cover is required but may be other than as supplied by Uncle Frank's.

721 BRIGGS LOCAL OPTION 206 RULE

Briggs & Stratton (B&S) Model 124332 Type 8201 only.

The intent of this class is to provide a sealed, simple-to-operate, ultra dependable and ultra-reliable, engine using only factory parts.

The crankcase is sealed at the factory to help control costs and maintain equality while simplifying tech. Only the top end must be inspected. No engine may enter this class without a crankcase seal or with a seal that shows evidence of tampering.

This engine must be raced exactly as it comes from the factory. All parts must be B&S factory production parts unless otherwise noted in these rules. No machining or alteration of parts is permitted unless specifically noted in these rules. All parts are subject to comparison to a known stock B&S part. This includes specified and mandated aftermarket parts. Example: RLV exhaust and silencer. Unless these rules state that you can do it, YOU CAN NOT DO IT!

Spirit and Intent (Syd White rule): Covered, stated, restated, or unstated any change or action with the sole intent to wrongfully create a performance advantage is grounds for disqualification

- a. Only the original equipment Briggs & Stratton 206 #124332-8201 or Junior 206 #124332-8202 engines are allowed in the classes recommended herein.
- b. All parts must be unaltered Briggs & Stratton 206 parts specifically made for this engine by Briggs & Stratton. No aftermarket parts to be used unless specified in these regulations.
- c. The tech official, at their sole discretion, may at any time replace a competitor's sealed engine, carburetor, or head assembly with another sealed engine or known stock part. Failure to comply is grounds for disqualification.
- d. If a competitor's part is replaced, it must be drilled or reconfigured in a way that prohibits the reuse of that part.
- e. Briggs & Stratton 206 classes must have a serialized block. Exception: for early built engines without a block serial number the engine identification sticker must be in place and legible. If the sticker is illegible or missing the engine must be tagged with a suitable sticker or seal approved by the technical inspector.

- f. Standard organizational protest procedures can allow for short block inspection (seal removal) if a new, replacement short block, p/n 555715 is offered in replacement. Competitor short block to be forfeited to the series or club as terms of this procedure.

721.1 Shrouds & Covers: Engine shroud may be painted any color. Engine shroud, covers, and control panel must be intact and not modified, Any bolt, except head bolts, used to secure sheet metal shrouds and covers may be replaced with a larger diameter bolt. Stock kill switch must remain in stock location and wires must remain in place. No taping or covering of the rewind shroud allowed.

721.2 Header and Silencer:

721.2.1 Header must be either RLV 5506 or RLV 5507.

721.2.2 Silencer must be RLV B91 with round baffle holes only. End baffle of silencer is teched per dimensions shown in Section 700.1. Holes are .128" No-Go.

721.2.3 Gasket and/or silicone allowed to seal header to head.

721.2.4 Studs or bolts allowed to fasten header to head. Bolts or nuts must be safety wired. Header support brace is mandatory.

721.2.5 Wrapping the header with material to protect participants from heat is mandatory in exposed area of pipe which includes from just above the flange to where the header falls below the rocker cover. Wrapping the full length of the header is encouraged. Muffler may not be wrapped.

721.3 Air Filter: Air filter required and must be B&S #555729. No filter adapters allowed. Pre Filter allowed, part # (to be determined) on dirt speedway classes ONLY!

721.4 Fuel and Fuel Pump

721.4.1 The fuel is gasoline. Unleaded 89 to 92 octane only.

721.4.2 Fuel pump:

- a. Only fuel pump number 808656, is legal for competition. This fuel pump can be identified by the Briggs & Stratton diamond logo on the pump face. All other pumps are prohibited.
- b. It is prohibited to pulse from the intake manifold.
- c. Relocation of the fuel pump is legal as long as it is spaced to less than 3/4 inch off of the control plate, B&S #555699, in a similar location that is both safe and secure. Measurement is from the base of the control plate to the bottom of the fuel pump.
- d. Vertical mounting or mounting the fuel pump upside down is NOT allowed. The fuel pump must be pulsed from a pulse fitting mounted on the oil fill fitting located on the engine side cover. Aftermarket one-piece filler/pulse fittings such as shown on the right are permitted. The use of silicone sealant on the brass vent is permitted.
- e. A fuel pump return line to the fuel tank is prohibited.
- f. A fuel filter is not required but highly recommended to insure that dirt and contamination within your fuel system does not impact your carburetors performance. The fuel filter itself is not a tech item but only one fuel filter is legal for use and it can only be located between the fuel tank and fuel pump inlet (not between the pump outlet and carburetor).

A fuel filter is to ensure that dirt and contamination within your fuel system does not impact your carburetors performance.

721.5 Carburetor: The B&S stock carburetor part #555658 is the only carburetor permitted. "Walbro", "Briggs" diamond logo and/or #590890 etched in the body are additional visual indicators. Any 6mm bolts may be used to attach carb to manifold. Studs are not allowed. Carb to manifold seal is by O-ring only. No sealer allowed. Air

must enter carb at air horn only. Choke must be stock as from factory and must operate. Spring or rubber band may be used to hold choke lever in position. Metal Choke Cover must remain in place but may be secured with silicone or epoxy sealer. Additional pin punching is allowed to tighten the choke cover. Air must only enter the engine from the natural air filter horn of the carburetor. Air entering through any other method is illegal.

Throttle cable cap on the top of the carburetor must be properly installed and secured in the fully tight position. Juniors with restrictor slides must have secured throttle cap locking device from Briggs on carb.

721.5.1 Throttle bore I.D. is .874" No-Go. Must be as cast.

721.5.2 Choke bore I.D. is 1.149" No-Go. Must be as cast.

721.5.3 Venturi: Vertical dimension is .792" No-Go. Horizontal dimension is .615" No-Go. When .615" No-Go is inserted horizontally into the air filter side of the venturi, it may not pass into the slide area. When the .615" No-Go is inserted horizontally into the manifold side of the venturi, it may not enter the venturi section at all. When Sox tool # AT331 - .602" gauge is inserted horizontally, it may not pass into slide area at the narrow point formed by the overlap of the two venturi circles. No machining allowed. Must be as manufactured.

721.5.4 Air pick off hole is .061" No-Go.

721.5.5 Venturi Idle Fuel Hole: 0.038" Maximum. Idle circle air hole does not allow drilling, reaming, or elongating of the hole. Venturi Idle Air Hole .119" maximum, use .1195" pin gauge. A small chamfer at the outer edge as compared to a stock part can be present. The measurement of that chamfer is subject to sanctioning body guidelines.

721.5.6 Throttle slide: Standard Throttle Slide (Part #55559): Throttle Slide must be B&S stock Unaltered. Minimum length from top edge of the slide to the deepest part of the cut away is 1.148".

Slide cutaway to be measured on flat surface. 0.075" No-Go.

721.5.6.1 Recommended Junior I Throttle slide: Part # 555734 (Blue Slide). Slide must remain unaltered. Minimum length: 1.520 when measured from the cut-out to the top of the slide with a digital/dial caliper. Stock needle marking BGB required. Blue Slide opening 0.520 maximum opening between slide & carb venturi, measured with the air filter removed, carb lock must be in place & unaltered.

Tracks may run under different Local Option rules, using different slides.

721.5.6.2 Slide Opening Optimization: Optimization of the slide opening is ONLY permitted in Briggs & Stratton Cadet, Novice, Junior 1, Junior 2, and National Junior classes.

The only allowable method of slide optimization is by removing material from the throttle cap area. The use of multiple gaskets and/or machining of the slide is prohibited.

Slide opening must not exceed the appropriate No-Go specification as per class regulations. For information on slide optimization see video section at www.BriggsRacing.com



721.5.7 Jets must be stock gasoline jets only. Factory marking is required.

Needle Jet - BGB - set at any notch.

Pilot Jet - #32, hole size is 0.0130" No-Go.

Main Jet - #95, hole size is 0.0380", .036" go .039" No-Go.

Main Nozzle - OEM stock unaltered. Hole size .101" Min - .104" Max

Emulsion Tube - OEM stock unaltered 4 small holes .018" Min - .021" Max. 4 big holes .026" Min - .029" Max.

Note: See reference at 721.27 and 721.28

721.5.8 Overflow from float bowl must be vented to catch can.

721.6 Intake Manifold

721.6.1 Length of manifold must be from 1.740" minimum to 1.765" maximum.

721.6.2 Inside Diameter must be .885" minimum, .905" No-Go maximum.

721.6.3 Stock manifold to block gasket required.

721.7 Rocker Cover: Stock rocker cover from factory is required.

721.7.1 Rocker cover gasket must be stock. No sealer allowed.

721.7.2 Filter or tubing to a catch can may be fitted to outlet. No welding or tapping of rocker cover allowed.

721.7.3 An oil overflow catch system is mandatory. Overflow catch tube must be run from the crankcase breather to a catch container. The catch container must be vented to the atmosphere.

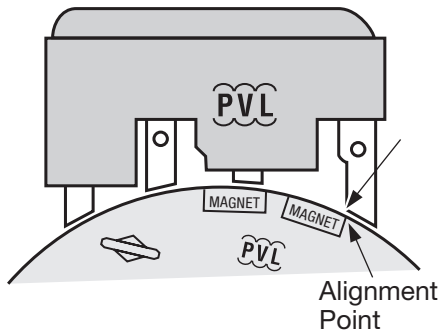
721.7.4 Briggs & Stratton Vent Kit #555688 NOT ALLOWED.

721.8 Camshaft and Ignition Timing: First Camshaft check will be taken at the valve spring retainers. With lash set at zero, the movement of the valve spring retainer may not exceed 0.255 Intake and Exhaust Maximum.

721.8.1 Install degree wheel, using positive stop method.

721.8.2 Check ignition time for PVL coil and flywheel: with the left edge of the right coil leg aligned with the right edge of the right magnet. The motor timing may not be more than 30 degrees BTDC. See figure 721.8.2

Figure 721.8.2 PVL Coil Diagram



721.8.2.1 Coil: Unaltered / Coil unit is "green" B&S #555718 Mandatory. Maximum RPM limit 6150

721.8.2.1.1 Exception: Jr./Cadet Jr 206 requires unaltered B&S #555725 (Black) coil. Maximum RPM 4150 with 50 RPM tolerance.

721.8.2.2 Attachment bolts must not be altered.

721.8.2.3 Spark plug connector must be B&S #555714

721.8.2.4 Coil air gap is not tech. Recommended .014"

721.8.2.5 Spark plug: Only unaltered, B&S #555737, Champion RC12YC, spark plug with B&S logo allowed. Sealing washer must be in place as from the factory.

721.8.3 Tech Camshaft at pushrods. Push gently down on dial indicator stem to ensure that there is no lash when push rods are going down. NOTE: Due to the extended life of the engine, a single point on each lobe can be off by a maximum of 2 degrees without issue, the exception being on the .006" check, both intake and exhaust.

INTAKE LIFT		EXHAUST LIFT	
0.006	59 to 51 BTDC	0.006	101 to 93 BBDC
0.020	16 to 12 BTDC	0.020	59 to 55 BBDC
0.050	.5 to 4.5 ATDC	0.050	43 to 39 BBDC
0.100	17 to 21 ATDC	0.100	26 to 22 BBDC
0.150	33.5 to 37.5 ATDC	0.150	9 to 5 BBDC
0.175	43 to 47 ATDC	0.175	1 to 5 ABDC
0.200	54 to 58 ATDC	0.200	11.5 to 15.5 ABDC
0.225	68 to 72 ATDC	0.225	25 to 29 ABDC
MAX LIFT	0.257	MAX LIFT	0.259
MIN LIFT	0.252	MIN LIFT	0.252

INTAKE LIFT		EXHAUST LIFT	
0.225	38 to 34 BBDC	0.225	76 to 72 BTDC
0.200	24.5 to 20.5 BBDC	0.200	62.5 to 58.5 BTDC
0.175	14 to 10 BBDC	0.175	52 to 48 BTDC
0.150	4.5 to .5 BBDC	0.150	42 to 38 BTDC
0.100	12 to 16 ABDC	0.100	25.5 to 21.5 BTDC
0.050	29 to 33 ABDC	0.050	8.5 to 4.5 BTDC
0.020	45.5 to 49.5 ABDC	0.020	8 to 12 ATDC
0.006	83 to 91 ABDC	0.006	47 to 55 ATDC

721.9 Valve operating mechanism:

721.9.1 Rocker arms: Must be unaltered from stock. Minimum length to be 2.820". Rocker arm must be stock B&S part #555711 (US) or #797443 (Metric) and may not be altered in any way. Briggs Logo must be present.

721.9.2 Ball Rocker: must be stock. Diameter .600" +/- .010"

721.9.3 Push rods: Must be stock. Diameter is .185" - .190".

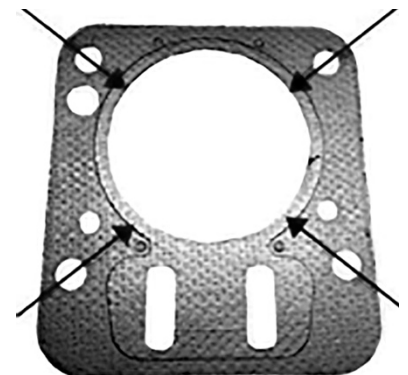
Length is 5.638" - 5.658".

721.10 Head Bolts: Four stock head bolts are mandatory.

721.11 Head Gasket: Unaltered B&S #555723 is the only head gasket allowed. Minimum thickness allowed is .049". Measurement must be performed using a micrometer. Readings are taken from inside the cylinder hole of the gasket closest to the combustion chamber (see diagram). Four measurements must be taken with 3 meeting the minimum thickness of .049".

721.12 Cylinder head plate: Must be stock

721.12.1 Cylinder head plate gasket must be stock with maximum thickness of .060". Rocker arm stud plate must be bolted to the head with one, OEM stock B&S gasket only – no alterations. Maximum



thickness of gasket is .060 inches. Rocker plate to head fastener holes must remain stock, .289" Maximum.

721.13 Rocker arm studs: Rocker studs must be stock, unaltered B&S part # 694544 US (1/4-28 thread) or #797441 Metric (M8x1.00 thread) and in stock location.

Rocker arm #555711 (US) must be used with rocker stud #694544 (US).

Rocker arm #797443 (Metric) must be used with rocker stud #797441 (Metric).

721.14 Valves: Stock valves only. One angle only. Valve may not be polished or lightened. If working area (that portion of the valve stem translating with the valve guides) of valve stem is cleaned, no material may be removed. No grooves, cross hatching, etc.

721.14.1 Intake Valve: 45 degree face. Head diameter is 1.055" - 1.065". Intake valve minimum weight 27.8 grams.

721.14.2 Exhaust valve: 45 degree face. Head diameter is .935" - .945". Exhaust valve minimum weight 27.2 grams.

721.14.3 Length of valves must be 3.355" to 3.390".

721.16 Valve Springs: Stock B&S valve springs and keepers are mandatory. Springs must remain unaltered as supplied from the factory. WARNING: Aftermarket spring with higher spring rate will result in damage to the camshaft.

721.16.1 Valve Springs are single coil stock, unaltered B&S part #26826. Must be identical in appearance to factory part and have 4.00 to 4.75 coils in stack.

Maximum valve spring length is .940". Wire diameter is .103" to .107", measured in three places on the spring. Inside diameter of spring is .615" minimum to .635" maximum.

721.16.2 Valve Spring Retainers: Thickness is .055" - .070".

721.17 Cylinder Head: Stock B&S RT1 Casting as shipped from the factory is the only configuration approved. No machining of head allowed. Machining marks left on head gasket surface are a tech item. Bosses on back of head, just below valve cover gasket surface may be tapped for attachment of header supports.

721.17.1 Combustion chamber: Hard carbon may be scraped from head before measuring.

721.17.1.1 From head gasket surface the depth of the head at shallow part is .030" minimum. Depth at floor of head is .341" minimum.

721.17.1.2 Depth to top of valve seats is .340" minimum .360" Maximum.

721.17.1.3 Shoulders of Sox tool # AT 341 may not touch head gasket surface when tool is placed into combustion chamber.

721.17.1.4 Minimum thickness of cylinder head is 2.430".

721.17.2 Valve Seats: Must have only one 45° angle on valve seats. Stock B&S seats are mandatory.

721.17.2.1 Intake seat diameter is .966" - .972".

721.17.2.2 Exhaust seat diameter is .841" - .850".

721.17.3 Ports: Must be stock, no machining, polishing, easing.

721.17.3.1 Intake inlet port: .918" No-Go. When checking 90° to line between center of studs, no - go will be straight. When checking on line with center of studs, No-Go will set on floor of port at bottom and stop at upper edge of port on top.

715.17.3.2 Exhaust outlet: .980" No-Go.

721.17.4 Replacement of valve guides with B&S part #555645 only is allowed. Valve guides must be stock as supplied from factory. Maximum depth from the head gasket surface to the intake valve guide is 1.255".

721.17.5 Heat Disperser: B&S heat disperser p/n 555690 can be installed in the exhaust bolt boss per factory instructions.

721.18 Deck/Piston: Deck gasket surface finish is not a tech item. Arrow on Piston must point to flywheel side of the motor. Piston pop up can be .005 inches maximum. Piston pop-up to be checked with flat bar in center of piston parallel to piston pin and then again checked 90 degrees to piston pin. Tech Tool A25. Angle milling or peak decking is not allowed.

721.19 Cylinder Bore: Stock bore is 2.690". Allowance for wear is permitted, up to 2.697".

721.20 Stroke: maximum stroke is 2.204". Push piston down to take up rod play. Check stroke from BDC to TDC.

721.21 Flywheel: B&S PVL flywheel with plastic fins is the only flywheel permitted. No machining, glass beading, sandblasting, painting or coating of flywheel is allowed. Minimum factory overspray is allowed.

721.21.1 Plastic fins are required. All fins must be in place.

721.21.2 Stock flywheel key with B&S logo is required. Width of key allowed is .1825" - .1875".

721.21.3 Minimum weight of flywheel, fins and fin attachment bolts is 4 pounds, 1 ounce.

721.22 Cylinder and side cover: Unaltered seal must be in place. No alterations or welding are allowed to any component.

721.23 Clutch: Novice class must run Max Torque Clutch only; B&S #555727, no alterations to clutch other than springs. No exceptions. Jr1, Jr2, Senior, and Masters classes may run any rim centrifugal clutch with a maximum of 9 springs and 6 shoes. No alterations to clutch allowed other than springs. No clutch coolers allowed.

721.24 Starter: Recoil starter must be retained, as produced and intact. Starter may be rotated.

721.25 Things That Are Not Permitted but not limited to:

721.25.1 Tampering of the factory installed engine seals (2).

721.25.2 Addition or subtraction of material in any form or matter.

Exception 1: Valve maintenance (valve job). Valve seats must remain with the factory specification of 30 and 45 degree angles only. Valve seats of additional angles and/or angles not comparable to the factory stock of 30 and 45 degrees are not permitted. Grinding of valve stem or excessive material removal prohibited.

Exception 2: Optimization of the slide opening in Briggs & Stratton Cadet, Novice, Junior 1, Junior 2 and ASN National Junior classes are permitted per guidelines located at BRIGGS & STRATTON Optimization Video at www.briggsracing.com.

721.25.3 "Blueprinting" unless stated herein.

721.25.4 Modification to or the machining of any parts in order to bring them to stated minimum/maximum specification, (or for ANY reason).

721.25.5 Machining or alteration of any kind to the engine or replacement parts unless specifically stated herein.

721.25.6 Deburring, machining, honing, grinding, polishing, sanding, media blasting, etc.

721.25.7 Sandblasting or glass-beading any interior engine surfaces.

721.25.8 No device may be used that will impede, or appear to impede, airflow to the engine cooling system.

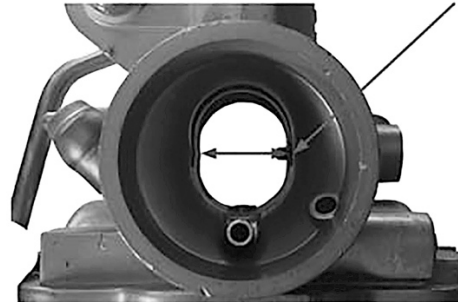
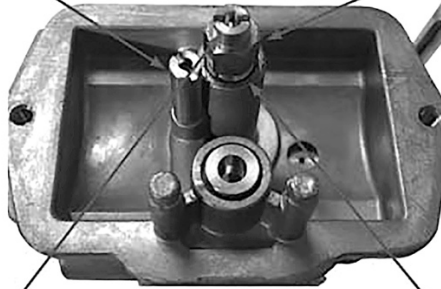
721.26 Engine Oil: Engine oil testing/verification, refer to 700.5.6 and 700.5.6.1

721.27 Reference Photos:

Idle Pilot Jet -
Stock Unaltered #32,
.0130" No-go

Emulsion Tube - Stock, Unaltered.
4 Small holes=.018" to .021" Max.
4 Big holes=.026" Min. to .029" Max.

Venturi Horizontal Measurement
(narrowest part) - .602" no-go
can't pass into the slide area.



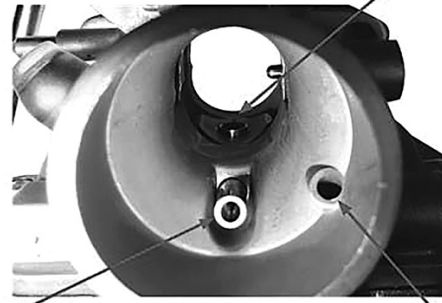
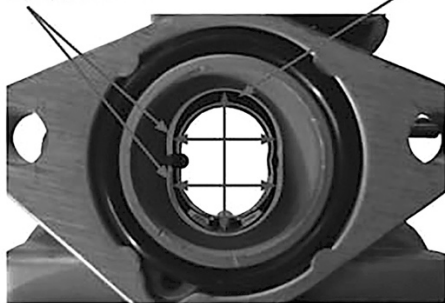
Main Jet -
Stock, Unaltered, #95,
.036" go, .039" No-go

Main Nozzle -
Stock, Unaltered,
.101" Min./ .104" Max.

Venturi Horizontal Measurement
(widest part) - .615" no-go
can't pass into slide area.

Venturi Vertical Measurement -
.792" no-go can't pass into the
slide area.

Venturi Idle Fuel Hole - .038" Max.
Use pin gauge and access
from slide opening.



Air Pick Off Hole -
.057" Min./ .061" Max.

Venturi Idle Air Hole - .119" Max.
.1195" pin gauge.

721.27 Reference Tech Procedures and Tools Required:

TECHNICAL ITEM	DESCRIPTION	TECH TOOL
a. Needle Jet C-clip	Needle Jet C-clip must be properly installed but may be installed at any of the 5 factory settings on the needle jet.	
b. Throttle cable cap	Throttle cable cap on the top of the carburetor must be used and properly installed in tight position.	
c. Choke	Choke: OEM unaltered, but lever may be fastened open with a spring, rubber band, wire, etc.	
d. Idle pilot jet	Idle pilot jet – #32, hole size is .0130" No-Go.	
e. Idle circuit air hole	No drilling, reaming, elongating of the hole allowed. .119" max. diameter. A small chamfer at the outer edge, as compared to a stock part, can be present. The measurement of that chamfer is subject to sanctioning body guidelines.	.1195" Pin gauge
f. Main jet	Main jet – #95, hole size is .0380" 0.036 Go, 0.039 No-Go	
g. Main nozzle and Emulsion tube	Main nozzle – OEM stock unaltered – hole size = .101 min and .104 max inches. No drilling, reaming, slotting or oblonging of hole. Emulsion tube – OEM stock unaltered 4 small holes = .018 min inches to .021 max inches 4 big holes = .026 min inches to .029 max inches.	
h. Venturi Measurement	Venturi Measurement: Vertical: .792 max inches.	A8
	Horizontal: .615 max inches at widest part	A8
	Horizontal: .602 max inches at narrowest part.	A20
i. Air pick off hole	Air pick off hole - .057 Go .061 No-Go	A9
j. Throttle bore	Throttle bore – Must be as cast and bore max diameter = .874 inches.	A7
k. Venturi idle fuel hole	Venturi idle fuel hole = .038 inches max	
l. Air filter	Air filter: Only GREEN air filter, part # 555729 is allowed. Filter adapters are not allowed, filter must attach directly to carburetor air horn	
m. Carburetor overflow	Carburetor overflow: Must be vented to a catch container.	
n. O-Ring	O-Ring part number B&S part # 555601 is required and must be unaltered.	
o. Intake manifold	Intake manifold – max length = 1.740 inches min to 1.760 inches max	A12
	Intake manifold – bore diameter = .885 inches min to .905 inches max	A11
p. Choke Bore	1.149	A7
q. Carb Slide Cutaway	.075 No-Go	A10
r. Widest part of Combustion Chamber	2.64	A30

**Throttle Bore**

Diameter Max: 0.874 Tool: A7

Choke Bore

Diameter Max: 1.149 Tool: A7

**Venturi Measurement**

Vertical Max: 0.792 Tool: A8

Horizontal Max: 0.615

**Air Pick Off Hole**Diameter Max: 0.061 Min: 0.057 Tool: A9
No go Go**Slide Cutaway**Max: .075 Tool: A10
No go**Intake Manifold**

Diameter Max: 0.905 Min: 0.885 Tool: A11

**Intake Manifold**

Length Max: 1.760 Min: 1.740 Tool: A12

**Venturi Measurement**

Horizontal Min: 0.602 Tool: A20

**Width of Widest Part of Combustion Chamber**

Length Max: 2.640 Tool: A30

722 STOCK INTERNATIONAL CLASS ENGINES (CLONE, JR. CLONE, PRO CLONE)

These rules describe the specifications of Clone Class Engines. All parts must be factory production parts unless otherwise specified. No machining or alteration of parts is permitted unless specifically noted. All parts are subject to be compared to known stock parts. No reading in between the lines. If it is not in the rules, then it must remain stock.

722.1 Clutches: Any dry clutch is allowed, applies to all classes

722.2 Fuel: 87 Octane pump gasoline only.

722.3 Fuel Tank: Must be floor mounted.

722.4 Carburetor: Huayi or Ruxing type carb only. Choke assembly must be in place and functional.

722.4.1 Venturi: 0.615" No-Go

722.4.2 Throttle Bore: 0.751" No-Go

722.4.3 Emulsion Tube: Must remain stock. 0.066" No-Go Minimum length 1.092

722.4.4 Low Speed Idle Jet: Non Tech

722.4.5 Main Jet: 0.042 No-Go

722.4.6 Throttle Shaft: Minimum Diameter 0.115"

722.4.7 Butterfly: Minimum Thickness 0.037

722.4.8 Black Phenolic Insulator Plate: Must be in place between carb and block. Plate hole is non-tech, but must maintain OEM shape. Fuel bleed off slot must be unaltered. OEM thickness must be maintained at .257 minimum

722.4.9 Clone Restrictors:

722.4.9.1 Junior I one hole 0.425 No-Go ARC green

722.4.9.2 Junior II one hole 0.550 No-Go ARC blue

722.5 Fuel Pump: Any pulsed type fuel pump is allowed. Fuel pump must be pulsed from the valve cover, crankcase or side cover.

722.6 Air Filter: Any air filter allowed

722.7 Air Filter Adapter: Maximum Length 1.375"

722.8 Engine Block and Side Cover

722.8.1 Block: Decking of the block is permitted

722.8.2 Crankshaft: OEM crankshaft only, no modifications. Journal diameter 1.168" min. 1.180" max.

722.8.2.1 Governor: Governor and governor components are non tech. Removal of governor drive is allowed

722.8.3 Connecting Rod: OEM connecting rod only. OEM rod bolts only. Honing is allowed but must maintain factory defined edge. New Stock Performance cast rod allowed.

722.8.4 Wrist Pin: Overall Length 2.100" minimum, inside diameter .550" maximum

722.8.5 Bore: Maximum Bore 2.685"

722.8.6 Stroke: Maximum Stroke 2.133" +/- 0.010. Push piston down to take up rod play. Check stroke from BDC to TDC.

722.8.7 Side Cover: Side cover must be OEM, no machining allowed. Gaskets must be OEM configuration and are non tech. Sealer may be used.

722.9 Piston and Rings:

722.9.1 Piston: Piston must be unaltered OEM only. Standard bore is 2.685" maximum. Arrow on top of piston must be pointed toward valves / lifters

722.9.1.1 Piston Pop Out: No piston pop-out is allowed. No tolerance is allowed.

722.9.2 Piston Rings: Top ring and middle ring .115" max. width, 0.060 max thickness. Piston rings must be self-supporting in cylinder bore. Oil ring assembly must be self-supporting in cylinder bore when checked installed on piston with connecting rod attached. Rings must be in one piece (unbroken) when presented for tech. Filing of ring end gaps permitted with max Ring end gap of .040"

722.10 Cylinder Head: Must be OEM castings only. Porting and/or grinding not permitted.

722.10.1 CCV: Minimum combustion chamber volume when mounted on engine @ TDC is 26.5 cc's. Head gasket required, but thickness is non-tech and can be either steel or aluminum. Measurement to be checked at TDC with LAD Tool and must be plum front to back and side to side before submitting fluid.

722.10.2 Head Gasket: Head gasket required, but thickness is non-tech and can be fiber, steel or aluminum. 2 gaskets permitted, to maintain a minimum 26.5cc chamber volume. Sealer may be used on head gasket.

722.10.3 Valve Depth Check: Depth check between the valves in any direction cannot vary more than 0.005"

722.10.4 Valve Seats: Valve seats are of 3 angles, 45 degree face angle with top relief of 30 degrees and bottom relief of 60 degrees. Outside face of valve seat cannot be below floor of combustion chamber.

722.10.5 Inside Diameter of valve seats: Intake = 0.897" maximum, Exhaust = 0.862" maximum

722.11 Valves: Steel or Stainless steel valves with 45 degree seat angle only are acceptable. No lightening, polishing, grinding or other alterations are allowed. Only OEM or Nitrated Valves are allowed in this class. Upper seals optional, seals may be used on both intake and exhaust, lash cap on exhaust valve only.

722.11.1 Intake Outside Diameter: 0.980" minimum,

722.11.2 Exhaust Outside Diameter: 0.940" minimum,

722.11.3 Stem Diameter: 0.213" minimum

722.11.4 Weight: 21 grams minimum

722.12 Valve Springs: Springs must be made of a magnetic material. Number of coils: 4

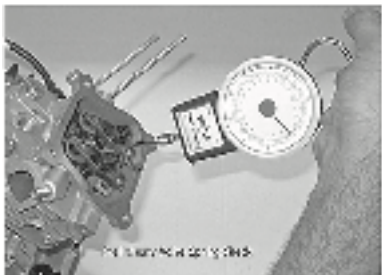
722.12.1 Maximum Length: 1.250"

722.12.2 Maximum Outside Diameter: 0.790"

722.12.3 Maximum Inside Diameter: 0.650"

722.12.4 Maximum Coil Diameter: 0.0715",

722.12.5 Installed Height: 0.815". Spring shims allowed but must maintain 0.815" installed height,



722.12.6 Maximum spring pressure: 10.8 lbs. at .850" and 18 lbs. at .650"

722.12.7 Intake Retainer: Minimum thickness 0.225"

722.12.8 Exhaust Retainer: Minimum thickness 0.245"

722.13 Rocker Arms: OEM 1:1 ratio steel rocker arms only. Must be OEM rockers.

722.14 Lifters: OEM lifters only

722.15 Camshaft: Stock appearing camshaft cores only with the ez-spin assembly unaltered and in stock condition.

722.15.1 Cam lobe base circle diameter: 0.860" - 0.875" (taken from pushrod)

722.15.2 Duration (taken from pushrod):

722.15.2.1 Intake: 217 - 222 degrees at 0.050" lift, 84/88 degrees at 0.200 lift

722.15.2.2 Exhaust: 220 – 224 degrees at 0.050" lift, 95/99 degrees at 0.200 lift

722.15.2.3 Intake lift at pushrod: 0.215" - 0.225"

722.15.2.4 Exhaust lift at pushrod: 0.222" - 0.232"

722.15.2.5 Intake lift at retainer: 0.238" maximum

722.15.2.6 Exhaust lift at retainer: 0.242" maximum

NOTE: Lift is measured off top of retainer at zero lash.

722.16 Timing Gear: OEM factory timing gear mandatory and must be installed in original location.

722.17 Ignition Coil: Ignition coil must be OEM for all classes, timing is non tech

722.18 Flywheel: Flywheel must be a minimum weight 3.3 lbs. No modification or removal of fins is allowed.

722.18.1 Legal Flywheels:

722.18.1.1 Raceseng RSP-13-075 & 077 Rev Wheel F-S1

722.18.1.2 ARC-6618 and ARC-6619

722.18.1.3 DYNO PVL Boxstock Flywheel

722.18.1.4 King Wheel Billet Steel DJ-168F-16200-A

722.18.1.5 King Billet Aluminum Slipstream

722.19 Exhaust Sprint and Senior Speedway Classes Only: Multi-stage pipes allowed. Looped pipes (360 degree turns) are not allowed. Pipe (including silencer) cannot extend past rear bumper. Header wrap required for safety reasons. Gasket and/or silicone allowed to seal header pipe to head. Allen bolts permitted on header to head. Pipes must be double nutted or safety wired on at least one stud or bolt

722.19.1 Maximum length: 24" measured thru the inside of the pipe with .250 wide tape measure.

Remove silencer and pull tape measure tight, if any portion of the length of the pipe is below 24" – pipe is legal.

722.19.2 Silencer: RLV 4104.or RLV B91 is mandatory with all baffle plates inside and as supplied by manufacturer. Baffle holes .1285" max. Silencer must be supported by clamped on brace.

722.20 Exhaust Speedway Junior Clone Class Only: Weenie Pipe Exhaust System only allowed in Speedway Clone Junior Classes.

Note: All Senior Class Exhaust Systems to follow 722.19, 722.19.1, 722.19.2

722.20.1 Weenie pipe must be round .750" OD steel tubing & constant diameter for entire length of pipe. No multi-stage on any portion of the pipe. Entire length may not exceed 15 inches in length or be less than 10 inches minimum length including silencer.

722.20.2 Pipe shall have a threaded fitting at the end of pipe to screw RLV B-91 mini silencer into it (no welding). Silencer shall have all baffle plates inside and be stock as supplied from mfg. Silencer may be compared to a known stock part! No grinding of inside of silencer. ID .685 +/- .005

722.20.3 Outside baffle holes shall have a max ID of .1285" ID and measured with a no go pin gauge. Internal baffle holes shall have a max ID of .965" ID and measured with a no go pin gauge.

722.20.4 Silencer must be supported by clamped on brace. Silencer must be able to be removed for inspection. No aftermarket coatings of any type on pipe or silencer. Header wrap required for safety reasons. Gasket and/or silicone allowed to seal header pipe to head. Pipes must be double-nutted or safety wired on at least one stud.

722.21 Starter: Pull starter must be present and remain stock, angle of installation is non tech. Color and finish of blower housing, valve cover and all sheet metal is non tech.

722.22 Oil Catch Can: Engine oil recovery system required

723 SUPER STOCK INTERNATIONAL CLASS ENGINES

Note: For Super Stock International Class Engines, all rules in Section 722 apply with the following exceptions:

723.1 Clutches: Engine Clutch only. Either Drum or disc clutch.

723.2 Carburetor: Main Jet and low speed jet may be drilled to any size.

723.3 Flywheel: Flywheel must be billet minimum weight 3.3 lbs.
Legal flywheels are:

723.3.1 ARC Model 6618 or 6619

723.3.2 Racesengrsp_13_075 rev wheel NF-SF1

723.3.3 rsp_13_077 rev wheel F-S1

723.3.4 BSP Billet / steel

723.3.5 Dyno PVL Billet aluminum,

723.3.6 King Steel

723.3.7 Race Engen S1 and S2

723.4 Header and Muffler: Any header is allowed with RLV B91 Muffler, Header and muffler must be secured and wrapped See Sections 700.1 and 700.1.10. No Loop type headers allowed. Header may NOT protrude into exhaust port. Coating of the header only is permitted. High Temp silicon may be used on exhaust gasket but may not protrude into exhaust port or flange of header pipe.

723.5 Starter: Recoil starter components may be replaced with a flat flywheel fan cover bolted in place of the recoil starter housing. Starter nut may be added to employ a handheld electric starter.

750 PROCEDURE FOR 4-CYCLE ENGINE AND PARTS HOMOLOGATION

750.1 All stock class engines must be submitted to IKF, by the original manufacturer or importer, by March 1 of each year for approval. All approved engines will be legal January 1 of the following year. Five hundred engines must be available by November 1 or homologation will be void. IKF will approve/disapprove all engines by July 1.

Complete engines must be presented for approval. (Complete with ignition, carburetor, etc.) The decision to approve or disapprove engines will be made by IKF and it's decision shall be final.

All stock class engine parts must be submitted to IKF for approval. At IKF's discretion, all approved parts will be legal either after the Grand Nationals or January 1 of the following year. One thousand parts must be available for homologation or approval will be voided. IKF will approve/disapprove all parts on a timely basis.

750.2 Any expenses incurred to inspect, count parts/engines will be the responsibility of the person submitting the same.

750.3 All parts submitted for approval must retro fit engines submitted for. (No machine work or modification to existing engine allowed.) Any part may be refused if there is a potential performance gain that could disrupt overall class competitiveness.

750.4 External changes which IKF feels do not in any way affect a performance gain do not need homologation, but must be submitted for the record.

750.5 IKF reserves the right to retain all submitted engines and parts.

750.6 Contact the IKF office for instructions on where to send engines/parts for approval. A data sheet on each engine or part must be sent to the IKF office. A copy of all data must accompany engines or parts submitted.

800 REGIONAL POINTS PROGRAM

Only one Regional Point Series will be allowed per Division (Sprint, Road Race, etc.) in each IKF region. This rule is to ensure the integrity and prosperity of a Regional Points Series without dilution.

800.1 This program is designed to create interest and reward the great number of IKF karters who participate at the regional level.

800.2 The Points Program is open to any and all IKF karters who participate in IKF's National program.

800.3 The Regional Points Program will coincide with the competition year beginning January 1st and ending December 31st of each year.

800.4 Points will be kept for each class in each region.

800.5 A karter need not live in a region to score points in that region and he will accumulate points in each region he participates in.

800.6 Points may not be transferred from one class to another or from one region to another.

800.7 A karter must compete in a minimum of 3 Regional races to be eligible for a Regional Point Award.

800.8 The Regional Points Program will be administered by the Region Coordinator in each division.

800.8.1 The Region Coordinator, in conjunction with the Governor, Track Owner/Operators and Clubs will designate the point races within their region. All races must be approved, in writing, by the National Coordinator to ensure that it does not conflict with a Grand National event.

800.8.2 The dates of all Regional point races will be posted at least once on the IKF Website, and/or in a mailer from the IKF office at least 30 days prior to the race.

800.8.3 The Region Coordinator will be responsible for keeping the point totals for their region.

800.8.4 Each promoter/track will supply the IKF office with the results of each Regional race. The office will keep series points for each Region.

800.8.5 IKF will post the Region Point Standings quarterly on the IKF Website. Point totals published by the IKF Office will be the official point totals from which awards will be determined.

800.8.6 Race directors are required to send regional coordinators a copy of all race results sent to IKF to speed up point tabulation.

800.9 In each division a point fund will be set up to purchase awards for at least one and up to five places in each class. The number of places awarded will be computed by taking the total number of entries in each class for a season divided by the number of races, which will give you the average number of entries per class. The number awards will be based as follows:

1 award - 1 to 3 average entries per class

2 awards - 4 to 5 average entries per class

3 awards - 6 to 7 average entries per class

4 awards - 8 to 9 average entries per class

5 awards - 10 and above average entries per class

Tie Breaking: In the event of a tie in the year end Regional point totals, the tie will be broken in favor of the driver who has the most wins. If number of wins will not break the tie, the tie will be broken in favor of the driver with the most seconds, the most thirds, etc. Should there still be a tie, it will be broken in favor of the driver in the highest finishing position in the most recent Regional points race in which either or both drivers participated.

First place award will be a Regional Point Champion jacket. Only National classes, and Regional classes listed in Section 850, shall be eligible for a jacket award. Senior Local Option classes will not be eligible for a jacket award, regardless of participation. Minimum participation for any eligible class shall be an average of 5.0 (not 4.9) entries per Regional event, or 50 entries total within the Regional series. Junior classes, including local option classes, must have a minimum participation average of 3.0 (not 2.9) per regional event and jackets will be awarded. Kid Kart classes will, under no circumstances, be eligible for a jacket award. There shall be absolutely no other way to acquire a Regional Point Championship jacket. All other awards will be plaques suitably engraved. Attempts will be made at the national and regional level to solicit additional monies and awards to augment the Regional Awards Program.

The fund will be derived from one dollar (\$1.00) of the Regional Points Fund paid for each IKF Point Race entry in a region. Each regions' monies will be accumulated independently and all of these funds will be held in a separate IKF bank account as a Regional Liability. The funds will be used to benefit the karters who race in those programs. The money collected each year will be used to purchase awards for the karters who participate in that division. The points fund will be administered by the IKF office.

800.9.1 All Regional champion jacket sizes and names need to be submitted to the IKF Office by the Regional Coordinator before December 15 of that racing year.

800.9.2 All requests for local option/non-National classes, with supporting tech info, must be submitted by March 1 of that competition year

800.9.3 To receive Regional Points Funds Payment an itemized invoice from the vendor that states product, quantity and price (must include the Region and the name of the Regional Coordinator ordering from the vendor) must be submitted by February 1, following the competition year. Any remaining funds revert to the IKF general operating account on February 2nd.

800.9.3.1 All invoices must not list the IKF as the payee, no Region has the authority to indebted the IKF.

800.9.3.2 The Regional Coordinator must sign all invoices. Checks will only be sent to the vendor (no payments will ever be made to the Promoter, Coordinator, etc.).

800.9.3.3 The Regional Coordinator is responsible only for disbursement of the Regional Points Fund, the monies from the Matching Funds Program will not be made available to them.

800.10 Each karter who wins an IKF Point Race will receive a "Win Sticker" to be displayed upon their kart.

800.11 In Road Race, the defending Region Point Champion will start on the pole position of every race they attend while racing in that class, except if the defending National Champion is also entered, then the National Champion will grid first and the Region Point Champion will be second. This will apply only to the region in which the championship was earned. A driver achieving the status of Region Champion for a calendar year, in Road Racing only, will receive a top starting position at the following years' Road Race Grand Nationals.

800.12 Points awarded for finish positions will be as follows:

1st-200 points+* / 2nd-190 points+* / 3rd-180 points+* / 4th-175 points+* / 5th-170 points+*
6th-165 points+* / 7th-160 points+* / 8th-155 points+* / 9th-150 points+* / 10th-145 points+*
11th-142 points+* / 12th-139 points+* / 13th-136 points+* / 14th-133 points+* / 15th-130 points+*
16th-127 points+* / 17th-124 points+* / 18th-121 points+* / 19th-118 points+* / 20th-115 points+*

*Points equal to number of entries in class.

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220
2		192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210
3			183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200
4				179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195
5					175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190
6						171	172	173	174	175	176	177	178	179	180	181	182	183	184	185
7							167	168	169	170	171	172	173	174	175	176	177	178	179	180
8								163	164	165	166	167	168	169	170	171	172	173	174	175
9									159	160	161	162	163	164	165	166	167	168	169	170
10										155	156	157	158	159	160	161	162	163	164	165
11											153	154	155	156	157	158	159	160	161	162
12												151	152	153	154	155	156	157	158	159
13													149	150	151	152	153	154	155	156
14														147	148	149	150	151	152	153
15															145	146	147	148	149	150
16																143	144	145	146	147
17																	141	142	143	144
18																		139	140	141
19																			137	138
20																				135

All finish positions below 20th position will receive two points less than the higher finishing position; 21st would receive 113 points plus the number of entries, 22nd position would receive 111 points plus the number of entries, etc. 35th position and over would get just the number of entries.

800.12.1 Bonus Points: Bonus points for fast Qualifier and/or Prefinal/Heat race may be awarded at regional races. Bonus points must be declared at the start of the season and presented along with the race schedule for approval(800.8.1). Fast Qualifier - 5 points. Prefinal/Heat race - winner receives points equal to number of entries in the class, descending by one for each finish position (i.e. last place will receive one point).

800.13 If a Sprint event is rained out, points will be awarded by time trials. If time trials could not be run, seventy-five (75) points plus number of entries in that class will be awarded to each entrant. If some classes are qualified and others rained out, the classes that qualified will receive points and awards by qualifying time and the classes that were rained out will receive seventy-five (75) points plus the number of entries.

If all classes qualify but only some of the classes are able to run a heat race, then the points and awards will be determined by the finish of the heat or by points and the classes that are unable to run a heat will be awarded points and awards by qualifying.

If a class is rained out during qualifying, then the entire class will be considered to be rained out and will receive their points as above.

800.14 There will be no "Double Points" awarded at an IKF Regional race. Section 200 (2 Cycle and 4 Cycle) Regional race programs only, multiple points (2X, 3X, nX) may be awarded for races held after the first Grand National event (either 2 Cycle or 4 Cycle) for that year. Multiple points must be declared at the start of the season and presented along with the race schedule for approval (800.8.1).

800.15 The Regional Points System in 800.12 is the schedule for keeping IKF points. Each Regional Series in each Division, through the Regional Coordinator, may select the percentage of races to count for each Region's

Championships. This percentage must be published in a Regional flyer or on the IKF Website prior to the first Regional event. Regional Points shall be tabulated to the nearest whole number using the approved percentage of races. Should a Region not specify a percentage, a default percentage of 60% of the races will be used. The points will be tabulated by the IKF office and posted on the IKF Website quarterly. Point totals published by the IKF Office will be the official point totals from which awards will be determined.

820 MATCHING FUNDS PROGRAM

820.1 "This program is designed to assist track/clubs/promoters who set aside funds guaranteeing year end awards for their racers. At the Series conclusion, all awards/sponsorship monies submitted plus a maximum of \$2.00 of the sanction fee paid per National entry, will be made available to each qualifying series of races. These monies will be administered by the IKF office and must be used to benefit the karters who raced within that year and should support the karting industry. Each series' monies will be accumulated independently and all of these funds will be held in a separate IKF bank account as a Matching Funds Liability."

820.2 "The Matching Funds Program is a maximum of \$2.00 of the sanction fee paid for National entries given back to the series at its conclusion. This maximum is attained by a series submitting awards/sponsorship monies equal to or greater than the eligible sanction amount. Example: if a series is eligible for \$1,000 in Matching Funds (\$2.00 of the sanction paid on 500 National entries) and they have submitted \$3,000 in awards/sponsorship monies throughout the year. At the conclusion of the series they will have \$4,000 available to them (\$3,000 awards/sponsorship plus \$1,000 series rewards.)"

820.3 If a series has not submitted awards/sponsorship equal to \$2.00 of the sanction fee paid for National entries, they are only eligible to receive the equivalent of what they submitted. Example: if a series is eligible for \$1,000 in Matching Funds (\$2.00 of the sanction paid on 500 National entries). But they only submitted \$500 in awards/sponsorship throughout the year. At the conclusion of the series they will have \$1,000 available to them (\$500 awards/sponsorship plus \$500 series rewards.)

820.4 A series must utilize three different tracks in order to qualify for the Matching Funds Program. All Series races are Regional Races, but NOT ALL Regional Races are Series Races.

820.5 The signed Matching Funds Procedure and all Sponsorship Agreements must be submitted to the IKF Office by March 1 of that competition year to qualify. All of this paperwork is available through the IKF Office.

820.6 All awards/sponsorship monies must be submitted into the IKF Office or they will not qualify for the Matching Funds Program.

820.6.1 Awards/Sponsorship monies can either be submitted (in their entirety) to IKF by May 1st or if additional monies are being submitted per entry, they must be submitted throughout the year with each race.

820.6.2 If the race and all fees i.e., sanction, membership, regional points and awards/sponsorship monies are not submitted within 21 days after the conclusion of the event, that race will not qualify for the Matching Funds Program, i.e. the \$2.00 sanction fee reward will not be available from that race.

820.7 Only National Classes are eligible for the Matching Funds Program.

820.8 To receive Matching Funds Payment an itemized invoice from the vendor that states product, quantity and price (must include the Series Program name and the name of the Series Coordinator ordering from the vendor) must be submitted by February 1, following the competition year. Any remaining funds revert to the IKF general operating account on Feb. 2nd.

820.8.1 All invoices must not list IKF as the payee, no Series has the authority to indebted IKF.

820.8.2 The Series Coordinator must sign all invoices. Checks will only be sent to the vendor (no payments will ever be made to Promoter, Coordinator, etc.)

820.9 The Series Coordinator is responsible only for disbursement of Matching Funds; the Regional Points Fund will not be made available to them.

820.10 Any Series, Series Promoter, or Regional Coordinator using the IKF Matching Funds, Regional Points Program or conducting IKF insured events does not have the authority to indebted or bind the IKF to contractual or sponsorship agreements. All agreements extending for more than one year should be reviewed by the Series promoter for that year and accepted by all clubs and promoters of that Series.

850 REGIONAL CLASS LIST

Starting with 2005 Competition Rules, any class listed under the 850 Section that has had zero Regional Participation will be dropped from the 850 lists. Anyone wishing to retain a class as an Approved Regional Class must apply in writing to the IKF Office before the Fall Board Meeting.

The following are approved regional classes for IKF competition. At this time, however, these classes will not be run at Grand National events. Specific safety regulations, division rules, and competition procedures for these classes are not to deviate from the rules set forth in the general, divisional, and technical sections of the IKF Competition Regulations and Technical Manual.

All classes other than published National and approved Regional Championship (see Section 850) classes must be approved by the Board or Committee, in advance, in writing.

850.1 2-CYCLE SPRINT REGIONAL CLASSES

CLASS	ENGINE TYPE	FUEL	WEIGHT	AGE
Superstock CR125	Honda CR125	Gas-Oil	385	16-up
Superstock CR125 Heavy	Honda CR125	Gas-Oil	420	16-up
Junior Sportsman	Yamaha KT100S/RLV Box Muffler YBX/eng. clutch only/ no Direct Drive		280	12-15
Senior Sportsman	Yamaha KT 100S/RLV Muffler YBX/ engine clutch only		350	16-up
KPV 3 Senior	KPV100/Spec. Pipe KPV3 (620.20.2)/ Spec. Clutch (202.3)		340	16-up
Rookie Sportsman	Yamaha KT100S/WA55B or WA55-1 carb/RLV1 Spec Pipe/no Direct Drive	Gas-Oil	235	43690
Super Sportsman	Yamaha KT 100S/RLV3 Spec Pipe/ engine clutch per 202.5		340	16-up
IAME Cup	Details are in Sec 275.5.3 and 676			
IAME Cup Junior	Details are in Sec. 275.5.3 and 676			
Honda Kid Kart	Honda GXH50U Rules available from Honda Performance Development	Gas	TBD	5-8
Yamaha SEC Junior	Yamaha KT100SEC (electric start), Exhaust TBD, Clutch TBD	Gas-Oil	280	12-15
Yamaha SEC Senior	Yamaha KT100SEC (electric start), Exhaust TBD, Clutch TBD	Gas-Oil	350	16-up
Rookie Comer 80	Comer K-80, Restrictor 0.647 No-Go <ul style="list-style-type: none"> • Kid Kart competitors that compete in any Jr 1 class may not move back into the Kid Kart class. • Competitors of proper age may compete in: <ul style="list-style-type: none"> ○ Rookie Comer 80 and also the Kid Kart class (5-7) without restrictions. ○ Rookie Comer 80 and also the Junior 1, Rookie Sportsman and KPV1 classes (8-11) without restrictions. 	Gas-Oil	210	Attain 7, Comp 10
*Junior I	80cc Comer K80/Yamaha KT 100S/.600 Restrictor/RLV Box Muffler YBX/ no Direct Drive/ Optional Carb (see sect. 623.4.2)	Gas-Oil	225	8-13
Jr I PRD TaG Controlled	PRD TaG Controlled	Gas-Oil	250	8-13
PRD TaG Masters	PRD TaG Controlled, 35 years and older or 200lb. driver in race gear, verified at the scales on race day	Gas-Oil	390-400	-
KPV 1 Cadet	KPV100/KPV1 Spec Pipe (620.20.3) carb KPV1, WA55B or WA55-1/Spec Clutch (202.3)	Gas-Oil	240	8-13
*Jr. Super Sportsman	Yamaha KT100S/RLV2 Spec Pipe/ engine clutch per 202.5	Gas-Oil	300	12-15
KPV 2 JUNIOR	KPV100/KPV2 Pipe (620.20.4)/ Spec. Clutch (202.3)	Gas-Oil	310	12-15
Junior II PRD TaG controlled	PRD Controlled	Gas-Oil	320	12-15
Rotax Max Jr	Per USRMC Rules	Gas-Oil	320	13-15
*Super Sportsman Heavy	Yamaha KT 100S/RLV3 Spec Pipe/ engine clutch per 202.5	Gas-Oil	360	16-up
KPV 4 Senior	KPV100/Spec. Pipe KPV4 (620.20.5)/ Spec. Clutch (202.3)	Gas-Oil	340	16-up
Senior PRD TaG controlled	PRD Controlled	Gas-Oil	360	16-up
IKF TAG	Details are in Sec. 275.5.3	Gas-Oil		
Rotax MAX Sr	Per USRMC Rules	Gas-Oil	365	16-up
Rotax MAX master	Per USRMC Rules	Gas-Oil	405	16-up

*See Section 617.21. Old-style cylinders must add 30 lbs.

NOTE FOR EXHAUST RESTRICTED YAMAHA CLASSES: RLV 1, 2, 3 are all restricted pipes on a Yamaha engine. ONLY pipes with welded end caps are allowed. Connector tube (flex) length is 9.375" to 9.875", measured from the face of the piston to the end of the connector tube.

NOTE FOR YAMAHA CLASSES: The use of two ignition crankshaft halves is not allowed in Yamaha classes for 200 Sprint Divisions

850.2 4-CYCLE SPRINT REGIONAL CLASSES

CLASS	ENGINE TYPE	FUEL	WEIGHT	AGE
Junior II Briggs World Formula Heavy	World Formula per 717 World Formula Hvy	Gas	340	12-15
IKF Briggs World Formula Light	World Formula (717)	Gas	340	16-up
IKF Ltd Mod Briggs Animal	Animal (719)	Methanol	350	16-up
IKF Briggs Animal Heavy	Animal (716)	Methanol	360	16-up
Jr II Briggs Animal	Animal (716)	Methanol	310	12-15
Jr I Briggs Gas Animal Medium	Animal (716)	Gas	250	Attain 7-11
Briggs Animal Medium	Animal (716)	Methanol	335	16-up
Briggs Gas Animal Heavy	Animal (716)	Gas	370	16-up
Jr I Briggs Gas Animal Light	Sec. 718 Animal with Junior Animal Light Restrictor per 700.3.7.5	Gas	240	Attain 7-13
Jr. II Briggs Gas Animal Heavy	Animal (718)	Gas	330	12-15
IKF Briggs World Formula Super Heavy	World Formula (717) Driver must weigh a minimum of 200 lbs. as he comes off the track.	Gas	405	16-up
Briggs Gas Animal	Animal (718)	Gas	350	16-up
Briggs Gas Animal Masters	Animal (718)	Gas	370	40-up
IKF Briggs World Formula Medium	World Formula (717)	Gas	365	16-up

850.3 ROAD RACE (Enduro) REGIONAL CLASSES

CLASS	ENGINE TYPE	FUEL	WEIGHT	AGE
Junior IKF World Formula	World Formula per 717, Chassis per Sec. 200, Bodywork per Sec. 201.9 only	Gas	325	13-15
Junior Yamaha Sprint Sit-up Light	Yamaha KT100S/RLV Box Muffler, SSX/SSX-V (See 312.2)	Gas-Oil	300	13-15
WC 80cc Sprint		Gas-Oil	380	16-up
Formula 80 Jr.	See 306.9.5	Gas-Oil	320	13-15
Formula 80 Junior Heavy	See Sec. 306.9.5	Gas-Oil	340	13-15
Super Stock Sit-Up	100cc Piston Port 100cc Stk Reed Valve, pre 1998 100cc Stk Reed Valve, 1998+ 100cc Stock Rotary Valve	Gas-Oil	320 340 365 340	16-up
Yamaha Ltd. Light Sprint	Yamaha KT100S See 306.9.2	Gas-Oil	330	16-up
IKF Briggs World Formula Medium	Briggs World Formula per Sec. 717. 5" diameter wheels only	Gas	365	16-up
Yamaha Sportsman Heavy	Yamaha KT100S/RLV Box Muffler, SBX/RLV 26S "style" header only. Tube must protrude through flange. No taper allowed, tube must be same i.d. on both sides. May be "kicked" to clear tire and sprocket, 11-12 inches of Flex, 30 minute race. See Sec. 302.16.	Gas-Oil	400	16-up
Yamaha KT100S Light	Yamaha KT 100S, must run fixed pipe only, any brand or style. See Sec. 302.12.	Gas-Oil	370	16-up
Yamaha KT100S Heavy	Yamaha KT 100S, must run fixed pipe only, any brand or style. See Sec. 302.12.	Gas-Oil	400	16-up
80cc Laydown	'99 Honda CR80	Gas-Oil	410	16-up
TAG Enduro	IKF TaG approved engines. See 302.11.1.1 Enduro/Laydown chassis Sprint chassis, bodywork per Sec. 201.9 only Sprint chassis, Full Superstock style bodywork	Gas-Oil Gas-Oil Gas-Oil	410 TaG Light Weights	16-up 16-up 16-up
Rotax Max Jr.	Rotax Max Engine Rules	Gas-Oil	320	13-15
Rotax Max Light	Seal required. Front wheel brakes optional.	Gas-Oil Max. 98 Octane	370	16-up
Rotax Max	Seal required. Front wheel brakes optional.	Gas-Oil Max. 98 Octane	390	16-up
TaG Junior	See 2017 Rules, Sec 275.5.2 for weights	Gas-Oil		13-15
TAG Light	Engine: Leopard (digital ignition) Motori Seven PRD PRD 2008 Rotax Vortex Rok TT X30 X125T	All Engines Max. 98 Octane, Gas-Oil	370 385 370 370 370 385 375 375	16-up
All motors per IKF Tech, Sec 675. No modifications allowed. Sit-Up kart. Bodywork per Sect. 201.9 only. Front brakes allowed. Competitor must supply tech inspector with proper factory specification sheets for engine.				

CLASS	ENGINE TYPE	FUEL	WEIGHT	AGE
Formula 125 Limited	See 306.9.3	Gas-Oil	385	16-up
Formula 125 Limited Heavy	See 306.9.3 35+ yrs. of age or 190 lb. min. driver weight	Gas-Oil	420	35+
Sprint Super Stock CR125	'99 Honda CR125 Kit Engine, Sec. 657, and 2000-2002 cylinders allowed, SKUSA branded exhaust and 2 Piece RLV R4H allowed, CIK Bodywork only	Gas-Oil	385	16-up
WC Super Stock CR125	'99 Honda CR125 Kit Engine, Sec. 657	Gas-Oil	400	16-up
WC Super Stock CR125 Heavy	'99 Honda CR125 Kit Engine, Sec. 657	Gas-Oil	420	16-up

NOTE: Open Fuel Classes: Only Acetone may be added to facilitate blending of gas and methanol with oil, and only in quantities necessary to achieve blending. Large amounts not permissible. See Special Bodywork Rule 302.11.14

NOTE: Yamaha KT100S Engines See Sec. 617.21.

NOTE: There is a 20 lb. weight reduction for the use of a Sprint chassis in specified Enduro (laydown) classes. Top of seat back must be a minimum of 14" above the ground.

850.4 2-CYCLE SPEEDWAY REGIONAL CLASSES

CLASS	ENGINE TYPE/RESTRICTIONS	FUEL	WEIGHT	AGE
New Mexico Superbox	Yamaha KT100S, Engine Clutch RLV SSX-V Muffler, No Experts	Gas-Oil	360	16-up
Yamaha Limited Heavy	Yamaha KT100S, 3-Disc Wet Engine Clutch, KB-12 Spec Header and Pipe, No Experts from any division, no remote card adjusters	Gas-Oil	400	16-up
Senior Champ	Yamaha KT100S	Gas-Oil	410	16-up

850.5 4-CYCLE SPEEDWAY REGIONAL CLASSES

CLASS	ENGINE TYPE/RESTRICTIONS	FUEL	WEIGHT	AGE
Junior Gas	Per Sec. 704 Briggs Gas	Gasoline	225	8-11
Super Jr. II Unrestricted	5hp Briggs	Methanol	325	12-15
SAM	Limited Modified Flathead	Methanol	350	16-up
	Limited Modified Animal	Methanol	360	16-up
	Star Super Stock	Methanol	380	16-up
Open Class	Various weights by type and displacement, rules available from IKF office			16-up
Briggs Animal Blue Wazoom Medium	(Sec. 720)	Methanol	345	16-up

850.6 Pavement Speedway regional Classes (no classes at this time)

850.7 Shifter Kart REGIONAL CLASSES (no classes at this time)

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