ARTICLE 10: GENERAL OPERATIONS

SECTION 10.1: GENERAL

10.1.1: Spirit & Intent All standards, operational and technical, contained within this rulebook are written with the concept of ***Spirit and Intent*** in mind. This concept allows for the production of fair and consistent events across all forms of karting. It should not be the goal of any participant to "read between the lines" to manipulate the rules for their advantage, or bog down events in constant protests and appeals, or working to determine loopholes to exploit. Officials have the right to interpret a situation, operational or technical, to the best of their ability by referring to these rules, and the spirit and intent of the written standards presented here. Do not assume that if a situation or technical standard is not specifically addressed within this document that the ruling will be in your favor. If you are unsure of a regulation, or are considering a technical gray area, please contact NKA directly for clarification prior to moving forward.

10.1.2: Rules & Standards

10.1.2.1: Rules contained are used to ensure that all participants of a NKA event understand how the event is to be organized and operated. Rules may be modified for sanctioned events via section 10.1.3 Supplemental Rules.

10.1.2.2: Standards contained are used to legislate operational and technical specifications that are critical to the successful production and management of a NKA event as approved by the NKA and the NKAChampionship Series, which are jointly referred to as 'the NKA' in this document.

10.1.3: Supplemental Rules NKA events, and/or series have the right to add "Supplemental Rules". These rules and regulations are presented in many ways as a framework for the many types of NKA events that occur in the US. Supplemental Rules may take precedence to facilitate special needs that the club may have, with approval

from the NKA. These may include a variation in points structure, event structure, class structure, etc. At no time will Supplemental Rules be allowed to minimize any safety standards contained within this document.

10.1.4: Local Option A Local Option class is any class that competes at a NKA event but is not officially recognized by the NKA. These classes may be added at any time and at the discretion of the series with approval from the NKA.

10.1.5: Comprehension of Standards All officials, drivers, pit crew, and participants are expected to be fully versed with the all applicable sections of NKA rules and standards, as well as any other supplemental rules that are part of any event. Failure to be aware of the rules and standards does not minimize their scope.

10.1.6: Participant Responsibility & Conduct

10.1.6.1: NKA facilities expect the highest level of conduct at their events. All attendees are responsible for their behavior. Any offense committed by a crew member shall be chargeable directly to the driver but may also be chargeable to the offender(s) in conjunction with the driver should the situation warrant. This responsibility also extends to conduct in the local area of an event, including motels, hotels, restaurants or any private or public area, as well as social media.

10.1.6.2: Participants are also responsible to report any unsafe conditions to the event staff or officials, and to operate within the guidelines for the event.

10.1.7: Living Document/Revisions This is a living document and can be modified by the NKA as needs arise in terms of safety, supply chain disruption, technical evolution, and information not previously known. Revisions will be posted at www.nkaonline.com. Revisions supersede any standards or standards contained within.

10.1.8: Approved Use/Copyright/Name Use The use of these standards, which is registered and copyrighted by the NKA is for approved NKA events only and is used to allow for the smooth and efficient operation of an event. Its use or reproduction in whole or in part without the express permission of the NKA is forbidden.

10.1.9: Rules and Standards Disclaimer the NKA offers no warranty, expressed or implied, resulting from the compliance of these rules and standards that govern karting events. Racing is a dangerous sport that can result in injury, dismemberment, and even death. No rules or standards can guarantee the elimination of those risks. Your (or your child's) participation in the sport of karting is at your own risk.

10.1.10: Legal Action Any competitor, Parent or Legal Guardian of the competitor, or participant of a NKA event that threatens or takes legal action via an attorney against NKA, or the NKA host facility, or any its legal agents or staff, will be automatically and indefinitely suspended from all NKA events.

10.1.11: Social Media

10.1.11.1: Social media is a part of our daily lives, and when used correctly is an important place for the sport to discuss issues and promote our activities. This policy is not intended to restrict the good. Rather, it is to assist in curbing the more dangerous and damaging activities that have become or may become an issue.

10.1.11.2: the NKA Social Media policy covers all those involved within a NKA event whether they are a driver, participant, official, family/crew, general third parties, media members, or associated industry as it relates to NKA , or an NKA event.

10.1.11.3: Any content submitted online through the medium of the internet by those participating or officiating at the NKA events should not contain material that could be deemed to be threatening, harassing, bullying, illegal, obscene, defamatory, slanderous or hostile towards any individual, team or entity participating or officiating at the NKA events. the NKAdefines content as text, images, audio, video and any user generated content knowingly uploaded to the internet.

10.1.12: Consumable Specifications It is the right of NKA events to declare the requirement of certain consumables such as tires, fuel, and/or oil.

10.1.13: Insufficient Funds If an entrant has insufficient funds, the entrant has ten (10) days from the start of the event to rectify the funds. Should the Legal Entrant not rectify the situation in the given time period it puts the driver out of 'Good Standing', eliminating any benefits from that event.

10.1.14: Reversal of Fees A Reversal of Fees at any time puts the driver out of 'Good Standing', shall automatically disqualify that driver from that event, and revoke any benefits from the event.

10.1.15: Refunds Once the Legal Entrant has taken to the track for any official session of an event, they are not eligible for a refund. If they have not taken to the track for an official session, but the event has begun, they are eligible for a 50% refund. It is at the sole discretion of the NKA to determine whether the refund is in cash or in credit.

10.1.16: Waiver Requirements

10.1.16.1: RELEASE AND WAIVER OF LIABILITY, ASSUMPTION OF RISK, INDEMNITY AGREEMENT: All persons who intend to enter a restricted area (thereby becoming a participant of that event) shall sign the official Release and Waiver of Liability, Assumption of Risk, and Indemnity Agreement provided to the facility by the NKA before being allowed to participate in any event. All participants, by signing the waiver, hereby elect to use the track at their own risk, and thereby release and forever discharge NKA Inc., the NKA, and any NKA,

together with their heirs, assigns, officers, representatives, agents, employees and members, from all liability from injury to person, property, employees and/or reputation, that may be received by said entrant and/or driver, and from all claims of said injuries to parties listed above growing out of, or as resulting from the event contemplated under the entry form, or caused by any construction or condition of the course over which the event is held.

10.1.16.2: PARENTAL CONSENT RELEASE AND WAIVER: It is mandatory that at least one parent or legal guardian of a minor 17 years old or younger fully execute the Parental Consent and Release and Waiver of Liability, Assumption of Risk, and Indemnity Agreement before being allowed to participate at any the NKA event. NKA MINOR REPORT is to be signed by a parent or legal guardian at each event and reaffirms the agreement of the Parental Consent.

10.1.17: Criminal Activity The laws of the United States, and local laws and statutes,are always in effect at any event, including a NKA event. These rules and standards cannot supersede the laws of the land, and do not remove the expectation that everyone on the premise is expected to abide by those laws. the NKA is not responsible for any injuries or actions that result from criminal activity at a NKA facility or in the area of a NKA event. Driver is responsible for all actions of their crew/guests. Criminal activity may include, but is not limited to;

- Physical Assault: participants (driver, crew, spectator, official, etc.) shall not make any physical contact in an aggressive manner towards another participant or official.
- Verbal Assault: participants who use aggressive or threatening language towards another participant or official.
- Use or possession of a prohibited/illegal substance.
- Underage consumption of alcohol or controlled substances.

10.1.18: Prohibited Substance All participants entering the restricted area of a NKA 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 for the duration of the event, or while on premises for a multi day event. Participants are prohibited from being under the influence of alcohol or any controlled substance. Authorities will be called if it is determined that any participant has operated a kart during any part of a sanctioned event.

10.1.19: Series Decals All karts shall display all event or series required decals in the correct positions.

SECTION 10.2: NKA Competition Licensing

NKA event competitors are not required to maintain licensing through the NKA.

SECTION 10.3: ENTRANT

10. 3.1: Participant in Good Standing To be eligible to compete or attend any NKA event, or to be eligible for any benefits that are part of the event, each participant must be in good standing with the NKA .

10.3.2: Legal Entrant The Legal Entrant is the driver in a NKA event, and shall include their parents or legal guardian in the event the driver is a non-emancipated minor. This may also include the chassis and engine as determined by the sanctioned event. The term 'Legal Entrant' and 'driver' may be interchanged throughout the document.

10.3.3: Entry for an Event The Legal Entrant must enter a NKA event prior to going on course for any official session of the event. Entry to a NKA event does not guarantee the Legal Entrant any additional benefits, points, or awards, and may not be used in any protest or appeal. Entering an event implies that the rules and standards have been agreed to by the Legal Entrant.

10.3.4: Refusal of Entry NKA Member Facilities and/or their respective Race Directors reserve the right to refuse any entry.

10.3.5: Appearance of Driver/Crew It is expected that the driver and crew, team, and industry members in attendance maintain a professional appearance during the event.

10. 3.6: General Ability

10.3.6.1: It is expected that all drivers competing at a NKA event will show the basic skills necessary to properly compete in a karting event, which includes understanding the basic policies and procedures that govern an event.

10.3.6.2: The event Race Director and/or series officials have the final decision regarding a competitor's ability to properly perform, as well as having the competitor run the appropriate class for their skill level. It is within the rights of the Race Director of a NKA event to remove anyone from competition, or to place them in a more appropriate class for their skill level, should they determine it necessary for their safety, or the safety of the other competitors.

10.3.7: Supporting Documents Any driver shall be required to prove his/her age via one or more legal documents such as birth certificate, driver's license, passport, etc. if requested, or if the class they intend to compete has some type of age requirement such as Rookie, Junior, or Master classes.

10.3.8: Competition Age A driver's competition age is determined by the age that they will be on December 31 of that year. For example; A driver is 9, but will turn 10 in November. As their age on December 31 will be 10, that driver is considered to be 10 for that year but can take advantage of the Option Year.

Exception: The absolute minimum age for on track NKA events is 5. The driver must have had their 5th birthday before being able to take to the course.

10.3.9: Option Year NKA option year is designed to give the rookie and junior drivers flexibility during transition years by allowing them to either stay in the current level class, or move to the next class level. Series officials retain the right to make the final determination.

10.3.10: Advancing an Age Group When eligible by age, drivers may move up to the next class. Once they have completed one full event at the next level, they must decide whether to remain at that level or revert back to the previous level. They can make this decision only one time in a given season. Once the second event at the higher level has been completed, they must remain at that level at any NKA event. This applies only to the NKA events, and the NKA will not take into consideration what classes drivers compete in outside of the NKA related events.

10.3.11: Medical Conditions

10.3.11.1: It is not the duty of the NKA to determine the health status of each participant. Each participant must exclude themselves from participating if they have any condition known to them that a reasonable person would consider unsafe. NKA shall not be liable in the event there is additional injury, including death, from any medical condition.

10.3.11.2: These conditions, physical and mental, include but are not limited to; Pregnant women, diseased persons, persons with known or unknown medical issues, persons on medications known to cause impairment, anyone under doctor's care without express consent by doctor to compete, any person with a disability that would not allow them to manage the basic operation of a competitive kart.

10.3.12: Drivers with Disabilities If a driver has a known disability, and wishes to compete, they must contact NKA to obtain the basic criteria to compete and to apply for a waiver through the NKA. This is done to ensure the safety of the driver in question, as well as the safety of all participants at an event.

10.3.13: Entrant Equipment The Entrant is allowed to use up to one chassis per event. Any additional chassis used for a class must have evidence of physical damage or failure and is at the discretion of the event Technical Director.

10.3.14: Age Waivers It is at the sole discretion of the NKA in conjunction with its NKA facility to allow a waiver for a driver to compete in a class they technically do not qualify for. These situations may result from size of driver, experience, etc. These situations are rare and any waiver presented does not set precedence for any future waiver considerations.

To apply for a waiver, the parent or legal guardian will email their respective club with the following information; Name, current age, birth date, and the specific request along with any data to assist the club and the NKA in making an appropriate decision. The club will review this information to ensure validity, and then forward the information along with its recommendation to the NKA. The NKA will render a final decision within 30 days.

SECTION 10.4: SAFETY

10.4.1: Participants Responsibility It is the responsibility of each participant to properly manage the safety of their equipment at all times during the course of an event. NKA will not assume the responsibility for the safety and/or technical compliance of any competition vehicle. Additionally, it is their responsibility to inform series officials of any issues on or directly surrounding the racing surface that may present or develop into a dangerous situation.

10. 4.2: Accidents

10.4.2.1: Kart(s) and driver(s) safety equipment involved in an accident may be required to stop for inspection by officials only. Officials may not allow a kart to continue or safety equipment to be used if there is reasonable visible evidence that the kart or safety equipment is damaged and may pose a safety risk in general. This decision shall be made solely by event officials, and not the drivers involved.

10.4.2.2: Parents of a minor may be allowed onto the track only when approved by NKA event officials once the course is clear and the conditions are safe.

10.4.2.3: Any driver who has lost consciousness, indicates a strong likelihood of concussion (dizziness, vomiting, blurred vision, memory loss), or indicates a reasonable chance of serious injury may not be permitted to continue in any official session for that event, and is at the discretion of the event medical staff and/or the Race Director. The driver may be required to be cleared by a Medical Doctor before being allowed to attend further NKA events.

10.4.3: Dangerous Conditions

10.4.3.1: Officials have the right to stop, postpone, or cancel any event if they deem conditions to be dangerous. This includes weather, track conditions, driver(s) actions, civil unrest, or any other condition that may arise and threaten the safety or well-being of competitors, spectators, officials, or other people at or near the event.

10.4.3.2: If lightning is observed in the area of the racing facility, immediately cease all on-track and outdoor activities or be advised to seek their own shelter should a common indoor area not be available. All participants and spectators should be

moved indoors. Competition can resume 30 minutes after the last sighting of lightning is observed.

10.4.3.3: In the case of impending severe weather, the event officials will evaluate any available information, cease all activities, and advise all parties to take immediate shelter if necessary. NKA is not responsible or liable for any damage to property or individuals during bouts of severe weather. It is the responsibility of the driver and their crew/family to recognize severe weather and take appropriate action to secure their property and protect themselves regardless of the actions of the event.

10.4.4: Fire Extinguisher It is highly recommended that each entrant have a minimum of one operable 1-1/2 pound dry-powder fire extinguisher (rated for use on A, B, & C. type fires) in their pit area. Carbon Dioxide type extinguishers are not acceptable substitutes for the dry-powder type.

10.4.5: Track Access During "live/hot" sessions, no person or race official shall be permitted on the racing surface at any time.

10.4.6: Personal Safety Equipment

10.4.6.1: Helmets All helmets used at a NKA event must be full coverage (full face), with the face-shield installed, and designed for competitive motorsports use with the following certifications:

Snell Foundation	**Expires**
SA, K or M 2010	12/31/2021
SA, K or M 2015	12/31/2025
CMS 2016	12/31/2026
CMR 2017	12/31/2026
SA, K, or M 2020	12/31/2030
SFI	
SFI 24.1/2010 (Youth)	12/31/2021
SFI 31.1/2010	12/31/2021
SFI 41.1/2010	12/31/2021
SFI 24.1/2015 (Youth)	12/31/2025
SFI 31.1/2015	12/31/2025
SFI 41.1/2015	12/31/2025
SFI 24.1/2020 (Youth)	12/31/2030
SFI 31.1/2020	12/31/2030
SFI 41.1/2020	12/31/2030

10.4.6.1.3: Helmets must be in "factory condition", with no visible shell damage. If shell damage is visible, it will not be allowed to be used. Additionally, all

certification stickers must be present and easily visible upon inspection if required.

10.4.6.1.4: Cameras shall not be affixed to the helmet in any way. Officials are to immediately black flag and remove from the course any driver that enters a session, official or otherwise, with a camera mounted in any way to a helmet. This includes 'in-helmet' cameras that are affixed to the interior of the helmet near or around the viewport of the helmet.

10.4.6.2: Gloves Gloves are required in all divisions.

10.4.6.3: Suits/Jackets Driving suits of one piece design made of abrasion resistant material are required. A jacket, if used, must be made for racing competition, be abrasion resistant, with typical construction of nylon or leather. If wearing a jacket long pants must be worn and must be free of defects such as rips, holes, etc.

10.4.6.4: Footwear High top shoes or boots designed for motorsports use are recommended. Closed toe shoes of most types are allowed. All shoes, regardless of type, must be properly laced and/or buckled at all times in any on-track session and must be free of holes or signs of extensive wear.

10.4.6.5: Ear Plugs The use of earplugs by participants, both drivers and pit crews, is strongly recommended. Hearing loss in motorsports is extensive, and it is worth a few moments to protect your hearing.

10.4.6.6: Long Hair

10.4.6.6.1: If hair extends appreciably from beneath the helmet, the competitor must wear a balaclava to retain hair from extending outside the helmet. No hair is allowed to be visible when the driver is "race ready".

10.4.6.6.2: NKA and its sanctioned events are not responsible or liable for injuries related to long hair while on-track, regardless of the situation. The driver is exclusively responsible for ensuring that their long hair is properly secured**.**

10.4.6.7: Neck Collar

10.4.6.7.1: Use of a neck collar is mandatory for all Rookie and Junior divisions.

10.4.6.7.2: They are not mandatory, but recommended, for all Senior divisions.

10.4.6.7.3: If a Rookie or Junior driver loses a helmet support on-track, they shall be removed from the course and will not be able to return to competition. A senior driver that elects to use a Helmet Support shall not receive a Black Flag for losing a helmet support.

10.4.6.7.4: Advanced neck and head supports are highly recommended for drivers of all ages.

10.4.6.8: Chest Protectors All rookie and junior drivers up to 13 years in all divisions are required to wear a chest protection device with the following;

SFI specification 20.1.
Up to 8 Years (actual age): SFI 20.1/1
9-13 (actual age): SFI 20.1/2

10.4.6.9: Rib Protectors Rib protectors are recommended, but not mandatory.

10.4.7: Driving in Pits Driving in the pit area is expressly prohibited at a NKA event. The only area drivers can operate their karts is exiting the grid, on track, and driving up to (but not on) the scales. Due to the serious nature of driving in the pits and the potential for severe injury and/or death, doing so is an immediate disqualification from the event, plus the potential of additional sanctions from NKA .

10.4.8: Recovery/Emergency Vehicles While karts are active on the track, no recovery or emergency vehicle shall cross, run adjacent to, or park in close proximity to the track's surface.

10.4.9: Open Flame Open flames can only be used outside in a well ventilated area and not as a heating source for tires. A charged fire extinguisher must be within ten feet of the open flame while being used.

10.4.10: Weight/Ballast

10.4.10.1: All bolt-on weight must be white in color.

10.4.10.2 All weight added to meet minimum kart/driver weight requirements shall be bolted and safety wired to the kart with a minimum 5/16 or 8mm through bolt. Weight over 7 pounds will require a minimum single 3/8 bolt, or two 5/16 bolts. All bolts are to use double nuts, with threads of at least 1/4" still visible. Drilling and using cotter pin/safety wire in addition to the double nuts is highly recommended.

10.4.10.3: Weight mounted to the seat should use a large washer to prevent the head of the bolt from pulling through the seat.

10.4.10.4: Carrying of ballast on the driver's person is prohibited, which includes any materials not normally considered necessary for the driver to compete and is at the discretion of series officials.

10.4.10.5: No weight may be mounted to the underside of the chassis.

10.4.11: Safety Tech Standards The following connections must use a nylock nut (or mechanical where specified), and/or safety wired/pinned/clipped during all official sessions;

Pedals (brake and throttle)
All brake rods and safety tether
Master cylinder to frame
Calipers to frame/spindle
Rotor to hub bolts (mechanical lock nuts required)
Kingpins
Steering shaft to frame
Tie Rods (all mounting points)
Steering hub to steering shaft
Steering wheel to steering hub (all – minimum 3)
Third Bearing Support bolts to the support mount, or to each other (minimum 2)

10.4.12: Technical Inspection Form

At any NKA event, it is the responsibility of the entrant/driver to maintain all facets of safety for their vehicle, and not the NKA, for all sessions related to the event. To ensure that the entrant/driver is aware of this responsibility NKA requires the use of the Safety Inspection Form. This form is to be filled out and signed by the entrant and handed in as they enter the grid prior to their qualifying session. The event officials may do spot checks during an event.

It is acceptable for a NKA event to require a pre-tech inspection as opposed to the Technical Inspection Form, and is at the discretion of the event officials.

SECTION 10.5: EVENT

10.5.1: Restricted Area Access

10.5.1.1: Only those persons having signed a waiver of liability and with a pit pass shall be allowed in the pit/restricted area, which include hot grid and track if a driver or when expressly permitted by an official.

10.5.1.2: Areas that are directly involved in the continuous operation of the event are restricted to anyone except for the event production staff without an

expressed invitation, and include but are not limited to; Tower, scoring, tech, any area designated ‘official’.

10.5.2: Meeting of Drivers/Crew and Officials The Race Director may conduct a meeting of drivers for the discussion and interpretation of the rules and any specific standards applying to that event. All drivers may be required to attend, and it is the driver’s responsibility to do so. Failure to attend this meeting does not remove the responsibility of the driver to know the rules and standards of the sanctioned event.

10:5.3: Legal Equipment To compete in any official session the driver and kart must be compliant with the technical regulations of that class. In the event that it is determined that the Legal Entrants equipment is not legal, infractions will apply. In the event that it is determined that non-legal parts were intentionally created with the goal of subverting the Spirit and Intent of the technical regulations, the person or persons involved will be subject to severe infractions, and possible expulsion from the series.

10.5.4: Official Session For NKA events, an Official Session typically includes practice, qualifications, heats or pre-finals, last chance events, and Features/Finals. The terms ‘official session’, ‘session’, or ‘race’ may be interchanged in this document but all imply an Official Session. Drivers are to only enter the sessions they have entered for.

10.5.5: Class Structure

See related appendix

10.5.6 Combining Classes The combining of classes at a NKA event is acceptable. Classes must be age and speed similar, and is at the discretion of series officials. While it is not preferred, it is acceptable under certain conditions to allow a Junior and Senior class to be combined, as long as they are similar in speed and maneuverability.

10.5.7: Environmental Consideration

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

10.5.7.2: Fuel & Oil All participants shall not dispose of fuels or lubricants in the pit area or the track area by pouring or spilling such fuels or lubricants upon the ground.

10.5.7.3: Used Tires Used tires are not to be left in the pits, paddock, trash, or any location at any NKA event without the expressed consent of the track owner and/or race director, which may include specific instruction.

10.5.7.4: Trash It is the responsibility of each Legal Entrant and their crew to collect and dispose of their trash at any NKA event unless directed otherwise.

10.5.8: Cancellation of Event

10.5.8.1: It is the right of a sanctioned event to cancel the event for various circumstances such as war, dangerous conditions, government action, pandemic closures, weather, civil unrest, etc. It is also their right to determine what and/or if a refund is practicable.

10.5.8.2: If the event is cancelled prior to the completion of qualifying of all classes, and cannot be rescheduled, the event shall award 1st place points to all competitors.

10.5.8.3: If the event is cancelled, and cannot be rescheduled, before all heats/pre-finals have been completed, points will be awarded based on the results of qualifying.

10.5.8.4: If the main event is cancelled and cannot be rescheduled: If the race is at or over 50% complete, it can be declared an "official event", and full points/prizes awarded. If the main event has not reached 50%, the results of that main, and all subsequent mains, will be based on the line-up for the mains. Any main that has already been completed prior to the cancellation is considered complete.

10.5.9: Failure to Compete Should a competitor attend and enter a NKA event, but is unable to compete due to circumstances out of their control (approved by Race Director), they will be given last place points as if they had competed in any official session.

10.5.10: Substitute/Relief Driver Substitute/Relief drivers are not allowed in NKA events. If it is determined that a substitute driver has been used, both the legal entrant and the substitute driver are to be disqualified from the event.

10.5.11: Official Scoring

10.5.11.1: The official race scoring, whether by electronic system or hand scoring, is the only "Official/Legal" source of race scoring. The official scoring is the information supplied & certified by the official scorer.

10.5.11.2: Any information provided to the public through real-time scoring programs such as the Race Monitor, is not official and the information it displays cannot be used to protest or question the official scoring of an event.

10.5.11.3: To be scored, a kart must be under its own power.

10.5.11.4: If a transponder provided by the event malfunctions or is not charged, and results in the driver not being able to be scored in qualifying, the driver will be given a replacement and will be allowed to re-qualify with a 'green-white-checkered' at the earliest opportunity, if possible, as determined by the Race Director.

10.5.11.5: If a transponder is owned by the driver and malfunctions or is not charged, or is improperly mounted, resulting in it not being able to provide the correct signal (also applies to event provided transponder), the driver will not be eligible to re-qualify.

10.5.11.6: At no time is the lap time delivered from any data system to be used as a valid qualifying time.

10.5.12: Points

Final Points

Position	Points	**Position**	Points
1	200	**21**	85
2	180	**22**	80
3	175	**23**	75
4	170	**24**	70
5	165	**25**	65
6	160	**26**	60
7	155	**27**	55
8	150	**28**	50
9	145	**29**	45
10	140	**30**	40
11	135	**31**	35
12	130	**32**	30
13	125	**33**	25
14	120	**34**	20
15	115	**35**	15
16	110	**36**	10
17	105	**37**	5
18	100	**38**	4

Heat/Pre-Final Points

Position	Points	**Position**	Points
1	100	**21**	34
2	90	**22**	32
3	85	**23**	30
4	80	**24**	28
5	75	**25**	26
6	70	**26**	24
7	65	**27**	22
8	60	**28**	20
9	58	**29**	18
10	56	**30**	16
11	54	**31**	14
12	52	**32**	12
13	50	**33**	10
14	48	**34**	8
15	46	**35**	7
16	44	**36**	6
17	42	**37**	5
18	40	**38**	4

19	95	**39**	3		**19**	38	**39**	3
20	90	**40**	2		**20**	36	**40**	2

Points for Heat/Pre-final are as noted. Points for Finals are posted points + the number of entries in the class.

10.5.13: Tie Breaker In the event of the tie, tiebreakers will be determined by: wins, 2nd places, 3rd places, on down through all finishing positions and then qualifying positions (if applicable). If a tie still cannot be resolved, “co-champions” (or whatever the points position) will be declared.

10.5.14: Did Not Start In the event that a driver is unable to start any session of the official race event but has taken at least one competitive green flag during the event, they will be given last place points for that session. If a driver fails to take a competitive green flag for any session of an event, DNS points will not be allowed.

10.5.15: Radio Use Radio communication to or from the driver is prohibited.

10.5.16: Video Use

10.5.16.1: The use of video from the kart via a mounted camera(s), or from spectators viewing an official session, is allowed. Refer to the standards for cameras and camera mounting.

10.5.16.2: Video may be used for protests during an event at the sole discretion of the Race Director or event. The event may, if it deems helpful, request video of an incident to properly judge a situation. The sanctioned event is under no obligation to do so at any time.

10.5.16.3: Officials may request video from an event to review on-track activity that is considered dangerous and with intent to harm. The series reserves the right to determine infractions, post event, that may result from specific footage.

SECTION 10.6: COMPETITION

10.6.1: Sportsmanlike Conduct Drivers are expected to compete with a high standard, to follow the general rules for official sessions, and to avoid unnecessary contact with other drivers. Unsafe or unsportsmanlike conduct is prohibited. Bumping, nerfing, aggressive driving, etc. is prohibited.

10.6.2: Established Course Drivers are to follow the established course as designed, with all four wheels remaining on course. Deviation is only acceptable in avoiding an incident. The Established Course does include all curbs and exit curbing.

10.6.3: Driving Standards Driving standards are the benchmark for assessing on track infractions. The event marshals and the Race Director have sole decision making for assessing infractions related to driving standards.

10.6.4: Right of Line The 'right of line' is the ability of a driver to have the right to utilize their preferred line entering, through the apex, and exiting a corner.

There are numerous types of corners, and this serves as a guide.

10.6.4.1: **Establishing Position** For the overtaking driver to 'establish position', they must have the centerline of their front axle midway between the lead kart's front and rear axle as they enter the corner without the use of contact or leaving the established course prior to the application of brakes, or corner turn in.

10.6.4.2: **Maintaining Position** For the lead driver to 'maintain position', the centerline of their front axle may not fall behind the midway point between the overtaking karts front and rear axle centerlines without blocking or leaving the established course.

10.6.4.3: Once the overtaking driver has 'established position', and while the lead driver 'maintains position', they are considered to have equal right to the entire corner (entry, middle, and exit) and are obligated to give the other driver racing room, but are not obligated to concede the corner.

10.6.4.4: A corner is won when either the overtaking driver fails to maintain their 'established position' and execute the pass, or the lead driver fails to 'maintain position' and allows the overtaking driver to execute the pass.

10.6.4.5: A driver that finds himself defending on the outside of a corner at exit has the responsibility of using the correct judgement to concede the corner at the moment the inside kart is making forward progress.

10.6.5: Defending Drivers are allowed to make moves to defend off the preferred line ina straight coming to a corner. However, that driver is only allowed to return back ¼ kart width to set for the corner. Lines may not be adjusted while in a braking zone. Once an overtaking driver has broken the rear plane of the lead kart with their front nose, the lead driver is not allowed to move any further. Should contact occur after the rear plane of the lead kart has been broken, but not to a point where the lead kart may be unaware, the lead kart must immediately abandon any further movement. If so, no infraction will be issued. If the lead driver continues the defensive move after contact, or had looked to his/her rear prior to contact, an infraction will be assessed.

10.6.6: Avoidable Contact While it is expected and common for contact to occur during an official session, it is to be avoided with care at all times. Avoidable contact that results

in directly affecting the other driver(s) to their detriment, regardless of intent, is prohibited and subject to infractions.

10.6.7: Impeding Impeding is the intentional or unintentional act of placing your kart and adjusting speed so that it inhibits the trailing driver(s). Impeding is also to be defined in a more general sense of creating a situation that affects another driver, or drivers, negatively. Typical impeding is being off pace and in the racing line, or generally holding up other drivers from managing their session.

10.6.8: Signaling Signaling from pit to driver is acceptable if done safely from the grid area by way of hand signals,or by using a sign board. At no time are lights or lighting of any kind to be used while signaling.

10.6.9: Mechanical Failure/Stopping on Course If a driver has a mechanical failure, the engine dies for any reason, or from any other reason while the session is under green flag conditions, they are to raise their hand(s), slow safely, and pull off of the course with caution. They are to move their kart safely away from the established course, or assist the corner marshal in doing so, and then move behind the nearest barrier protection. The driver is not to leave the protected area until instructed.

10.6.10: Restarting of Karts Restarting of a kart during green conditions is allowed by instruction from officials only. Karts involved in a yellow or red flag may restart unless they were previously stopped on course or their engine not running was the cause of the caution. Drivers have 90 seconds to restart after a yellow or red flag condition when allowed.

10.6.11: Leaving the Track Drivers are expected to re-enter slowly and safely after leaving the track, with their hand raised until they are back to racing speed. If the driver leaves the course, and cannot continue for any reason, they are to exit the kart and move to a safe area at the direction of an official.

10.6.12: Lapped Drivers Lapped drivers are expected to not impede the lead drivers. When receiving a Blue Flag, they are to maintain position and make it easy for the lead drivers to go by. In mixed run groups for all sessions, and all heats and pre-finals for single run groups, the sole remedy will be the Blue Flag. In the final, the Black Flag may be used to remove lapped karts depending on class size and type of facility and is at the discretion of race officials.

10.6.13: Reverse Direction Driving in a reverse direction, or generally driving off of the established course for any reason other than attempting to safely re-enter the established course is prohibited.

10.6.14: Exiting the Established Course to Scale or Pit Following the conclusion of a session, drivers are expected to slow to pace speed and exit the course at the established point.

10.6.15: Event 107% Rule At all times the competitor is expected to be able to execute lap times within 107% of the fastest time in any session. If not, the Race Director has the authority to remove any competitor that is not able to maintain that pace to ensure their safety, and the safety of others.

10.6.16: Qualifying 101% Rule (Sprint Only) In the event class sizes result in two qualifying sessions,and there are changing conditions (weather/track surface), the 101% rule may be utilized. The fastest times of the two groups are directly compared. If the slower of the two is at or over 101% then the faster of the two, then instead of the two qualifying groups merging by time, they will merge by group with the faster group lined up on the inside line, and the slower group lined up on the outside line.

SECTION 10.7: OFFICIALS

10.7.1: Officials Powers The designated officials of any NKA event shall have the power of rule enforcement and race supervision. Any official at a NKA event can report a dangerous driving situation or other rules violation that is observed on-track. The decision on whether to issue an infraction or not lies with the Race Director.

10.7.2: Race Director The Race Director shall be that official having complete charge of all officials, technical inspector, turn marshals, the track, and karts during all “official times” the event is occurring. The Race Director, or their designated representative, shall uphold all rules and standards, including the interpretation. As all potential situations may not be specifically addressed in this document, it is also within the powers of the Race Director to react and rule to an unanticipated situation with the best interests of the series and competitors. Once the Race Director has levied a decision, only through an appeal can that decision be overturned.

10.7.3: Course Control This official is in charge of all activities on the course, and has the authority to call and manage on track activities.

10.7.4: Head Flagman The Head Flagman shall be that official having complete charge of the flags. The Head Flagman’s flag signals are to be obeyed without exception. If necessary, the Head Flagman shall conduct a meeting for all drivers prior to the start of the event to explain the flags, their use, and rules of the road.

10.7.5: Official Scorer The Official Scorer shall be that official in charge of timing and /or scoring. The Official Scorer shall keep the Flagman informed of positions, laps completed, etc.

10.7.6: Course Marshall Course Marshalls shall be strategically located around the inside of the course and out of harm’s way to use flags, as instructed and when necessary, to signal drivers as to accidents, debris, fluid or other hazards on their portion of the track. It is not the duty of a turn marshal to assist drivers at the scene of the

accident or incident to get their karts separated or going again. Their duty is to warn oncoming traffic of an incident, and to direct race control of the possible need of additional resources if necessary.

10.7.7: Grid Steward The Pit Steward shall be that official(s) having charge of the grid. The Pit Steward shall keep all unauthorized persons out of the area, assign the pit spaces, grid the next class, and report any irregularities or rule infractions to the Race Director.

10.7.8: Head Technical Inspector The Head Technical Inspector shall be that official having charge of all aspects of race inspection and the area in which technical inspections are performed. The Head Technical Inspector solely appoints Assistant Technical Inspectors. Any other persons in the Technical Inspection Areas are at the sole discretion of the Head Technical Inspector.

The Head Technical Inspector shall designate an area where karts and drivers will be checked for minimum class weight, maximum kart size, engine legality, exhaust system legality, legal attachment of weights, fuel legality, etc. 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.

The Head Technical Inspector has the final say over any and all tech inspection questions or compliance.

10.7.9: Infraction Steward The infraction Steward is available to assist competitors in understanding infractions they may have received. They are also responsible for accepting and managing the protest process.

10.7.10: Infraction Marshal infraction Marshals will be stationed around the course. It is their sole purpose to review, in real time, the driving standards of the competitors on track and issue infractions for those that disobey the driving standards.

10.7.11: Officials List The officials of an event may or may not be exactly as described in this section. It is up to the event organizer to determine exactly what types of officials are to be utilized.

SECTION 10.8: Flags

10.8.1: General The use of flags during a NKA event is not eligible for protest. The term 'flag' may be interchangeable with the term 'light' or 'lights'.

10.8.2: Green Flag Signals the start of racing and the course is safe to resume full-speed racing. Passing is legal as soon as the green flag is displayed, unless there are specific instructions.

10.8.3: Yellow Flag - Local The local yellow flag, presented by any official on track, signifies an area of caution on track.

10.8.4: Yellow Flag - Full Course A full course caution is called via the use of two yellow flags held sideways, and not waiving. When you see this, note that scoring has stopped and there is a significant reason to slow. Slowly reform in a pack and prepare for either a Red flag to be displayed, or instructions that we are returning to a restart.

10.8.5: Black Flag - Rolled The black flag may be used to warn a driver that potentially poor sportsmanship on track has been noted, and they are to revise their tactics or be issued an infraction for the next occurrence. A rolled black flag does not mean the driver is to exit the course.

10.8.6: Black Flag - Waived This flag indicates you are being removed from the course immediately for a number of potential reasons. A driver has a maximum of two laps to adhere to this flag.

10.8.7: Black Flag w/ Orange Dot This flag is specifically meant to warn a driver of a serious mechanical issue with their vehicle. They are to exit the track with caution immediately.

10.8.8: Blue flag or Blue Flag w/ Orange Stripe A blue flag is shown to a kart or karts being lapped by faster traffic. When a kart 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 that he wants the faster traffic to pass on.

10.8.9: Crossed White & Green Flags A crossed white and green flag signifies the halfway point of a heat or race. This is an option that the participating club may choose to use.

10.8.10: White Flag

Shown only as a courtesy to signify the beginning of the last lap. Ultimately it is only the checkered flag that will end the race.

10.8.11: Checkered Flag Shown to signify the absolute conclusion of an official session regardless of the actual number of laps completed and is not contingent upon a white flag being thrown.

10.8.12: Checkered & Black Flags Signifies the end of the racing event; however, the addition of the black flag, if the event officials decide to utilize it, signifies the top 5 in the race is under protest or official review.

10.8.13: Red Flag The red flag shall be displayed when an unsafe condition exists onthe track, such as; serious incident, an inverted kart(s), dangerous conditions, failure of a competitor to comply with a black flag, or other reasons deemed necessary by the Race Director.

10.8.14: Red Flag Procedures

10.8.14.1: When a red flag is displayed, all drivers shall stop in a safe manner as soon as possible and step safely away from their karts. No work is allowed on karts at this time.

10.8.14.2: If a red flag is thrown before all karts running have gone through scoring once, then a complete restart shall be required, using the original lineup, with the karts involved placed at the rear of the field in order of the original lineup.

10.8.14.3: An 'involved' kart is any kart directly or indirectly involved in the cause of the red flag. Stopping short of the incident does not mean that the driver is involved. The final call regarding whether a kart was 'involved' is at the discretion of race officials.

10.8.14.4: If all karts running have gone through scoring at least once, the last fully completed lap scored shall be the lineup for the restart. The lineup order shall be determined by the official scorer.

10.8.14.5: A kart that previously dropped out prior to the red flag cannot restart the race.

10.8.14.6: No work on a vehicle is allowed during the course of a red flag. At any point work occurs on a kart in any way it is immediately eliminated from competition.

10.8.14.7: Officials may inspect karts that are involved in the red flag, or any kart that is stopped on course, for damage. If the kart exhibits any reasonably significant damage to any part of the kart that may result in an unsafe condition for the driver, or for other drivers, they will exclude the kart from competition. Examples would be bent steering components, damaged bodywork, bent axles, or damaged wheels.

SECTION 10.9: RACE PROCEDURES

10.9.1: Event Format Each NKA event will generally have the following format, or some reasonable variation of the following format which is at the discretion of race officials; Official Practice, Qualifying, Heat Rounds, Pre-final, and Final. The exact duration and number of laps of each session will be determined by the length and general lap times of a facility.

In the event of inclement weather or conditions as determined by NKA officials, the NKA will not use a lap count, but will revert to the time of the session, plus one lap. For example, if 10 minutes is used to calculate the lap count for a heat race, and there are

inclement conditions, the leaders of the session will receive the white flag at roughly the 10 minute mark and is at the discretion of the Head Flagman and Timing/Scoring.

10.9.2: Grid Area

10.9.2.1: The grid area is reserved for the exclusive use of competing karts and their crews, and is subject to the control of the Race Director, who can limit the number of crew per vehicle at any time.

10.9.2.2: All karts will grid in the grid area to enter the track for their respective on track session. The grid area closes after the field is released onto the track. Once the grid area is closed to a class, no more entrants for that session may enter the grid area.

10.9.2.3: No Commitment Cone: Once the class has left the grid area for the on-track practice or qualifying session, any drivers currently in the grid area have either 90 seconds to join. Once the 90 seconds has passed, they are not allowed into the session. This applies to all sessions.

10.9.2.4: With Commitment Cone: Once the first kart reaches the Commitment Cone, the grid is considered closed. This applies to all race sessions.

10.9.2.5: NKA observes a quiet grid. All engines can be warmed in your pit, but once you leave your pit the engine is to remain shut off until given the signal to fire by the grid steward.

10.9.3: Race Start - Sprint

10.9.3.1: Formation Cone: Once a class has left the grid, they can proceed at a reasonable speed until they reach the Formation Cone, typically half track distance. At the formation cone it is the responsibility of the pole sitter to bring the field to pace speed and allow the field to properly line up. Applies to standing and rolling starts.

10.9.3.2: Commitment Cone: Once the pole sitter reaches the commitment cone, the field is now set. Drivers late leaving the grid, who are attempting to regain their starting position, at this point must halt and line up where they are. Applies to standing and rolling starts.

10.9.3.3: Tram Lanes: At all starts (with the exception of a standing start), all drivers are to stay fully within their tram lanes. Once the green has been shown, racing has begun and drivers can then move out of the tram lanes.

If Tram Lines do not exist, then each lane is expected to be formed directly behind the pole and off pole karts, who will place their karts at ¼ distance from the inside or outside of the edge of the course.

10.9.3.4: Rolling Start Start Zone The use of the Start Zone has shown significant ability to control the starts of an event, and has also shown to greatly eliminate the chance of significant accidents at the start. While it is not required, it is highly suggested that a NKA facility adopt this procedure.

Procedure: The pole sitter shall approach the start zone at a reasonable and maintained pace, roughly 20mph. The speed shall be constant until the pole sitter reaches the start zone which is defined by a set of cones spaced 40-60 feet apart. The pole sitter will start the race anywhere within this defined zone, and the starter will use a light or green flag to signify that the race has started once the leader has started the race. There is no waived start. If the leader goes before the first set it shall be considered a jump start and is subject to infraction. If the pole sitter has not accelerated when they have reached the last set of cones the starter shall start the race and begin. The outside pole may not lead the pole sitter into the start zone or out. If it is deemed the off pole has led the entire way and the race has started it shall be considered a jump start and shall be subject to infraction.

10.9.3.5: Single File Restart The start zone is to be used as the standard for single file restarts with the field lined up in order, nose to tail. The lead kart will choose the inside or outside tram lane and will use the basic start zone procedure.

10.9.3.6: Standing Start Drivers will arrive at the start area, and pull into their grid position as indicated by an official. The driver is to stay on or behind the grid line. When the field is set, the official 'holding' the field will move off course, which indicates the start is imminent. The flagman will raise their hand indicating roughly 5 seconds to green. At roughly 5 seconds, the starter will waive the flag and the race has begun.

10.9.3.7: Starting Procedure Discretion While the Start Zone is highly recommended, the actual starting procedure used is at the discretion of race officials. However, this procedure must be addressed in the drivers meeting or supplemental rules.

10.9.4: Race Start - Speedway

10.9.4.1: Rolling Double File: Drivers are to exit the grid at a reasonable pace, and line up, two by two behind the pole and outside pole.

10.9.4.2: Rolling Single File: Drivers are to exit the grid at a reasonable pace, and line up single file behind the pole sitter.

10.9.4.3: Start Line: The start line, located midway in turn 4, is either a line on the track which has been installed by race officials, or a cone at the inside of the track.

10.9.4.4: Starting Procedure: Coming to the green the pole is to maintain a slow and steady pace. At the start line, but not before, the front row (or pole sitter) is to accelerate to race speed.

10.9.4.5: Waive Off: If the field is too fast, improperly aligned, or the pole sitter accelerates prior to the Start Line, the start will be waived off. If a second attempt to start is not successful, the front row will invert with the second row. In the case of a single file start, the pole sitter will invert with second place.

10.9.5: Race Start The race will officially start with the Head Flagman waiving the green flag.

10.9.6: Scratched Entries In the event of a scratched entry in an event with a rolling start that space shall be filled on track by moving forward directly. Standing starts will have the grid space left open. If in the pits, and if time and conditions allow, the open space will be filled by crossing over. At the order of the Race Director, if time and/or conditions don't allow, the Grid Steward will simply have the row with the empty space move forward.

10.9.7: Race Completion

10.9.7.1: A race will be considered complete at the moment the checkered flag is displayed on course and each kart that is capable of operating on its own power has had reasonable time and opportunity to cross the finish line as determined by the Race Director and/or Head Flagman.

10.9.7.2: Every effort will be made to complete an event under green flag conditions, with scoring based on the order that the vehicles pass the start finish line from the lead kart and down the order with any lapped karts accounted for.

10.9.7.3: To be complete, a race must complete at or above 50% of its established distance. The Race Director may, in the case of a yellow or red flag or time limit reached, declare the race complete.

10.9.7.4: Participants shall not protest the determination of Race Completion.

10.9.8: Time Limits While there are no specific time limits, the Race Director has the authority to institute a time limit if the conditions warrant. In general, the time limits if enabled will be roughly double the time of the session. Example, a Heat is typically 10 minutes to determine lap count, so the time limit for the class would be 20 minutes.

10.9.9: Post-Session Scale Procedures

10.9.9.1: All drivers shall be weighed with their karts immediately after every official session with the exception of practice. Post-race scale areas should be separated from persons other than the competitors.

10.9.9.2: Drivers and karts shall be weighed together and must achieve the minimum weight for the class as they came off of the track. If parts or pieces have come off of the kart, they are not allowed to be included in post-session scale procedures. Drivers shall not add any weight to themselves or their karts between the finish of the competition and weigh-in of driver and kart.

10.9.9.3: Drivers have two attempts to make stationary weight. If a driver does not make weight at the first attempt, they shall remove the kart from the scales, “zero” the scales, and immediately make a second attempt.

10.9.9.4: Should a driver have an incident or mechanical failure on track that does not allow them to continue, but is not a result of a infraction, must complete the Post-Session Scale Procedures.

10.9.9.5: At the discretion and pre-approval of the Race Director, drivers may have one 20oz bottle of water in a clear plastic bottle to drink in extreme conditions. Drivers will be eligible for a infraction if they dump the water on themselves, their kart, or their equipment.

10.9.10: Post-Session Technical Inspection

10.9.10.1: At the end of competition, all required karts and drivers shall proceed directly to the designated impound area to be checked for maximum kart size, engine legality, exhaust system legality, legal attachment of weights, etc. DO NOT LEAVE THE POST-RACE TECH AREA UNTIL DISMISSED BY THE TECH DIRECTOR.

10.9.10.2: Only one driver and one designated crew member per kart is allowed in the post-race technical inspection.

10.9.11: Confiscation of Items If a part is deemed illegal, or its legality is suspect and requires additional inspection or testing, the technical officials have the right to confiscate the item for further review, to prepare for Appeal, or to simply remove it from the sport. NKA , the sanctioned event, or event official is not responsible for replacement of the part, or the value of the part.

SECTION 10.10: PROTESTS, APPEALS, & INFRACTIONS

10.10.1: Protests

10.10.1.2: Who Can Protest All protests involving specifications, legality and driver conduct shall be submitted by a legal entrant from the same class in which the protested infraction occurred.

10.10.1.3: What Can Be Protested The following are eligible for protests at a NKA event;
Chassis and Bodywork Specifications
Infractions
Driver Conduct
Scoring Results
Verification of Technical Compliance (only valid if part in question has remained under the care, custody or control of the Technical Director).

10.10.1.4: Protest Fee A Protest Fee of $200 is to be paid in cash to the infraction Steward when the protest is submitted. This fee is refunded only if the decision is in the favor of the protesting party.

10.10.1.5: Singular Protest Requirement Protests may not be collective. Only a legal entrant of the class in which the protest is made may protest. Once a protest is properly lodged, additional protests of the same incident, alleged technical infraction, etc., will not be accepted.

10.10.1.6: Written Requirement All protests must be submitted in writing on an official protest form to the infraction Steward of the event up to but not exceeding 30 minutes after official results have been announced and/or posted (tech and scoring has cleared).

Written protest should refer to the specific specification and/or regulation contained within this document and refer to the same section, paragraph number and page number. It is the sole responsibility of the party presenting the protest to present their case with all evidence at their disposal, which can include scoring results, video (theirs or another competitors), reference to specific regulations, etc. The protest will be reviewed based solely on the information provided.

10.10.1.7: Video Review Video and/or photos are accepted concerning protests and is the sole responsibility of the legal entrant filing the protest to supply their own, as well as any additional footage that may be helpful. Video will only be

reviewed as part of a protest, and not as part of a general complaint to the series officials.

10.10.1.8: Reasonable Attempt Every protest with or without video evidence will be reviewed. However, due to natural time constraints of an event it is to be understood that the event cannot be held up for a protest. If this is the case, the protest is void and funds will be returned.

10.10.1.9: Protest Limit Each legal entrant is entitled to one (1) protest perevent. Should the legal entrant win their protest, their protest fee will be returned and they are still eligible to use their one (1) protest.

10.10.2: Appeals the NKA is available to process the appeal of a decision during a series event. The appeal may handle operations, infractions, and technical issues that were not able to be determined at the facility.

10.10.2.1: Who Can Appeal Any Legal Entrant of a NKA event may file an appeal after they have properly filed a protest at the event where the solution was not acceptable, or if they were disqualified due to a technical infraction.

10.10.2.2: Intent to Appeal If the legal entrant intends to appeal a technical infraction, the part or parts in question may not leave the tech area if the appeal is technical related. It is to be boxed and sealed with tape with the legal entrant, the technical director, and the Race Director as witnesses. The three are to then sign, in marker, across the tape and the box to establish chain of custody. It will remain with the Race Director or Technical Director until either the appeal moves forward and they send the part to NKA , or the legal entrant does not appeal in time in which the Technical Director will either confiscate the item (with NKA approval), or return the item to the legal entrant. Once a part leaves the post-race technical inspection area, an appeal cannot be held. If the legal entrant intends to appeal an operations decision, they must secure all exhibits prior to leaving the event.

10.10.2.3: Appeal Period The Legal Entrant has 10 business days to file an appeal, including all documents and exhibits, to the NKA who will process to the NKA.

10.10.2.4: Appeal Fee The appeal to NKA is $500, and is payable by cash, money order, check, or credit card. The fee must be processed and cleared within the 10 day period. The fee is non-refundable regardless of the outcome.

10.10.2.5: Appeal Process The appeal will be heard by 3-5 individuals, depending on the type of appeal and depth of understanding required, from the Appeals Committee that are made up from the motorsports world at large with specific knowledge in either technical or procedural issues. They will review

evidence submitted from the Race Director or Technical Director, the Legal Entrant appealing, and may opt to do their own research. They have 30-60 days to complete their process, and vote on the appeal. Their vote is final.

10.1.3: Infractions

10.1.3.1: The officials at a NKA event have full authority to levy infractions based on their interpretation of the rules and standards within this document, the concept of Spirit & Intent, and the current and future integrity of the sport. NKA infraction system is to provide protection and guidance for both participants and officials so that the infractions levied are acceptable for the infraction.

It is also understood that there are many types of events that run a NKA program who may not have the ability to fully police a detailed infraction list as provided here. The list is not an expectation that a NKA event is obligated to follow each and every infraction listed.

10.1.3.3: While infraction ranges are specified, it is understood that during the course of an event, or of a season, participants that are consistently noncompliant with the rules or standards contained in this document may receive infractions of a progressive nature, particularly for non-compliance of the same nature in during the course of the same event, or string of events.

10.1.3.5: Multiple infractions may be assessed to a participant at one time for multiple infractions in an official session or during an event.

10.1.3.6: The following infraction types may be utilized during NKA events, and are typically found in sprint competition. Race Directors for speedway competition may use some or all of the listed infractions. However, due to the nature of speedway racing most infractions will result in a DQ.

Infractions are applied following the on-track session, except in the case of a Black Flag (non-mechanical) issued to a competitor.

Off-Track Infractions

Enter Officials Areas without approval	Exclusion From Event
Severe Verbal or Physical Altercation	Exclusion From Event
Miss Driver's Briefing	Loss of Fast Lap (Qualifying)

Technical Infractions *Note: Technical infractions on course that require removal that occur in the final two laps of an official session will result in a 10 second penalty. If removed prior to the final two laps you will be scored up to when you were removed.*

Bodywork (not bottom fairing mount)	Removal from course
Loose or lost required equipment	Removal from course
Loose or lost Neck Brace (Junior only)	Removal from course
Engine Change	Rear of Grid

Approved Seal Change for Repair	10 Spots next session
Tampered Seal	Exclusion from Event
Unapproved Engine Modifications (Includes engine/carb/pipe/header/clutch/etc.)	Exclusion from session

Competition Infractions: Applied to end of race results except for any removal from course

Impeding	3 Seconds Race/Loss fast lap Qualifying
Avoidable Contact	5 Seconds Race/Loss fast lap Qualifying
Avoidable Contact-Severe	10 Seconds Race/Loss 2 fast laps Qualifying
Jump Start	3 Seconds
Pushing at Start	3 Seconds
Tram Line 2 Wheels	2 Seconds
Tram Line 4 Wheels	4 Seconds
Incident Responsibility	5 Seconds Race/Loss fast lap Qualifying
Incident Responsibility-Severe	10 Seconds/Loss 2 fast laps Qualifying
Disregard Commitment Cone	10 Seconds
Refuse Officials Request	Exclusion from Session
Blocking	3 Seconds
Ignore Red Flag Requirements	Exclusion from Session
Dangerous Track Entry	10 Seconds
Cutting the Course (for advantage)	5 Seconds
Disregard Yellow	10 Seconds Race/Loss 2 fast laps Qualifying

ARTICLE 20: VEHICLE STANDARDS

SECTION 20.1: GENERAL VEHICLE This section covers general items common to all karts utilized at an NKA event, except where specified.

20.1.1 Cameras & Camera Mounting

20.1.1.1: Up to two (2) cameras (Go Pro or similar) per kart is allowed. Each camera and clear protective casing is to have the last name of the Legal Entrant clearly printed on it.

20.1.1.2: Cameras must be hard mounted by bolt and nut to a driver fairing or side pod. Mounting by use of any form of adhesive is prohibited.

20.1.1.3: Mounting any camera to the helmet in any way is prohibited at all times. This includes any form of mounting to the shell of the helmet, or the mounting of any type of video or camera system inside the helmet, such as in the viewport.

20.1.2: Remote Chassis Adjustments Any adjustment, by any means, of the chassis while in motion is prohibited (i.e. weight jacking, changing the angle of a torsion bar, etc.).

20. 1.3: Number Panels

20.1.3.1: Minimum width 9”, minimum height 7”, as measured on the surface of the panel. Number panel must be yellow.

20.1.3.2: All competition karts must be equipped with four (4) number panels, 1 on the front of the kart, 1 on each side, and 1 on the rear, meeting the above specifications.

20.1.4: Numbers The minimum height size for the number itself is 6”, and black in color, with no outlines.

20.1.5: Special Needs Any device that is necessary to accommodate a driver with a disability must be approved by NKA.

20.1.6: Differential/Torque Converter Any form of differential or torque converter is prohibited.

20.1.7: Seat Belts Seat Belts are prohibited, with the exception of caged karts.

20.1.8: Steering Wheels Must be circular in shape, with a 3 spoke design, with a minimum of 10” diameter.

20.1.9: Suspension There shall be no type of active, mechanical, or hydraulic suspension outside of the Spirit and Intent of the use of the chassis and its components, including torsion bars, as flexible suspension.

20.1.10: Traction Control Any form of traction control is prohibited.

20.1.11: Seat Mounting Seats must be mounted securely to a minimum of 4 points to the chassis, with two at the front and two on the sides to solid metal frame or adjustable mounts.

20.1.12: Chain Guards on engine are required, with a chain strap highly recommended for all classes with the exception of Micro/Mini which requires both.

20.1.13: Belt Drives **Prohibited**

20.1.14: Driver Location The driver must remain within the dimensions of the frame at all times.

20.1.15: Rear View Mirrors Rear view mirrors, defined as any mirrored surface used in an official session that allows the driver to see a reflected image of what is occurring behind them, is prohibited.

20.1.16: Chain Oiling The use of any type chain oiler is prohibited.

20.1.17: Clutch The use of a clutch is mandatory, and is determined by the specific engine rules for NKA classes.

20.1.18: Selective Gearbox/Transmission. 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 gearbox classes

20.1.19: Transponder Mounting Transponders shall be mounted on the back of the seat with the bottom of the transponder no closer than 20cm to the ground, with no interference from the bottom of the transponder to the ground.

20.1.20: Radiator and Cooling The primary radiator must be mounted to the side of the driver, and be maintained within the bodywork, and above the frame rails with a maximum height of 50mm above the ground. Any additional radiators must be approved for use. Cooling must be water, with Water Wetter or similar approved. Absolutely no Glycol based coolant additives allowed.

20.1.21: Exhaust All exhaust systems must be intact and as manufactured with no sealing, painting, coatings, etc. and includes all aspects of the exhaust from the rear of the engine to the end of a silencer/exhaust. Should a repair be required the repair should be shown to the Tech Director prior to, and post, repair.

20.1.22: Air Box/Filter Air boxes, where required, must be affixed and functional at all times, with no stickers. An air box that has become non-functional by not being affixed will result in a mechanical black flag, and is not a disqualification. If the mechanical has not been able to have been issued, it will result in an automatic 10 second infraction (this normally will occur in the last few laps of a race). A drain hole no larger than 7mm may be drilled into the airbox. In wet conditions it is acceptable to attach a water deflection piece. Absolutely no type of ram air device is acceptable.

20.1.23: Exhaust Decibels If your facility is in an area sensitive to noise, the industry standard for exhaust decibels is as follows: the legal sound limit for all karts shall be 95 DB (a weighing scale, slow response), measured 100 feet, 90 degrees from the source, 4 feet from the ground, and meet any special class requirements. All exhaust systems must remain intact.

20.1.24: Tire Construction & Use

Spec Tires The spec tires for all NKA events are at the specific determination of the NKA member facility or series. The tires must be available for purchase 60 days prior to an event, and be from a common and known manufacturer.

20.1.24.1: Unless expressly stated otherwise, tires are to be used in competition as provided and constructed by the manufacturer.

20.1.24.2: Only pneumatic type tires shall be permitted of a non-grooved design, specifically made for the intent of kart racing on closed course events.

20.1.24.3: Rain tires shall be tires manufactured specifically for use in wet weather conditions. The number of sets of rain tires allowed is at the discretion of the event. It is not the responsibility of the series to have a ready supply of rain tires. Rain tire inventory is at the sole responsibility of the entrant.

It is at the discretion of the competitor to determine the use of dry or wet tires depending on conditions. The Race Director retains the right to remove a driver whose tire choice may result in a dangerous situation.

20.1.24.4: Any feature molded to the tire during the construction process, such as manufacturer logo, compound identifiers, bar codes, serial numbers, or size designations shall not be defaced, covered, removed, or replaced (normal wear and abrasions are acceptable).

20.1.24.5: Recapping of any tire, defined as applying a new or different layer of rubber compound on an existing carcass that was not done as part of the OEM tire construction process, is expressly prohibited.

20.1.24.6: Chemical alteration, commonly referred to as tire prepping, is prohibited.

20.1.24.7: Siping, grooving, or modifying existing grooves of a tire is not permitted.

20.1.24.8: Evidence or suspicion of the alteration of a tire may result in a seizure of one tire from the competitor by the technical director of the event. The tire will be inspected by the NKA Technical Group, or the manufacturer that constructed the tire, as determined by the NKA Technical Group. A tire will not be replaced, returned, nor the driver compensated, if it is found that it is illegal, or needed to be destroyed as part of the investigation.

20.1.24.9: Tires will be replaced at the discretion of the Tech Director. To be eligible the tire must show visible damage that may create a safety issue. Tires may only be replaced with a tire supplied by the driver that is comparable in terms of use and wear. New tires will not be used to replace worn and damaged tires.

20.1.24.10: New tires that have been supplied by the series must be used for qualifying.

20.1.24.11: Tire allotment: Per the event.

20.1.24.12 Warming of tires It is prohibited to warm tires by any method prior to entering the track.

20.1.25: Data Acquisition & Telemetry Data acquisition is approved, but may only collect basic data such as RPM, temperatures, wheel speed, and basic G force measurements from the kart that may be downloaded or reviewed in the pit area following an official session. Telemetry of data from a kart operating in an official session to the pit area or similar is prohibited.. Using GPS or a beacon is acceptable. Data, such as lap timing, may not be used in an official capacity or for protests or appeals.

SECTION 20.2: CHASSIS - Sprint

20.2.1: Homologation Chassis used in series competition are not required to be homologated, but are expected to generally meet homologation standards set by the CIK.

20.2.2: Maximum Overall Length 84 inches.

20. 2.3: Overall Kart Width

20.2.3.1: All standard full-size karts: 55 1/8” in. maximum

20.2.3.2: Cadet/Sportsman Chassis: 50 in. maximum

20.2.4: Maximum Overall Kart Height 26 inches.

20. 2.5: Wheelbase Minimum

20.2.5.1: Standard: Minimum 1010 mm as measured from the front and rear centerline of the axles when positioned 90 degrees from the centerline of the frame.

20.2.5.2: Cadet Kart: Minimum 889mm as measured from the front and rear centerline of the axles when positioned 90 degrees from the centerline of the frame.

20.2.6: Frame Frame tubing shall be circular cold roll steel tubing or other material of equal strength, with a consistent diameter throughout the frame member (i.e. no elliptical, square, etc.). Main frame members shall have a maximum diameter of 32mm. All joints must be welded, with no slip joints or similar. Carbon fiber is prohibited as an integral part of the chassis. Integral part of the chassis does not include: floorpan, seat, bodywork, clutch and engine components.

20.2.7: Wheels Shall be as manufactured, with no drilling or removing of material and void of any defects. Only 4 wheels are approved and can be aluminum or magnesium. 5” wheels are mandated, with a maximum width of 135mm front/215mm rear. Mini/Micro

classes are 135mm for both front and rear. Pressure relief devices are prohibited. Wheel weights for wheel balancing are approved.

20.2.8: Wheel/Axle Bearings Ground ball or roller type only. Split-race bearing not allowed. Bearings must be adjusted to remove excessive play.

20.2.9: Axles The axle must be of a one piece design, driving both wheels equally. It can be solid or tubular with a minimum diameter of 25mm, a maximum diameter of 50mm and a minimum wall thickness of 0.075". Axle must be of ferrous materials. Exotic materials, such as carbon fiber, carbon fiber composites, titanium, etc. are prohibited. Stiffeners are allowed if they are secured with bolts that are drilled for a cotter pin or safety wire or machined for spring clips or e-clips; with the above mentioned properly installed (cotter pin/safety wire/e-clip). Snap ring grooves, or any machining other than for keyway, are prohibited in the area between the left and right wheel hubs. Axle shall not extend past the outside edge of the wheel.

20.2.10: Rear Hubs Must be metallic materials. No "slip" or "ratchet" hubs allowed. Both drive hubs must be locked in fixed position so the wheels turn equally at all times.

20. 2.11: Bodywork

20.2.11.1: Two CIK or CIK style side boxes with side bars attached and operational, Front/Rear Bumpers CIK or CIK Style (full width steel allowed), Driver Fairing with 3" clearance to any part of the steering wheel & a maximum of 1" above the highest point of the steering wheel when operational before and after a session.

20.2.11.2: The bodywork must be attached as intended, and remain as intended throughout an official session. Loss of bodywork on track may result in a mechanical black flag, with the driver receiving points for the finishing position. Bodywork that has become unattached may not be used in post-session scale procedures. Bodywork may not extend past the width of the rear or front tires with the exception of rain set ups.

20.2.12: Floorpan No void large enough for any part of the driver's body to inadvertently pass through shall be permitted. Pan must stay within the main-frame rails of the kart, be flat, and only have holes for components. Floorpan is not to extend past the frame crossmember where the seat mounts are affixed.

20.2.13: Aerodynamic Devices Any additional form of aerodynamic device(s) is prohibited and subject to approval prior to use based on the Spirit and Intent of these standards.

20.2.14: Front Bumpers

20.2.14.1: The top of the front bumpers must measure a minimum of 7.750" above the ground or be CIK front bumper with nosecone. With the CIK front bumper, the nosecone must be attached to be legal.

20.2.14.2: The top of the CIK front bumper must measure a minimum of 6.5" above the ground.

20.2.14.3: Must have at least two vertical supports running to the top loop of the bumper or use two CIK style clamping hooks. The top tube shall not be less than 0.625" in diameter with a 0.065 wall thickness.

20.2.14.4: Main bumper members (bottom tube) shall be not less than 0.750" outside diameter by 0.065" wall thickness, cold rolled steel tubing or other material of equal or greater strength.

20.2.14.5: Front bumpers can be no wider than the inside of the front wheels.

20. 2.15: Rear Bumpers

20.2.15.1: CIK plastic approved rear bumpers that span the full rear track width are mandatory. Bumper shall be a minimum of 1" behind the tire as raced, and may not exceed the width of the rear tires with the exception of rain set ups.

20.2.15.2: Main bumper members shall not be less than .750" by 0.065 wall thickness, cold rolled steel tubing or other material of equal or greater strength.

20.2.15.3 Metal Double bar rear bumpers must be a minimum of .630" diameter. Bumper must be attached to each of the main frame rails. The top bar must be 6.5" to 12" from the ground with the driver seated in the kart. The Bottom bar may not be any lower than the frame rails of the chassis, or higher than the top plane of the rear axle. An interrupted bar design is acceptable between the frame rails so long as there is a rear cross bar present. Slip joints between the frame rails are also acceptable. The top and rear bars may be connected, but no 90 degree joints may be at the outer edges of the upper bar. Additional reinforcement bars are optional. Bumper may be mounted at an angle of 0 - 45 degrees tilted rearward.

20. 2.16: Nerf Bars

20.2.16.1: The overall length of the side nerf bar shall be a minimum of 400mm (bottom bar) and 300mm (top bar) 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.

20.2.16.2: Double high nerf bars are mandatory.

20.2.16.3: Main nerf bar members shall not be less than 0.630” by 0.065 wall thickness, cold rolled steel tubing or other material of equal or greater strength.

20. 2.17: Seat Assembly

20.2.17.1: Only seats suitable for sprint racing competition on sprint tracks will be allowed. Seat shall be molded, one piece sprint bucket design and be the correct size for the driver so they cannot move or slide from side to side in a manner that could be unsafe or to gain an advantage from aerodynamics. Lay down type seats are prohibited. Seat cannot be cut in any way to add or remove material and shall be in a safe condition, e.g., the bottom is not weak or broken. Repairing the bottom of the seat from rubbing on track is approved. Seat shall not extend past the center point of the axle.

20.2.17.2: Use of spacers or washers between the frame mount and seat is approved, provided that they are fully compressed and do not act as suspension in any form other than to prevent bind or remove space between frame and seat.

20.2.17.3: Auxiliary seat struts mounted from seat to axle bearings may not replace the use of chassis provided seat mounts. The seat end of the strut must be bolted or affixed to the chassis with a ty-wrap when not bolted to the seat. The bearing end must be bolted to the bearing carrier. The strut is to be of one-piece singular design with no added materials that may act as suspension.

20.2.17.4: The bottom of the seat can be no more than 2” (50mm) above the top of the chassis frame rails.

20.2.17.5: Seat positioning is to be considered ‘standard sit-up’. Any significant deviation is prohibited and is at the discretion of series officials.

20.2.18: Fuel System No pressurized fuel tank(s) permitted, or electronic fuel pumps. Fuel caps shall be able to be affixed tightly to prevent fuel spillage.

20.2.19: Fuel Tank Maximum 9 liter (2.38 gallons) fuel capacity. Fuel tank must be located between the frame rails except on engines whose sole fuel delivery is via engine mounted tank.

20.2.20: Throttle Assembly Karts shall be equipped with foot operated throttle incorporating a single or dual return spring system, which closes the throttle when the pedal is released. Hand operated throttle systems are prohibited, except for Drivers with Disabilities and must be approved prior to use.

20.2.21: Brake System Assembly

20.2.21.1: the NKA requires a single hydraulic braking system where both rear wheels will equally and adequately stop the rear, or rear and front, assembly when pressure is provided to the system via a brake pedal, rod, and safety cable with a minimum diameter of 1.8mm.

20.2.21.2: Hydraulic brake connections must be tight and free of any visible leaks. All brake lines must be safely routed to prevent any possibility of contacting the ground or any rotating members of the driveline. Scrub or mechanical braking systems are prohibited.

20.2.21.3: Dual braking systems are mandatory in all shifter classes. A dual brake system will consist of two independent brake systems on separate disc or drums. Each system must be fully operational if the other system fails. If a bias control is used, it must be able to provide safe operation of one system upon failure of one system. Karts with 4 wheel brakes are allowed to run in a single brake class if the front brake system has been disengaged.

20.2.21.4: Brakes may be cooled using flexible hosing that is properly affixed to the chassis.

20.2.21.5: Carbon/Carbon braking systems are prohibited, but carbon brake pads are approved.

20.2.21.6: Brake assembly is subject to all applicable in section SAFETY.

20.2.22: Steering Assembly

20.2.22.1: The steering shall be direct acting and of suitable design for maximum safety. Steering design shall be such that the pitman arm cannot rotate over center and cause reverse steering. The steering assembly includes spindles, tie-rods, shaft, steering hub, and steering wheel of traditional three spoke design. Butterfly steering wheels are approved. No other type of assembly is approved. Quick release hub/steering wheel is prohibited.

20.2.22.2: All collars and other devices used to retain the steering column shall be secured to prevent possible loss of the collar.

20.2.22.3: Steering assembly is subject to all applicable in section SAFETY.

SECTION 20.3: SPEEDWAY

20.3.1: Overall kart length 74” Maximum

20.3.2: Overall kart width

50” Maximum

20.3.3: Overall Kart Height
26”

20.3.4: Wheelbase 39.75” minimum, 44” maximum. Measured from the centerline of the front and rear axles when positioned at 90 degrees from the centerline of the frame. Measurement is for the left and right sides of the kart. Post race measurement is as raced.

20.3.5: Frame Material
Frame tubing shall be circular cold roll steel tubing or other material of equal strength, with a consistent diameter throughout the frame member (i.e. no oval, elliptical, square, etc.). Main frame members shall have a minimum diameter of 1” with a minimum wall thickness of 0.078”, and a maximum diameter of 1.375” with a minimum wall thickness of 0.060”. All joints must be welded, with no slip joints or similar. Carbon fiber is prohibited as an integral part of the chassis. Integral part of the chassis does not include: floorpan, seat, bodywork, clutch and engine components.

20.3.6: Wheels
Shall be as manufactured, with no drilling or removing of material and void of any defects. Minimum number of wheels is four. Only wheels of 5 inches and 6 inches will be allowed to compete. No pressure relief devises allowed. Wheel covering is prohibited (i.e. caps, covers, etc.). Weights for wheel balancing are approved. Maximum width 10 3/8” measured from outside to outside of wheel.

20.3.7: Axle The axle must be of a one piece design, driving both wheels equally. It can be solid or tubular with a minimum diameter of 1”, and a maximum diameter of 40mm of ferrous materials. Exotic materials, such as carbon fiber or carbon fiber composite, titanium, etc. are prohibited. Snap ring grooves, or any machining other than for keyway, are prohibited in the area between the left and right wheel hubs. Axle shall not extend past the outside edge of the wheel.

20.3.7.1: Axle stiffeners are not permitted.

20.3.7.2: Axles are permitted to be removed and weighed separately if required by the technical director.

20.3.8: Rear Hubs Must be metallic materials. No “slip” or “ratchet” hubs allowed. Both drive hubs must be locked in fixed position so wheels turn equally at all times.

20.3.9: Front Axle (Spindle)

Front spindle shaft diameter must be .625” +/-.010” where the outer most bearing of the hub rides on the spindle. Spindle shaft diameter must be between 0.625” and 0.750” +/.010” maximum where the inner bearing rides on the spindle. Front axle nuts/bolts must be cotter-keyed, wired, or pinned. All pieces that allow adjustment must be drilled, wired, and/or cotter-keyed.

20.3.10: Wheel/Axle Bearing
Ground ball or roller type only. Split-race bearing not allowed. Bearings must be adjusted to remove excessive play.

20.3.11: Bodywork

20.3.11.1: Brand and design is generally open. All bodywork must begin forward of the front axle, and end at the trailing edge +1" of the rear tires, must be nonmetallic, not impair the driver's vision, and is subject to the NKA safety rules.

20.3.11.2: All bodywork must be neat in appearance and in good repair. Bodywork that appears loose and in danger of falling off may subject the entrant to a black flag and disqualification during the running of an event. Mounting method is open, but must be secure and of good workmanship.

20.3.11.3: Nosecone

20.3.11.3.1: General Nosecone:

- Nosecone is the bodywork that extends forward of the rear edge of the front tire.
- Nosecone is to extend to the front of the kart from the trailing edge of the front tires, and cover a minimum of 50% of each front tire.
- No air inlets are allowed.
- All nose cones must have a tire opening equal to or greater than the tire used. No covering of the tire is allowed.
- Nosecone must allow for easy driver entry and exit, removal from the kart.
- Nosecone may cover foot area up to 3 inches rearward of both pedals in relaxed position, and must not interfere with the driver's ability to operate pedals. Six inches of clearance must be maintained all the way around nose and side panels for legs and feet to exit kart.
- No CIK or CIK style noses are allowed in Dirt Speedway competition.
- No "wedge" style bodies allowed in 4-cycle dirt classes.
- Decals are allowed.
- No fiberglass or other rigid material may be added.
- No fasteners (such as bolts, screws, pop rivets, etc.) may be used to attach additions (such as "wickers" or other bolt on pieces) to the nose.
- The bottom of the nose cone can extend back full width to the rear edge of the front tire & must be within the main frame rails.
- No use of nosecone as floor pan.

20.3.11.3.2: Nosecone Measurements & Procedures for Inspection:

- Measurements will be made with wheels and tires on with air in tires from ground up.
- Nose will be inspected 6-inches vertically high from the ground &1-inch horizontally.
- Nose will be teched from front of wheel opening to front of the other wheel opening.
- To allow for minor variation in noses in as raced condition tech inspectors will allow an additional 0.2500" in the 1-inch horizontal dimension.
- Tape may be added to the nose cone provided it does not interfere with the 1-inch tech rule.
- Rubber baseboard or rubber molding may be used in a safe manner below the 6 inch measured area.

20.3.11.3: Senior & Jr. 3 classes: Nosecone must be a minimum of 8-inches high and a maximum of 17-inches high.

20.3.11.4: Jr. 1 & Jr. 2 classes: Nosecone cannot be taller than 14 inches on any part of body as measured from ground up to highest point on the nose cone.

20.3.11.4.1 Maximum height forward of the backside of the front wheels is 14".

20.3.11.4.2: Maximum height reward of the backside of the front tires is 14" for all classes.

20.3.11.4.3: CIK or CIK style noses are prohibited in speedway competition.

20.3.11.5: Side Panels
CIK or CIK style side pods and traditionally designed side panels are approved. They must be securely mounted to the side nerf bars, and no higher than 14inches at any point (measured from the ground). All edges must be rolled if panels are flat. Graphic guard strips are permitted to be bolted to side panels.

20.3.11.6: Fairing
Fairing may be mounted on a line that generally follows the angle of the steering shaft. It shall be no longer than 20", and no wider than 10", and shall have no sharp edges or pointed corners. It must be mounted lower than the highest point of the steering wheel and have at least 3" clearance between the wheel and fairing at all points. Fairings are prohibited in JR 1 and JR 2 classes.

20.3.11.7: Wedge Bodywork
Only allowed on 2-cycle Speedway karts. Maximum height is 26" at highest point. From center line of rear axle to center line of front axle, overall height must be in a constant state of decrease. There must be a 1" gap (minimum) between seat and any point of bodywork.

20. 3.12: Floorpan No void large enough for any part of the driver's body to inadvertently pass through shall be permitted. Pan must stay within main-frame rails of kart, and only have holes for components (brake discs, sprockets, seat, etc.). The floorpan may extend to the trailing edge of the rear frame rails, must at all times stay within the frame rails, and must end before the rear bumper. The floorpan is not required to be flat, but at no point is the floorpan to be higher than the centerline of the rear axle.

20.3.13: Front Bumper

20.3.13.1: The top of the front bumpers must measure a minimum of 7.750" above the ground, and must have at least 2 vertical supports running to the top loop of the bumper.

20.3.13.2: Main bumper members shall be not less than .750" outside diameter by .065" wall thickness, cold rolled steel tubing or other material of equal or greater strength.

20.3.13.3: Front bumpers can be no wider than the inside of the front wheels.

20.3.14: Rear Bumper 20.3.14.1: The lowest rear bumper's cross bar must measure a maximum of 7.50" above the ground

20.3.14.2: Rear bumpers that span the full rear track width are not mandatory, but are recommended: CIK plastic or double steel bar.

20.3.14.3: Main bumper members shall not be less than .750” by .065 wall thickness, cold rolled steel tubing or other material of equal or greater strength.

20.3.15: 0.75” Tubing Nerf Bars

20.3.15.1: The overall length of the side nerf bar shall be a minimum of 22.00” from center-to-center of mounting points .

20.3.15.2: Flat single bar nerf bars are not permitted.

20.3.15.3: Main nerf bar members shall not be less than .750” by .065” wall thickness, cold rolled steel tubing or other material of equal or greater strength.

20.3.16: 1.00” Tubing Nerf Bars

20.3.16.1: Must be a multi-plane multi-bend 1” steel tubing that at center drop that is at least 50% lower than overall height and returns to original height before completing the bar.

20.3.16.2: The overall length of the side nerf bar shall be a minimum of 22.00” from center-to-center of mounting points; minimum overall height: 5” measured at two points.

20.3.17: Seat Assembly

20.3.17.1: Only seats suitable for speedway racing competition on speedway tracks will be allowed. Seat shall be molded, one piece bucket design and be the correct size for the driver so they cannot move or slide from side to side in a manner that could be unsafe. Laydown seats are prohibited. Seat cannot be cut in any way to add or remove material and shall be in a safe condition, e.g., the bottom is not weak or broken. Repairing the bottom of the seat from rubbing on track is approved.

20.3.17.2: The point where the seat strut attaches to the seat should be reinforced with at minimum a 1-1/4” or 35mm metal washer between the seat and seat strut. Use of spacers or washers between the mount and seat is approved, provided that they are fully compressed and do not act as suspension in any form other than to prevent bind or remove space between frame and seat.

20.3.17.3: No portion of the seat may be located rearward of a plane projected vertically from the rear of rear axle. Seat height requirements are as follows:

- Junior 1 & 2 classes (or classes aged 8-12): 10” minimum
- Junior 3 classes (or classes aged 12-15): 12” minimum
- Senior Classes (or classed 15+):14” minimum
- Note: Measurement is a vertical plane from ground to highest point on the seat.

20.3.17.4: Minimum seat angle 35 degrees, Maximum angle 50 degrees -as raced. Zero to the level to the surface the kart is inspected on.

20.3.17.5: The bottom of the seat can be no more than 2” (50mm) above the top of the chassis frame rails.

20.3.18: Fuel System

No pressurized fuel tank(s) permitted. Fuel caps shall be able to be affixed tightly to prevent fuel spillage. All flip type fuel caps shall be safety fastened during an event. Only pulse-driven fuel pumps are legal. No axle or electric pumps allowed.

20.3.19: Fuel Tank

Maximum 9 liter (2.38 gallons) fuel capacity. Fuel tank must be located between the frame rails except on engines whose sole fuel delivery is via engine mounted tank.

20.3.20: Throttle Assembly

Karts shall be equipped with foot operated throttle incorporating a single or dual return spring system, which closes the throttle when the pedal is released. Hand operated throttle systems are prohibited, except for Drivers with Disabilities and must be approved prior to use.

20.3.21: Brake System Assembly

20.3.21.1: The NKA requires a single hydraulic braking system where both rear wheels will equally and adequately stop the rear, or rear and front, assembly when pressure is provided to the system via a brake pedal, rod. A safety cable with a minimum diameter of 1.8mm is highly recommended should the brake rod or rod clevis malfunction.

20.3.21.2: Hydraulic brake connections must be tight and free of any visible leaks. All brake lines must be safely routed to prevent any possibility of contacting the ground or any rotating members of the driveline. Scrub or mechanical braking systems are prohibited.

20.3.21.3: Dual braking systems are may be mandatory in high horsepower classes. A dual brake system will consist of two independent brake systems on separate disc or drums. Each system must be fully operational if the other system fails. If a bias control is used, it must be able to provide safe operation of one system upon failure of one system. Karts with 4 wheel brakes are allowed to run in a single brake class if the front brake system has been disengaged.

20.3.21.4: Brake Rotor Guard (“Wolfe Plate”): All Speedway karts must be equipped with a brake rotor guard made of a metallic material.

20.3.21.5: Brakes may be cooled using flexible hosing that is properly affixed to the chassis.

20.3.21.6: Carbon/Carbon braking systems are prohibited, but carbon brake pads are approved.

20.3.21.7: Brake assembly is subject to all applicable in section 10.4, SAFETY.

20.3.22: Steering Assembly

20.3.22.1: The steering shall be direct mechanical acting and of suitable design for maximum safety. Steering design shall be such that the pitman arm cannot rotate over center and cause reverse steering. The steering assembly includes spindles, tie-rods, shaft, steering hub, and steering wheel of traditional three spoke design. Butterfly steering wheels are approved. No other type of assembly is approved. Quick release hub/steering wheel is prohibited.

20.3.22.2: 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 5/16” or 8mm minimum diameter. This does not pertain to kingpins or wheel spindles.

20.3.22.3: Steering assembly is subject to all applicable in section 10.4, SAFETY

20.3.22.4: Hollow Shaft
0.700 minimum O.D. steel tubing with a minimum wall thickness of 0.0625 in. 5/16” or 8mm minimum diameter fastener at lower end. Steering wheel hub (one piece, no welding) will be secured with a minimum diameter 6mm thru bolts. If the steering wheel has a center hole, it may not be large enough to allow the shaft to protrude. Hub minimum O.D. of 1.125 in., flange 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.

20.3.22.5: Solid Shaft
0.625” minimum OD steel & one-piece design. Bottom of shaft must have minimum 5/16” bolt.

20.3.23: Chain Unless otherwise allowed by local rules, all karts will be equipped with size #35 chain.

SECTION 20.4: CHAMP KART SUPPLEMENT

20.4.1: Overall Kart Length 95.5”

20.4.2: Overall Maximum Width 52” outside to outside

20.4.3: Minimum Width 40” outside to outside.

20.4.4: Minimum Overall Kart Height 38” ground to top of cage.

20.4.5: Wheelbase 42” minimum, 50” maximum.

20.4.6: Cage Standards

20.4.6.1: All Karts will be equipped with functional roll cages constructed of suitable material, craftsmanship (no soldering or brazing), and design, to protect the driver in the event the kart departs its normal racing attitude. All structural tubes (everything except side intrusion bar that is approximately elbow height), must be at least 1.125” with .083” wall mild-steel or stronger tubing.

20.4.6.2: The “drop” of the cage’s main cage bar between the rear vertical bar and lowest point in the front is 3” maximum.

20.4.6.3: Top crossbar must be welded rearward of downward bend of main cage tubes.

20.4.6.4: Horizontal bar on rear of cage, must be 1.125” with .083” tubing. Shoulder belts must be mounted here.

20.4.6.5: Height from Bottom Rail of Main Frame: Minimum 10”, Maximum 14”.

20.4.6.6: The side intrusion bar shall have a minimum of .750” tubing with .065” wall. This bar can be removable/replaceable via a slip fit joint welded to the main cage rails.

20.4.6.7: Top of cage opening shall be 16”-24” width, 18”-24” length (rear top-rail of cage to crossbar).

20.4.6.8: Corners must be rounded. Square, triangulated, or sharp corners are not allowed.

20.4.6.9: All welds must be 360 around tubing TIG or MIG welded.

20.4.6.10: Cage must attach at 4 points to the main-frame minimum and must be TIG/MIG butt-welded.

20.4.7: Seat Belts

20.4.7.1: Mandatory 5-point minimum harness must be commercially manufactured for motorsports with SFI rating. 2” wide belts are allowed for drivers less than 150 pounds; 3” wide belts are required for drivers over 150 pounds.

20.4.7.2: Lap & Sub Belts
Cannot wrap around fame and must be mounted via a welded on steel seatbelt tab: at least .063” thick and 2” square.

20.4.7.3: Shoulder Belts
Cannot be mounted to vertical cage rails and must be lower than the driver’s shoulder blades.

20.4.7.4: Arm Restraints
Mandatory SFI-rated, must attach to seat belt system, and not allow any part of the driver’s hand or arms outside the cage when fully extended.

20.4.8: Driver’s Suit

Must be SFI 3.2A1 rated or better. This is a fire resistant one or two piece suit.

20.4.9: Seat Position

Must be placed so that no portion of the driver’s torso or head is within 6” of the left side of the roll cage’s inner tube.

20.4.10: Fire Suppression

An on-board fire extinguisher system is recommended, but not mandatory.

20.4.11: Quick Release Steering Wheel

Mandatory

20.4.12: Bodywork

Front midget/sprint car style cowling is mandatory. All bodywork must be fiberglass or similar non-metallic. All edges must be rounded. No bodywork can be attached to side intrusion bars. Tail

section bodywork is optional. If used must be midget/sprint styling and be fully inside rear bumper. Wings or other aerodynamic devices are prohibited.

20.4.13: Windshields

Plexiglas or other clear material is allowed up to, but no higher than the driver's eye level.

SECTION 20.5: ROAD RACE/ENDURO CHASSIS STANDARDS

20.5.1: Maximum Length

Single Engine: 97"

Dual/125/100cc+: 110"

20.5.2: Maximum Height

26" (except Unlimited: 34")

20.5.3: Maximum Width 50". (Unlimited Class, maximum width 55".)

20.5.4: Wheelbase

50" maximum - 40" minimum. All minimum and maximum "Wheelbase" figures are based on "center to center" measurements between the front and back axles.

20.5.5: Frame

Frame tubing shall be circular cold roll steel tubing or other material of equal strength, with a consistent diameter throughout the frame member (i.e. no elliptical, square, etc.). Main frame members shall have a minimum diameter of 1", and a maximum diameter of 1.125". They shall have a minimum wall thickness of 0.060" and a maximum of 0.078". All joints must be welded, with no slip joints or similar. Carbon fiber is prohibited as an integral part of the chassis. Integral part of the chassis does not include: floorpan, seat, bodywork, clutch and engine components.

20.5.6: Wheels

Shall be as manufactured, with no drilling or removing of material and void of any defects. Only 4 wheels are approved. 5" or 6" wheels are approved. Pressure relief devices are prohibited. Wheel weights for wheel balancing are approved.

20.5.7: Wheel/Axle Bearings

Ground ball or roller type only. Split-race bearing not allowed. Bearings must be adjusted to remove excessive play.

20.5.8: Axles

The axle must be of a one piece design, driving both wheels equally. It can be solid or tubular with a minimum diameter of 25mm, a maximum diameter of 50mm and a minimum wall thickness of 0.075". Axle must be of ferrous materials. Exotic materials, such as carbon fiber, carbon fiber composites, titanium, etc. are prohibited. Stiffeners are allowed if they are secured with bolts that are drilled for cotter pin or safety wire or machined for spring clips or e-clips; with the above mentioned properly installed (cotter pin/safety wire/e-clip). Snap ring grooves, or any machining

other than for keyway, are prohibited in the area between the left and right wheel hubs. Axle shall not extend past the outside edge of the wheel.

20.5.9: Rear Hubs Must be metallic materials. No “slip” or “ratchet” hubs allowed. Both drive hubs must be locked in fixed position so wheels turn equally at all times.

20.5.10: Sprag Devices

In all classes, for safety purposes, NKA strongly recommends the use of sprag-type disengaging axle sprocket hub. This device allows the rear axle to free-wheel in the event of an engine or gearbox failure.

20.5.11: Bumpers

20.5.11.1: Bumpers required front and rear. No part of the feet may extend past the front bumper when pedals are fully extended.

20.5.11.2: Rear bumper shall be a maximum of 7 1/2” above ground level.

20.5.11.3: Bumper and side nerf diameter shall not be less than 3/4” OD with a minimum of .065 wall thickness, with at least cold rolled steel strength. Bumper and nerf bars must be made out of steel.

20.5.12: Brake System Assembly

20.5.12.1: The NKA requires a single hydraulic braking system where both rear wheels will equally and adequately stop the rear, or rear and front, assembly when pressure is provided to the system via a brake pedal, rod, and safety cable with a minimum diameter of 1.8mm.

20.5.12.2: Hydraulic brake connections must be tight and free of any visible leaks. All brake lines must be safely routed to prevent any possibility of contacting the ground or any rotating members of the driveline. Scrub or mechanical braking systems are prohibited.

20.5.12.3: Dual braking systems are mandatory in all 125cc shifter classes, or similar, and are recommended for all enduro classes. A dual brake system will consist of two independent brake systems on separate disc or drums. Each system must be fully operational if the other system fails. If a bias control is used, it must be able to provide safe operation of one system upon failure of one system. Karts with 4 wheel brakes are allowed to run in a single brake class if the front brake system has been disengaged.

20.5.12.4: Brakes may be cooled using flexible hosing that is properly affixed to the chassis.

20.5.12.5: Carbon/Carbon braking systems are prohibited, but carbon brake pads are approved.

20.5.12.6: Brake assembly is subject to all applicable in section 10.4, SAFETY.

20.5.13: Steering Assembly

20.5.13.1: The steering shall be direct acting and of suitable design for maximum safety. Steering design shall be such that the pitman arm cannot rotate over center and cause reverse steering. The steering assembly includes spindles, tie-rods, shaft, steering hub, and steering wheel of traditional three spoke design. Butterfly steering wheels are approved. No other type of assembly is approved. Quick release hub/steering wheel is prohibited.

20.5.13.2: 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 5/16" or 8mm minimum diameter. This does not pertain to kingpins or wheel spindles.

20.5.13.3: Steering assembly is subject to all applicable in section 10.4, SAFETY

20.5.13.4: Steering Shaft
700 minimum O.D. steel tubing with a minimum wall thickness of 0.0625 in. 5/16" or 8mm minimum diameter fastener at lower end. Steering wheel hub (one piece, no welding) will be secured with a minimum diameter 6mm thru bolts. If the steering wheel has a center hole, it may not be large enough to allow the shaft to protrude. Hub minimum O.D. of 1.125 in., flange 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.

20.5.14: Seat Assembly

20.5.14.1: Only seats suitable for enduro racing competition on enduro tracks will be allowed. Seat shall be molded, one piece body-forming design and be the correct size for the driver so they cannot move or slide from side to side in a manner that could be unsafe. Seat cannot be cut in any way to add or remove material and shall be in a safe condition, e.g., the bottom is not weak or broken.

20.5.14.2: The point where the chassis mounted seat strut attaches to the seat should be reinforced with at minimum a 1-1/4" or 35mm metal washer between the seat and seat strut. Use of spacers or washers between the frame mount and seat is approved, provided that they are fully compressed and do not act as suspension in any form other than to prevent bind or remove space between frame and seat.

20.5.14.3: All enduro lay-down karts must have a head rest. The head rest must have a minimum width of 4 inches and a minimum thickness of 1 inch.

20.5.14.4: Height of seat back must be 12" minimum Measured from ground surface. No head rest allowed. Sprint seat may not extend beyond the rear axle.

20.5.15: Bodywork

20.5.15.1: Cockpit must be completely open. It must have 15" minimum clearance from steering wheel to driver's shoulders and have 6" minimum clearance between steering wheel and other bodywork. The Schroeder hub may be utilized for this 6" rule.

20.5.15.2: Floorpan may be no higher than the bottom of the rear axle. Full pans are legal in all classes except CIK 125cc Sprint. If a full belly pan is not used, in the interest of safety, all bodywork that extends below the nerf bar must have a minimum 1/2" safety edge.

20.5.15.3: Bodywork may surround the tires, but may not enclose them (wheels must be removable with bodywork in tact).

20.5.15.4: No skirts or aerodynamic sealing devices are allowed behind the front of the front tires.

20.5.15.5: Fairings must have a maximum width of 14", and there must be a minimum of 2" clearance between the panel and the steering wheel and a minimum of 4" clearance between the panel and bodywork. Maximum distance between bottom of fairing and floorpan is 2" in all classes using CIK style bodywork.

20.5.15.6: Sprint Bodywork

20.5.15.6.1: Nose can extend 3" rearward of the most rearward pedal, when the pedals are in a normal position (not extended).

20.5.15.6.2: Minimum clearance between driver fairing and side panel: 4"

20.5.15.6.3: Minimum clearance between fairing and steering wheel: 2"

20.5.15.6.4: Driver fairing, 14" max. width, 26" max. height, may attach to nose

20.5.15.6.5: ONLY composite, aluminum, or high strength plastic is acceptable material for body construction.

SECTION 20.6: OUTLAW KART CHASSIS

20.6.1: Overall kart length 90" Maximum

20.6.2: Overall kart width 50" Maximum

20.6.3: Overall Kart Height 74" Wing attached

20.6.4: Wing Dimensions Minimum Beginner, Junior, and Box Stock Classes 26" width, 28" length, & 10" sideboards.

20.6.5: Wheelbase 39.75" minimum, 44" maximum. Measured from the centerline of the front and rear axles when positioned at 90 degrees from the centerline of the frame. Measurement is for the left and right sides of the kart.

20.6.6: Driver's Compartment Driver must be a minimum of 2" away from any part of the cage, and must be within the frame and cage at all times.

20.6.7: Frame Material

Must be of standard kart configuration. Frame tubing shall be circular cold roll steel tubing or other material of equal strength, with a consistent diameter throughout the frame member (i.e. no oval, elliptical, square, etc.). Main frame members shall have a minimum diameter of 1" with a minimum

wall thickness of 0.078", and a maximum diameter of 1.125" with a minimum wall thickness of 0.060". All joints must be welded, with no slip joints or similar. Carbon fiber is prohibited as an integral part of the chassis. Integral part of the chassis does not include: floorpan, seat, bodywork, clutch and engine components.

20.6.8: Wheels
Shall be as manufactured, with no drilling or removing of material and void of any defects. . Minimum number of wheels is four. Only wheels of 5 inches and 6 inches will be allowed to compete. No pressure relief devises allowed. Wheel covering is prohibited (i.e. caps, covers, etc.). Weights for wheel balancing are approved.

20.6.9: Axle
The axle must be of a one piece design, driving both wheels equally. It can be solid or tubular with a minimum diameter of 1", and a maximum diameter of 40mm of ferrous materials. Exotic materials, such as carbon fiber or carbon fiber composite, titanium, etc. are prohibited. Stiffeners are allowed if they are secured with bolts that are drilled for cotter pin or safety wire or machined for spring clips or e-clips; with the above mentioned properly installed (cotter pin/safety wire/e-clip). Snap ring grooves, or any machining other than for keyway, are prohibited in the area between the left and right wheel hubs. Axle shall not extend past the outside edge of the wheel. Maximum axle length is 40".

20.6.10: Rear Hubs Must be metallic materials. No "slip" or "ratchet" hubs allowed. Both drive hubs must be locked in fixed position so wheels turn equally at all times.

20. 6.11: Front Axle (Spindle) Front spindle shaft diameter must be .625" +/-.010" where the outer most bearing of the hub rides on the spindle. Spindle shaft diameter must be between 0.625" and 0.750" +/.010" maximum where the inner bearing rides on the spindle. Front axle nuts/bolts must be cotter-keyed, wired, or pinned. All pieces that allow adjustment must be drilled, wired, and/or cotter-keyed.

20.6.12: Wheel/Axle Bearing
Ground ball or roller type only. Split-race bearing not allowed. Bearings must be adjusted to remove excessive play.

20.6.13: Cage Standards

20.6.13.1: All Karts will be equipped with functional roll cages constructed of suitable material, craftsmanship (no soldering or brazing), and design, to protect the driver in the event the kart departs its normal racing attitude. All structural tubes must be at least 1" with .083" wall mild-steel or stronger tubing.

20.6.13.2: Corners must be rounded. Square, triangulated, or sharp corners are not allowed.

20.6.13.3: All welds must be 360 around tubing TIG or MIG welded.

20.6.13.4: Cage must attach at 4 points to the main-frame.

20.6.14: Bumpers

20.6.14.1: Front Bumper

20.6.14.1.1: "Cow Catcher" type front bumpers are prohibited.

20.6.14.1.2: The top of the front bumpers must measure a minimum of 7.750” above the ground and must have at least 2 vertical supports running to the top loop of the bumper.

20.6.14.1.3: Main bumper members shall be not less than .750” outside diameter by .065” wall thickness, cold rolled steel tubing or other material of equal or greater strength.

20.6.14.1.4: Front bumpers can be no wider than the inside of the front wheels.

20.6.14.2: Rear Bumpers
Main bumper members shall not be less than .750” by .065 wall thickness, cold rolled steel tubing or other material of equal or greater strength. Must generally conform to midget/sprint car form and provide proper push point.

20.6.15: Nerf Bars

20.6.15.1: Main nerf bar members shall not be less than .750” by .065” wall thickness, cold rolled steel tubing or other material of equal or greater strength.

20.6.15.2: Nerf bars may not extend over 3” from outside of tire’s edge.

20.6.16: Seat Belts

20.6.16.1: Mandatory 5-point minimum harness must be commercially manufactured for motorsports with SFI rating. 2” wide belts are allowed for drivers less than 150 pounds; 3” wide belts are required for drivers over 150 pounds.

20.6.16.2: Lap & Sub Belts Cannot wrap around fame and must be mounted via a welded on steel seatbelt tab: at least .063” thick and 2” square.

20.6.16.3: Shoulder Belts cannot be mounted to vertical cage rails and must be lower than the driver’s shoulder blades.

20.6.16.4: Arm Restraints Mandatory SFI-rated, must attach to seat belt system, and not allow any part of the driver’s hand or arms outside the cage when fully extended.

20.6.17: Driver’s Suit

Must be SFI 3.2A1 rated or better. This is a fire-resistant one-piece suit.

20.6.18: Seat Position

Seats are to be constructed of aluminum and of “high-back” design. Seat back shall reach at least the middle of the driver’s head when the driver is seated in the Kart. No portion of the seat may protrude outside the cage. Seat shall be firmly mounted through a minimum of four mounting points.

20.6.19: Fire Suppression

An on-board fire extinguisher system is recommended, but not mandatory.

20.6.20: Quick Release Steering Wheel

Mandatory

20.6.21: Bodywork
Front midget/sprint car style cowling, wing, and tail are mandatory. All bodywork must be fiberglass or similar non-metallic, excluding wing. No wood or exotic materials like titanium, or similar are allowed. All edges must be rounded. Tail section bodywork is optional. If used must be midget/sprint styling and be fully inside rear bumper.

20.6.22: Floorpan No void large enough for any part of the driver's body to inadvertently pass through shall be permitted. Pan must stay within main-frame rails of kart, be flat, and only have holes for components (brake discs, sprockets, seat, etc.). The floorpan may not extend past the trailing edge of the axle.

20.6.23: Numbers
Numbers must be displayed on the left and right side of the wing and tail piece. Wing numbers must be a minimum of 10" and tailpiece numbers must be a minimum of 6". Numbers must be legible and of a contrasting color to their background. Karts displaying duplicate numbers must add a letter, no smaller than 6" to their identifying number on the wing locations.

20.6.24: Throttle Assembly
Karts shall be equipped with foot operated throttle incorporating a single or dual return spring system, which closes the throttle when the pedal is released. Hand operated throttle systems are prohibited, except for Drivers with Disabilities and must be approved prior to use.

20.6.25: Brake System Assembly

20.6.25.1: The NKA requires a dual hydraulic braking system where both rear wheels, and both front wheels, will equally and adequately stop the kart, or rear and front, assembly when pressure is provided to the system via a brake pedal, rod. A safety cable with a minimum diameter of 1.8mm is highly recommended should the brake rod or rod clevis malfunction.

20.6.25.2: A dual brake system will consist of two independent brake systems on separate disc or drums. Each system must be fully operational if the other system fails. If a bias control is used, it must be able to provide safe operation of one system upon failure of one system.

20.6.25.3: Hydraulic brake connections must be tight and free of any visible leaks. All brake lines must be safely routed to prevent any possibility of contacting the ground or any rotating members of the driveline. Scrub or mechanical braking systems are prohibited.

20.6.25.4: The right front brake may be disengaged.

20.6.25.5: Brakes may be cooled using flexible hosing that is properly affixed to the chassis.

20.6.25.6: Carbon/Carbon braking systems are prohibited, but carbon brake pads are approved.

20.6.25.7: Brake assembly is subject to all applicable in section 10.4, SAFETY.

20.6.26: Steering Assembly

20.6.26.1: The steering shall be direct mechanical acting and of suitable design for maximum safety. Steering design shall be such that the pitman arm cannot rotate over center and cause reverse steering. The steering assembly includes spindles, tie-rods, shaft, steering hub, and steering wheel of traditional three spoke design. Butterfly steering wheels are approved. No other type of assembly is approved.

20.6.26.2: 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 5/16" or 8mm minimum diameter. This does not pertain to kingpins or wheel spindles.

20.6.26.3: Steering assembly is subject to all applicable in section 10.4, SAFETY

20.6.26.4: Hollow Shaft
0.700 minimum O.D. steel tubing with a minimum wall thickness of 0.0625 in. 5/16" or 8mm minimum diameter fastener at lower end. Steering wheel hub (one piece, no welding) will be secured with a minimum diameter 6mm thru bolts. If
the steering wheel has a center hole, it may not be large enough to allow the shaft to protrude. Hub minimum O.D. of 1.125 in., flange 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.

20.6.26.5: Solid Shaft
0.625" minimum OD steel & one-piece design. Bottom of shaft must have minimum 5/16" bolt.

ARTICLE 30: 2-CYCLE ENGINES

SECTION 30.1 ENGINE STANDARDS

30.1.1: Legality

The technical officials at an NKA sanctioned event may use any known method to properly technically inspect an engine, regardless if they are publicly acknowledged or contained within this document.

30.1.2: Readily Available

All products used for engines within this document must be readily available in the marketplace in North America. Being available in the marketplace does not guarantee the acceptance of a product into these standards. In most cases, the NKA will require a minimum of 60 days of being available prior to its approving a part, if it intends to do so.

30.1.3: As Constructed

All products must be used as constructed unless specifically instructed otherwise. These may include ignition, spark plugs, carburetors, etc.

30.1.4: Engine Sealing/Marking

Engines may be sealed or marked following qualifying, or at any other point as directed by the sanctioned event. Breaking or tampering with a seal, or replacing parts without approval is prohibited.

SECTION 30.2: Yamaha KT-100 Engines

30.2.1: General

Unless otherwise noted, the Yamaha KT-100S should utilize one carburetor and only stock Yamaha parts and be in OEM (stock) appearance.

30.2.2: External Modifications

External modifications that do affect performance are allowed (i.e. painting of cylinder head fins for advertising).

30.2.3: Pulse Line Hole

Pulse line hole may be relocated. The internal diameter of the Pulse Line pipe may not exceed 0.125" (+.003"). An NKA approved No GO gauge is the acceptable way of inspecting the Pulse Line pipe.

30.2.4: Bore and Stroke (Displacement)

Maximum Bore: 2.090" (52.96mm) Maximum Stroke: 1.816" (46.13mm)

30.2.5: Carburetors

30.2.5.1: Walbro WB3A Carburetor is the only carburetor allowed for the JR. 2 and SR. classes. Listed below are some specific specifications regarding this carburetor:

- Diaphragms are a non-tech item, but must be stock appearing
- Shimming of the inlet spring is allowed & inlet spring is a non-tech item
- Fuel must pass through internal OEM passages only • Both internal screens must be installed at all times • Machining of the throttle shaft is not allowed.
- All components not specified here must be stock appearing

30.2.5.2: WB3A bore must be "as cast" and will not exceed 1.010" (25.65mm) at any point. Venturi .950" No-Go. (See Figure for details):

30.2.5.3: Walbro WA55B JR. 1 Carburetor. Listed below are some specific specifications regarding this carburetor:

- Diaphragms are a non-tech item
- Shimming of the inlet spring is allowed & inlet spring is a non-tech item
- Fuel must pass through internal OEM passages only
- Both internal screens must be installed at all times
- Machining of the throttle shaft is not allowed.
- All components not specified here must be stock appearing

30.2.5.4: Carburetor Inlet Track Length

Minimum is 2.600" and maximum is 2.800". Inlet track length is measured from the face of the piston to the surface on which the carburetor mates with. Carburetor base gasket should be removed for tech.

30.2.5.5: Phenolic Spacer
Must be “as cast” straight bored with a minimum ID is 1.000” and maximum ID is 1.050”; the maximum thickness is 0.405”.

30.2.5.6: Aluminum Carburetor Mount Plate

Hole size 1.050” maximum, 1.000” minimum. Straight bore.

30.2.5.7: Airbox/filter Adapter cannot be “velocity stacked” or shaped to act as a “ram air” tube. For JR 1 Walbro WA55B carburetors, the minimum inlet hole size is 0.750”. Must be straight bore.

30.2.6: Cylinder Head & Sparkplug

Any machining of the cylinder head or cylinder liner to accept a sealing device is illegal unless it is stock equipment on the engine. Spark plug must be a stock (unmachined)
14mm x 3/4”-reach spark plug.

30.2.7: Combustion Chamber

Volume shall be a minimum of 11cc. Measured to top of the spark plug hole with L.A.D. (cc) gauge installed and torqued to 160 inch-pounds. Combustion chamber must be of conventional design and centered.

30.2.8: Head Gasket

Yamaha KT100S material should be copper or aluminum. Engine to have a ring type head gasket.

30.2.9: New Style Cylinder Identification

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. Any means taken to revoke or alter identification boss will result in that cylinder being inspected as a new style.

30.2.10: Cylinder

30.2.10.1: All ports are to be “as cast”. The only exception is the aluminum in the inlet track behind the carburetor and exhaust outlet areas can be “blended”. The original design of the intake and exhaust ports must be maintained; however, surface finish in these areas only is a non-tech item. Port edges may not be chamfered.

30.2.10.2: In summary, these rules do not allow:

- Grinding the aluminum to change the roof angle of the transfer ports.
- Grinding the port to alter the height, width or angle.
- Grinding to change the shape or size of the passages from the cylinder base to the port.
- Grinding to match the cases to the port passages (when cylinder is or is not reversed.)
- Sandblasting, glass beading, peening, etc. are not a substitute for “as cast” condition.
- 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.

- 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.

30.2.11: Blowdown
Maximum 420” Minimum .380”. Any “blowdown” measurement outside of these parameters will be deemed illegal and presumed to have been “altered” in violation of “as cast” rule stated above.

30.2.12: Inlet Opening Check with dial indicator; 0.775 ATDC maximum.

30.2.13: Cylinder Position
It is legal to turn the cylinder and piston 180° on the Yamaha KT100S. Matching of the transfer passages in the case and cylinder is prohibited.

30.2.14: Exhaust Port Opening
Check with dial indicator. Piston travel from top dead center to exhaust opening, 1.155ATDC or greater.

30.2.15: Piston

30.2.15.1: Piston must be an approved single ring only and stock appearing. Legal pistons are Yamaha, Burris, Wiseco, Vinart, RKE 787, and KSI. All approved pistons should have name cast inside.

30.2.15.2: Bottom of piston should be 90° to sides. Transfer area of piston must be cast, no scalloping. Piston top must be dome shape. Rings must be of magnetic material. No holes may be drilled to lubricate exhaust rib. Any machining to the top of the piston is illegal. All pistons are subject to a comparison to a known stock piston. See Figure 3.1.19 for more information.

30.2.16: Connecting Rods
Approved connecting rods are Yamaha part numbers 7F6-11651-01, 7F6-11651-02 and 50W-11651-00 only. The connecting rod must be of original manufacture and stock appearing with no machining, grinding, blending or polishing allowed. Shot peening the connecting rod is allowed. Center of crankshaft journal diameter to center of wrist pin diameter 3.932” minimum, 3.942” maximum. Top or bottom-guided rods and bearings allowed.

30.2.17: Wrist Pin
Stock type only. No tapered pins.

30.2.18: Crankshaft
Crank assembly must be original manufacture and stock appearing. Shot peening and polishing is allowed. Outside diameter measurement: 3.410” minimum, 3.435” maximum. Minimum width 1.790”. Concentric bushings may be applied to crankshaft journals to repair worn crankshaft is non-tech. Bushings may be tack welded to hold in place. See Figure 3.10.22 for more information.

30.2.19: Spacers

The top end of the rod shall have two or more spacers with loose or caged type bearings. Thrust washers for Piston Port engines are non-tech items, but must be in place. Spacer material may be steel, brass or aluminum. The bottom of the rod should have a caged type bearing and no spacers.

30.2.20: Bottom location of connecting rod approved with:

Two ✦ 1mm lower washers
One ✦ 13.95mm width lower cage
✦ Should not be a combination of top and bottom location

30.2.21: Crankpin

The crankpin should be hollow and must 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. New crankpin with no plugs approved. Maximum id .425 No-Go.

30.2.22: Ignition

30.2.22.1: Ignition must be of original manufacture and stock appearing. Ignition keys must fill slots in crankshaft and flywheel. Key width non-tech. Any means taken to alter the coil position is illegal.

30.2.22.2: Machining the shanks of coil hold-down screws to provide additional coil position adjustment is not allowed.

30.2.22.3: Modifying the flywheel in any manner in order to change ignition timing is illegal. Right hand flywheel on straight shaft ignition timing is illegal. Right hand flywheel on straight shaft ignition has machined side out, left hand flywheel has cast side out. Ignition bearing may be removed. Taper bore flywheels have only one keyway and both rotations have the cast side out.

30.2.22.4: Flywheel: 7F6-85551-01 (Std.), 7F6-8555-51 (Rev.) are approved. Main body thickness: .817” minimum (ears may be removed).

30.2.22.5: External coil damage may be repaired with silicone or epoxy.

30.2.22.6: The Atom ignition module is approved for the KT100S. Only one module may be used.

30.2.22.7: Old Style Flywheels: Minimum diameter: 2.350”; Minimum width: .827”.

30.2.23: Ignition Timing Inspection

30.2.23.1: Timing Inspection must take place BEFORE the rotor nut is loosened from the crankshaft.

30.2.23.2: With the piston at Top Dead Center to .015” below Top Dead Center, the leading edge of the rotor’s magnet is required to line up with the trailing edge of the ignition coil leg. The coil’s trailing edge is the bottom leg on clockwise ignitions.

30.2.24: Exhaust

30.2.24.1: The Yamaha KT-100S engine can be fitted with a variety of exhaust systems to form different classes based on speed (power), experience, and spec racing.

30.2.24.2: Full pipe classes are non-tech other than the maximum ID of the exhaust header of 1.780” and only one exhaust port gasket at .200 maximum thickness is allowed.

30.2.24.3: 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. No coatings (to be run as manufactured).

30.2.24.4: RLV YBX Box (3 hole) Muffler:

30.2.24.4.1: End cap must be removable for inspection of baffle with three each .380” maximum No-Go holes spaced approximately 1.250” apart.

30.2.24.4.2: End cap to have three 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.

30.2.24.4.3: Check of exhaust gas leakage may be made by a gas leak detector.

30.2.24.4.4: Must be run on kart in horizontal position.
EGT probe is allowed. Must not leak. Must be located between header, flange and front cap.

30.2.24.4.5: Additional support brackets from chassis or engine are allowed as long as they don’t improve performance.

30.2.24.4.6: In order to extend the life of the Superbox muffler series, RLV is applying a spot of weld on the center of the end cap (this is not a performance issue). This affects part numbers: 7502,7540, 7542, 7544, and 7548.

30.2.24.5: RLV SSX and SSX-V Box (4 hole) Muffler:
30.2.24.5.1: The four (4) external exhaust holes are to be checked with a .500” No-Go gauge.

30.2.24.5.2: Remove the three (3) cap screws to inspect the fourteen (14) inner baffle holes, a missing screw is grounds for disqualification.

30.2.24.5.3: The 14 inner baffle holes are inspected with a .380” No-Go gauge.

30.2.24.5.4: Check of exhaust gas leakage may be made by a gas leak detector.

30.2.24.5.5: Must be run on kart in horizontal position.

30.2.24.5.6: EGT probe is allowed. Must not leak. Must be located between header, flange and front cap.

30.2.24.5.7: Additional support brackets from chassis or engine are allowed as long as they don’t improve performance.

30.2.24.5.8: In order to extend the life of the Superbox muffler series, RLV is applying a spot of weld on the center of the end cap (this is not a performance issue). This affects part numbers: 7502,7540, 7542, 7544, and 7548.

SECTION 30.3: KPP/HPV/KPV 100cc ENGINE

Engine formula is no longer supported

SECTION 30.4: COMER 80cc ENGINES

Engine formula is no longer supported

SECTION 30.5: Comer C50 & C51 Engines

30.5.1: Comer C-50 & C-51 Specifications (Kid Kart Engine)
Modifications are prohibited. Engine must remain stock and compared to known stock parts. Piston rings must be present and cannot fall through cylinder. All gaskets must be in place. Silicone is not considered a replacement for gaskets. Seals, bearings and gaskets are non-tech. Seals must be unaltered. Head cc 7.3cc minimum. No LAD gauge.

30.5.2: Carburetor
Carburetor model SHA 14-12L Delorto, with .475" No-Go Venturi inside diameter. All parts as cast. Carburetor jetting is allowed.

30.5.3: Shroud
Taping or covering of the shroud in any manner is prohibited.

30.5.4: Magneto Key/Keyway
The magneto key and keyway must be unaltered and in place. The key and keyway can be inspected by removing the flywheel nut.

30.5.5: Filter
Stock filter and at least one stock filter element (unmodified) must be used.

30.5.6: Combustion Chamber
As manufactured. All threads are to be intact. Plug threads may be repaired, but must be full length.

30.5.7: Port Height Check Check with 3mm (0.120") rod 3.00" long (max) inserted approximately 0.25" into port. Rod should be unsupported. Exhaust: 1.200" min Intake: 0.370" max.

30.5.8: Base Gasket
Must be in place

30.5.9: Bearings

No Ceramic Bearings Allowed

30.5.10: Ignition Timing Check
Remove starter cover, install dial indicator in plug-hole, zero at TDC. Rotate flywheel counter clockwise until first magnet is completely exposed. Rotate back clockwise until right edge of magnet aligns with left edge of coil. Dial indicator reading 0.050”
- 0.060”.

SECTION 30.6: 125CC “TAG” TECHNICAL INSPECTION

30.6.1: Starter and Battery
Starter and battery must be in place; however, if the engine will not start with the on- board starter system, it is legal to start the engine with an external starter without penalty.

30.6.2: Approved Airboxes

- CIK approved/homologated airbox with two (2) 23mm or less diameter and minimum 95mm length tubes is approved.
- K&N with rigid internal filter. Two (2) tubes only 23mm or less diameter and minimum 95mm length tubes are approved.
- Any RLV airbox and filter combination with two (2) tubes only 23mm or less diameter and minimum 95mm length tubes are approved.
- Aftermarket internal air filters are allowed, must be unmodified.
- The internal side of the mounting flange of the rubber boot may be trimmed flush with airbox flange lip.
- Airbox must be in place at the end of event.

30.6.3: Carburetor
Only the supplied OEM carburetor is approved for each engine. No machining of any surface is permitted. All replacement parts, other than throttle linkage, must be OEM. Any non-performance enhancing throttle body is approved. Jetting is open.

30.6.4: Ignition Systems
OEM only as supplied by manufacturer. All parts must be in place, and static timing must be as factory settings.

30.6.5: Pistons, Rings, and Wristpins
OEM as supplied. NO modifications or coatings allowed.

30.6.6: Bearings
Must be of original OEM type steel bearings: NO ceramics, dual-ball, angular contact, or other “exotic” bearings allowed.

30.6.7: Exhaust System
OEM for each specific engine only. No plating or other coatings allowed. EGT sensors are allowed; however, if sensor is not present the hole must be plugged. System must be intact with no cracks, or missing parts or pieces.

30.6.8: Exhaust Flex Pipe
Flex can be solid or flexible material and is a non-tech item.

30.6.9: Clutch
Shall be as supplied from manufacturer. No machining or other modifications allowed. Must slip at or below 6,000 RPM, excessive grease or oil that enhances engagement is illegal. Entrant may be subject to clutch stall test (similar to KPP) if technical inspection officials believe it is necessary.

30.6.10: Cooling System
Radiator size and placement is open. Contents are open as well with the exception of any coolant containing ethylene glycol (anti-freeze).

30.6.11: Internal Modifications
No internal modifications, including the addition or deletion of parts, are permitted.

30.6.12: Reeds and Cages
Reeds are open; however, must be stock thickness +/-0.002". Reed cage must maintain OEM appearance: no grinding or polishing is allowed. Deburring is allowed.

30.6.13: P orts
As manufactured. That being said, all manufacturers have some hand grinding to reduce imperfections in manufacturing; every effort will be made to distinguish between manufacturer's grinding and owner's grinding for a performance gain.

30.6.14: Seals
Seals must be of OEM size, type, and shape. Must also be installed as manufacturer intended (no reverse seals).

30.6.15: Gaskets Gaskets are non-
tech.

30.6.16: Rods
OEM as manufactured, no removal of material is allowed.

30.6.17: Cylinder Head
Cylinder head must be stock. Combustion area must stock appearing. Each engine will have a specific squish regulation. CC test is done without LAD plug in sparkplug hole, measured to the top of the sparkplug hole as raced. Squish test using .060" (2mm) approximately solder, insert it between the piston and head parallel to the piston wrist pin. Using hand tools (not the electric starter) "squish" the solder. Removed the solder and measure with calipers.

30.6.18: Crankshaft
OEM as supplied by manufacturer per engine; no interchanging between engine brands is allowed. No metal removal, shot peening, polishing, or other modifications allowed.

30.6.19: Crankcases
OEM with no metal removal, coatings, or other modifications. Repair of main bearing pockets is allowed; however, relocation is not.

30.6.20: Painting/Anodizing:
Painting or anodizing is allowed as long as it does not enhance performance (i.e. painting the head to promote engine builder or anodizing aluminum starter braces is permitted).

30.6.21: IAME X-30

- Stroke: 54mm
- Bore: 54.28mm maximum
- Rod Length: 102mm, min. weight 110g
- Piston Type: Single Dyke Ring, min. weight 128g
- Port Height (Maximum Degrees): 177.5
- Overall Cylinder Height: 110mm +/-.5mm
- Minimum Cylinder Head Volume (cc): 9.7cc
- Minimum Squish: 0.035” using .060” solder wire.
- Minimum Reed Thickness: 0.011”
- Ignition: Selletra 4 pole.
- Timing: 22 degrees +/-2.5 degrees
- Clutch: Shoe (3) IAME. Aftermarket clutch hub and driver permitted, all other parts must be OEM IAME parts.
- Carburetor: Tillotson HW 27A with maximum throttle bore of 27mm.
- Exhaust: IAME silencer with adjustable flex, must have “IAME” stamp on both pipe body and end cap. Header also will have “IAME” stamp.

30.6.22: Vortex Rok TT

- Stroke: 54mm (no stuffers)
- Bore: 54.28mm maximum
- Rod Length: 102mm
- Piston Type: Single Rail Ring
- Port Height (Maximum Degrees): 173
- Port Height LAD Tool: 1.370”
- Cylinder Head Volume (cc): 10.8cc
- Minimum Squish: 0.038”
- Reed Thickness: 0.008”
- Ignition: Selletra
- Timing: 0.070”-0.085” BTDC
- Clutch: Shoe (3) Vortex
- Carburetor: Tillotson 3604A
- Exhaust: Vortex Pipe with adjustable flex.
- Exhaust Length Minimum: 15.75” from backside of header flange (where header meets cylinder), around the outside of the pipe, to the 1st weld at the end of the divergent cone.

30.6.23: Mini Rok TAG Cadet 60cc

- Stroke: 43mm
- Bore: 42.10mm maximum
- Rod Length: 90mm
- Piston Type: Single Rail Ring
- Port Height (Maximum Degrees): 116.5 Port Height LAD Tool:
- Cylinder Head Volume (cc): 7.5cc with LAD tool
- Minimum Squish: 0.032”
- Reed Thickness: n/a
- Ignition: Selletra
- Timing:
- Clutch: Shoe non-adjustable Vortex
- Carburetor: Dell’Orto PHBH 18 with #40 slid, W23 needle, #60 Outer Pilot, #50 Inner Pilot, 266AN Emulsion Tube, and 4 gram floats. Only Main Jet and Needle Clip position are allowed to be changed.

- Exhaust: OEM Vortex Mini Rok
- Airbox: OEM Vortex Grey Single Inlet Hole 23mm x 95mm (+/-1mm).

30.6.24: IAME Parilla Leopard (2008 & before):

- Stroke: 54mm
- Bore: 54.30mm maximum
- Rod Length: 102mm
- Piston Type: Single Dyke Ring
- Port Height (Maximum Degrees): 171
- Port Height LAD Tool: 1.380”
- Cylinder Head Volume (cc): 9.5cc
- Minimum Squish: 0.026”
- Reed Thickness: 0.012”
- Ignition: Selletra 4 pole or Digital K
- Timing: Fixed
- Clutch: Shoe (3) IAME
- Carburetor: Tillotson 334A or AB
- Exhaust: IAME Leopard Pipe with adjustable flex or 2010 IAME pipe 1piece pipe with tuning spacers behind header.
- Exhaust Length Minimum: 15.75” from backside of header flange (where header meets cylinder), around the outside of the pipe, to the 1st weld at the end of the divergent cone.
- Junior Modifications: Substitute Senior header for Leopard Junior Header with 25mm or 30mm restrictions (Local Option for Restriction size).

30.6.25: IAME Parilla Leopard MY09

- Stroke: 54mm
- Bore: 54.30mm maximum
- Rod Length: 102mm
- Piston Type: Single Dyke Ring
- Port Height (Maximum Degrees): 171
- Port Height LAD Tool: 1.380”
- Cylinder Head Volume (cc): 9.5cc
- Minimum Squish: 0.026”
- Reed Thickness: 0.012”
- Ignition: Selletra 4 pole or Digital K
- Timing: Fixed
- Clutch: Shoe (3) IAME
- Carburetor: Tillotson 334A or AB
- Exhaust: IAME Leopard Pipe with adjustable flex or 2010 IAME pipe 1piece pipe with tuning spacers behind header.
- Exhaust Length Minimum: 15.75” from backside of header flange (where header meets cylinder), around the outside of the pipe, to the 1st weld at the end of the divergent cone.
- Junior Modifications: Substitute Senior header for Leopard Junior Header with 25mm or 30mm restrictions (Local Option for Restriction size).

30.6.26: PRD Fireball 2008 (black head & machined ports):

- Stroke: 54mm
- Bore: 54.30mm maximum
- Rod Length: 100mm

- Piston Type: Single Dyke Ring
- Port Height (Maximum Degrees): 174
- Port Height LAD Tool: 1.385”
- Cylinder Head Volume (cc): 10.0cc
- Minimum Squish: 0.028”
- Reed Thickness: 0.011” Ignition: OPPMA PVL
- Timing: 0.075”-0.090” BTDC Clutch: Shoe (3) No Springs
- Carburetor: Tillotson 360A
- Exhaust: PRD Pipe with adjustable flex.
- Exhaust Length Minimum: 15.75” from backside of header flange (where header meets cylinder), around the outside of the pipe, to the 1st weld at the end of the divergent cone.

SECTION 30.7: 125cc SPEC HONDA TECHNICAL INSPECTION GUIDE

This section covers specifications for the 1999-2002 Honda CR125R engine formula, commonly referred to as “Stock Honda”.

30.7.1: Airbox

Engines must have either an air filter or CIK style airbox installed at all times, some tracks mandate an airbox for noise control. Airboxe can have a maximum of three inlet tubes of 29mm +/- 1mm diameter and 95mm in length. Running an air filter inside the airbox is allowed and is a non-tech item as long as it seals around the airbox. No modifications of any kind are approved to the airbox or filter.

30.7.2: Approved OEM Parts

OEM parts from 1999 through 2002 Honda CR125R engines may be interchanged.

30.7.3: Cylinder Head

Cylinder head must retain OEM without any machining or modifications. Removal of mounting boss and modifications to the water outlets for the purpose of hose connection are allowed. Cylinder Head Squish: is measured with .060” solder at two points parallel to the piston wrist pin. Measurement should be as follows: .045” to .050”.

30.7.4: Cylinders

1997 through 2002 cylinders are legal. No Modifications are permitted! OEM measurements fall within this range: 1997-1999 cylinders: 3.311”-3.316” and 2000-2002 cylinders: 3.307”-3.312” overall height.

30.7.5: Power Valve Plugs

Stock power valves may be removed and aftermarket plugs used; however, this must be done with no modifying of the cylinder and no machining of the exhaust port. Power valve plugs must be matched outside of the cylinder and re-inserted. Cylinder mounting flanges for retaining cylinder to cases may be spot faced in the area where the nut meets the flange only. Some factory grinding, done prior to the Nikasil process, is present on many cylinders. NKA Technical Director reserves the right to approve or disapprove any cylinder supplied by Honda and not modified.

30.7.6: Piston, Ring, and Wristpin

All must be OEM with No Modifications. The only exceptions are: 1) it is permitted to “lap in” the bottom of the ring, and 2) Wristpin clips are non-tech.

30.7.7: Crank and Rod Assembly
Must be OEM Honda with No Modifications. Main bearings and seals must be OEM. Flywheel must be in place, and keyway must remain unmodified and in use. Polishing of the crank to “slip fit” the bearings is permitted.

30.7.8: Gearbox (Transmission)
Five or six speed gearboxes are permitted. Six speed boxes must be 1994-1996 OEM: no aftermarket parts are permitted. No polishing, grinding, or other modifications of any kind are permitted!

30.7.9: Clutch
All parts must be OEM with No Modifications of any kind. All clutch plates, as per manufacturer’s design, must be in place.

30.7.10: Engine Cases
Cases must remain OEM with No Modifications of any kind, this includes lapping of bearing pockets. Non-performance enhancing modifications to external parts is allowed, for example, machining of kick-starter boss and installing a plug in the kick-starter shaft hole.

30.7.11: Exhaust Systems:
Exhaust flange and silencer are non-tech items, but flange must be OEM length and dimensions. The following exhaust pipes are legal, and must remain as manufactured.

30.7.12: Stator
Must be OEM 1999 with no modifications, including wiring. Flywheel key must remain in place with no modifications. The stock slotted plate or SKUSA™ plate, both allow a limited amount of timing adjustment. Any attempt to exceed this adjustment amount is not per- mitted. No modification to the hold down bolts or to the plate is permitted. No other modification to any of the ignition components that changes static timing is permitted beyond what the stock plate or SKUSA™ plate allows.

30.7.13: Coil
Must be 1999 OEM with No Modifications. No advanced ignition control can be performed on the coil. The lead and ground wires can be replaced to facilitate mounting. Ground cable type and size are non-tech.

30.7.14: Water Pump
Pump must be OEM, No Modifications are allowed.

30.7.15: Gaskets, Bearings, and Seals
Bearings and seals must be OEM. Gaskets must be to OEM specifications, thickness, and numbers. The use of common sealants is permitted.

30.7.16: Reed Cage, Manifold, and Reeds
The reed cage and manifold must remain stock 1999 OEM CR125 (Honda Part Number 16221-KZ4-A10 – marked KZ4M) with no modifications. The reed cage must be 1999 CR125 (PN 14100-KZ4-J11). For longevity reasons, aftermarket re- placement reeds will be allowed, including mono reeds or stiffeners. Note that this only allows reeds that may be installed without modification to the 1999 reed cage and does not permit multi-stage reeds.

30.7.17: Carburetors

30.7.17.1: For Jr.. Stock Honda: Keihin 35mm PWK, Keihin 38mm PWK, or Keihin 38mm PWM are legal. For all other Stock Honda classes: Keihin 38mm PWK or Keihin 38mm PWM are legal.

30.7.17.2: Pump around systems are allowed.

30.7.17.3: Carburetor bore measurement will be determined at the engine side of the slide. Bore may not exceed the designated maximum diameter of 38.6mm in an area .400" (10mm) wide measured inboard of the slide.

30.7.17.4: No additional performance components may be added to the carburetor. No internal or external performance modifications to the carburetor are allowed, such as polishing, boring (including oval boring), or modifying internal passages.

ARTICLE 40: 4-CYCLE ENGINE STANDARDS

SECTION 40.1 ENGINE STANDARDS

40.1.1: Legality

The technical officials at an NKA sanctioned event may use any known method to properly technically inspect an engine, regardless if they are publicly acknowledged or contained within this document.

40.1.2: Readily Available

All products used for engines within this document must be readily available in the marketplace in North America. Being available in the marketplace does not guarantee the acceptance of a product into these standards. In most cases, the NKA will require a minimum of 60 days of being available prior to its approving a part, if it intends to do so.

40.1.3: As Constructed

All products must be used as constructed unless specifically instructed otherwise. These may include ignition, spark plugs, carburetors, etc.

40.1.4: Engine Sealing/Marking

Engines may be sealed or marked following qualifying, or at any other point as directed by the sanctioned event. Breaking or tampering with a seal, or replacing parts without approval is prohibited.

40.1.5: Stock Parts Comparison

All parts are subject to inspection and comparison to OEM, stock, new parts.

SECTION 40.2: Honda GX-50

More information on converting to the GX50 for Kid Karts, contact NKA or Honda Performance Development. Rules are supplied by Honda Performance Development:

40.2.1: Engine
Honda GXH50 as supplied by Honda Performance development.

40.2.2: Engine Seal
As installed by HPD. If seal damaged, missing or disturbed in any way the entrant will be disqualified.

40.2.3: Gas Tank
Must remain on engine in factory location and mounting. Fuel line must run directly from tank to carburetor.

40.2.4: Fuel
87 octane pump gas or VP MS93. Fuel to be specified by the series/track. No additives allowed. Failure to meet fuel inspection results in a disqualification.

40.2.5: Carburetor

- KEIHIN BF32E
- No change or modification to the carburetor is permitted. Throttle plate: # 140 as manufactured with sharp edges.
- Must retain stock screw. Main nozzle: Minimum length 1.140”
- Through hole: .055” No-Go
- Two holes at bottom, 180° apart .028” No-Go
- Eight holes above bottom band 90° apart .020” No-Go
- Four holes at top 90° apart .020”
- No-Go Float: F3
- Main Jet: #52S. Go .50mm; No-Go .52mm Pilot Jet: #35
- Maximum venturi size (No-Go): 15mm
- All jets must be TIGHT. Loose jets will be disqualified.
- Throttle linkage must be as supplied by HPD

40.2.6: Air Filter
Must remain stock, with stock foam insert. No internal or external modifications of any type.

40.2.7: Spark Plug
NGK CR5HSB or Denso U16FSR-UB. Washer must remain on both spark plugs.

40.2.8: Kill Switch
Stock switch must remain connected. An additional switch may be installed in reach of the driver.

40.2.9: Oil Alert
Yellow wire must be disconnected or cut.

40.2.10: Oil
SAE 10W-30 or SAE 30 only. Hondaline oil recommended. No exotic oils such as those containing “combustion enhancers”. Tech on oil using a refractometer is encouraged.

40.2.11: Chain Cover
HPD chain cover to be used. (Pending availability)

40.2.12: Clutch
HPD supplied. White and Blue spring are only legal options. No mixing of colors. No modifications or oiling allowed. Stall speed 2400.

40.2.13: Gearing
16:89 or 15:89. Series/track to decide which gearing spec. Max 8000 rpm. No mixing of gear combinations within class.

40.2.14: Exhaust
As supplied, modification or repair not allowed. Cracked or broken exhausts will be disqualified. Any evidence of exhaust leaking is grounds for disqualification.

40.2.15: Decals
No additional decals or other signage allowed on engine except for Honda or Honda Racing HPD.

40.2.16: Engine Mount Pattern
112mm X 54mm

40.2.17: GX 50 Ignition Timing Procedure
- Remove the starter assembly and large cover.
- Install a dial indicator in the spark plug hole, using a 10mm X 1.00 adapter.
- Make sure the indicator has a ball end to ride across the crown of the piston without damage.
- Place light grease or oil on the ball.
- "0" the indicator at top dead center, it does not have to be on the compression stroke as long as piston is at TDC.
- Rotate the flywheel clockwise until the two magnets on the flywheel are to the right of the coil.
- Rotate the flywheel counter clockwise until the left hand edge of the left hand coil mount leg is in line with the left hand edge of the left hand magnet.
- Dial indicator reading should be between 245" and 265".

40.2.18: Intake
- Remove Carburetor: Only stock Honda insulator gasket between black plastic insulator and head. Air passageway in insulator will not be altered in anyway.
- Insulator thickness: .277" +/- .001". Hole is rough edged and is "as molded"
- Insulator (head side) gasket thickness: 0.019" maximum.
- Insulator (carb side) gasket thickness: 0.022" maximum.
- Check for any alterations or worn parts that would allow additional air into engine: holes, slots, perforations, spacers, loose bolts, warped flanges etc. Any evidence of air leaking is grounds for disqualification.

40.2.19: Valve Springs
- Valve springs will be stock Honda springs and will not be altered in any way.
- Wire diameter: 0.064" maximum
- Outside diameter of spring: 0.588" maximum Number of coils: 6
- Spring pressure: 11 LBS maximum at 0.514"
- Stacked length will be: 0.652" maximum

40.2.20: Rocker Arms – Push Rods – Studs
- Rocker arms will be stock Honda and will not be altered in any way.
- Rocker arm studs will be stock Honda.

- They or their mounting position may not be altered in any manner.
- No heli-coiling of mounting holes.
- No bending of studs.
- Push rods will be stock Honda and will not be altered in any way.
- Push rod length is 2.774” +/-.002”

SECTION 40.3: B&S 5HP “FLATHEAD” STANDARDS

40.3.1: General Specifications

- All components to be OEM Briggs & Stratton or approved aftermarket components.
- Gaskets and fasteners are non-tech unless otherwise specified.
- Gasket sealer on all machined surfaces is acceptable.
- Ball and roller bearings shall be of metallic (magnetic steel) construction (excluding retainers) and be of conventional design. This includes inner and outer races as well as the balls and rollers. No other materials allowed.

40.3.2: Cylinder Head

40.3.2.1: Machining permitted on the gasket mating surfaces and the top of the post bosses only. Welding on the cylinder head is prohibited.

40.3.2.2: Heli-coil repair of spark plug threads in original position permitted, no protrusion into combustion chamber allowed. Bolt hole diameters .348” maximum. Combustion chamber depths: piston area .011” minimum, spark plug area .408” minimum, valve area .300” minimum.

40.3.2.3 : Head gasket material non-tech but must be stock configuration and .043” minimum thickness.

40.3.2.4: Eight stock head bolts required.

40.3.3: Bore and Stroke

2.613” maximum bore, 2.437 +/- .0l0” stroke. Protrusion of the piston above the top of the cylinder deck is .005” maximum parallel and in line with the wrist pin.

40.3.4: Carburetor

40.3.4.1: Stock OEM 5hp carburetor only.

40.3.4.2: Filter adapter (if utilized) top surface must be flat and .250” maximum thickness from mounting face. Inside diameter of adapter may be radiused .250” maximum.

40.3.4.3: No more than one filter adapter gasket may be used, thickness .075” maximum.

40.3.4.4: One or two carburetor mounting flange gaskets may be used.

40.3.4.5: Swirl is non-tech.

40.3.4.6: Throttle shaft washer is non-tech and rubber seal must be in place if

OEM (older carbs). Throttle shaft leading edge .040” minimum, trailing edge .086” maximum.

40.3.4.7: Butterfly must be unaltered stock with .059” minimum thickness at throttle shaft mating location. Butterfly screw must be unaltered stock, .322” minimum length.

40.3.4.8: Except for outside end, needle screw must be unaltered stock with oring and washer present. Jet must have stock recess on backside with no funneling of hole allowed. Main metering hole diameter .062” maximum. Idle hole diameter .028” maximum.

40.3.4.9: Air horn diameter 1.011” maximum. Recess at flange end must be as cast, .726” maximum diameter.

40.3.4.10: Carburetor bore, from flange end recess to intersection of air horn diameter, .695” maximum diameter – must be straight, no tapering, no attempts to modify fuel/air flow permitted (rifling, dimpling, protrusions etc. not permitted).

40.3.4.11: Diaphragm cover plate may be faced for proper sealing. Aftermarket diaphragm of stock configuration permitted. Spring and cup must be unaltered stock. Long fuel pickup tube may not be brass. Short tube inside diameter .066” maximum.

40.3.4.12 : Breather tube must be removed. Any stock, single hole, domed OEM fuel tank cap is permitted including those with integral splash shields.

40.3.5: Valve Train

40.3.5.1: Stock, unaltered breather valve only. Two gaskets permitted. Grommet and internal foam must be in place. Stock, unaltered, single angle valves only.

40.3.5.2: Length of flat from seating surface to end of valve .035” minimum.

40.3.5.3: Intake valve angle 30º +/- lº, 1.115” minimum head diameter.

40.3.5.4: Exhaust valve 45º +/- 1º, .990” minimum head diameter.

40.3.5.5: Stock valve springs and lower retainers required. Springs may be machined to meet length requirements. Exhaust spring must be used on exhaust valve and may be used on intake valve.

40.3.5.6: One stock upper retainer may be used on either valve, .058” maximum lip thickness.

40.3.5.7: Intake valve spring length 1.240” maximum; .087” maximum wire diameter.

40.3.5.8: Exhaust valve spring length 1.300 “ minimum,1.500 “ maximum, .088 “ minimum wire diameter; inside spring diameter .625 “ minimum, .640 “ maximum.

40.3.5.9: Both upper valve chamber surfaces may be spot faced for valve spring stabilization.

40.3.5.10: Depth and geometry of spot face non-tech.

40.3.5.11: Stock, single angle valve seats required.

40.3.5.12: Valve seat height to cam center line 5.740” minimum, 5.775” maximum. Valve seat may not protrude above cylinder deck surface.

40.3.6: Ignition

40.3.6.1: Stock, unaltered coil and coil air vane optional.

40.3.6.2: OEM plug wire only.

40.3.6.3: Connector and plug boot non-tech.

40.3.6.4: Resistance from spark plug wire to ground is 2,000 ohms minimum, 5,000 ohms maximum.

40.3.6.5: Flywheel must be specifically designed for Briggs & Stratton 5HP motors: stock or aftermarket billet aluminum flywheel allowed. Flywheel weight 4 pounds minimum. For safety reasons, NKA highly suggests tracks/series mandate an SFI approved flywheel such as the ARC 6620.

40.3.6.6: Flywheel coating of any type is prohibited. Revolving or adjustable flywheel screens are prohibited. Flywheel key is optional and non-tech.

40.3.7: Piston

Length from top of piston to top of wrist pin bore .925” minimum. (Decking of piston permitted to adjust pop up within the .925” min.)

40.3.8: Wrist Pin Wrist pin outside O.D. .491” maximum, inside diameter .320” maximum, length 1.720” minimum.

40.3.9: Piston Rings

40.3.9.1: All three required.

40.3.9.2: Width of the top two rings minimum is 0.090”

40.3.9.3: Minimum overall thickness of top two rings is 0.058” the minimum height of the second step is 0.035”

40.3.9.4: Minimum width of oil ring is 0.070” and the ring groove must be in place.

40.3.9.5: Thickness of Oil Ring minimum is 0.100” +/-.005”

40.3.10: Connecting Rod

- Approved commercially available aluminum connecting rod is permitted.
- Length from bottom of wrist pin bore to top of crankshaft journal bore 3.1233” minimum, 3.1333” maximum.
- Connecting rod bolts and dipper are non-tech.

40.3.11: Crankshaft

40.3.11.1: Stock crankshaft required.

40.3.11.2: Machining, polishing, addition of material or otherwise altering of counterweights is prohibited.

40.3.11.3: Stock timing gear in stock configuration required.

40.3.11.4: Connecting rod journal diameter .990” minimum. Crankshaft journals may be clearance to .775” minimum diameter to facilitate bearing removal.

40.3.11.5: Thermal treatment of crankshaft is permitted.

40.3.12: Block

40.3.12.1: Side cover must be stock. Stub for governor may be removed and hole plugged. Gasket mounting surface of side cover and block may be pin punched. Block must be unaltered stock with the following exceptions.

40.3.12.2: The lifter bores may be countersunk to provide lifter head fillet radius clearance. Any means to raise the bottom of the lifter bore boss is prohibited.

40.3.12.3: Welding to the block shall be for damage repair or lifter bore reinforcement only and may not constitute a functional modification.

40.3.12.4: The cylinder deck may be machined, but cannot extend into the rear fin.
40.3.12.5: Carburetor and exhaust pipe mounting surfaces must be unaltered stock.

40.3.12.6: Alterations to inside surfaces of intake and exhaust ports are allowed so long as the intake port will not accept an .880” diameter No-Go plug gage and the exhaust port will not accept a 1.005” diameter No- Go plug gage.

40.3.12.7: No addition of material is allowed. No additional holes may exist in the intake and/or exhaust ports.

40.3.12.8: No alterations on the underside of the valve seats are allowed. Cylinder sleeve, if present, shall be ferrous material and uncoated.

40.3.13: Camshaft

40.3.13.1: Camshaft base circle is .770
“diameter maximum.

40.3.13.2: Lifter material is to be ferrous steel only.

40.3.13.3: Lifter head diameter: .982”minimum, 1.005” maximum, Length 1.606” maximum.

40.3.13.4: Cam profile check must be taken with zero (0) valve lash.

Camshaft Profile Limits

Lift	Exhaust degrees	Intake degrees
.050	38º BBDC to 33ºBBDC	7ºBTDC to 0ºTDC

.100	21ºBBDC to 16ºBBDC	10ºATDC to 17ºATDC
.150	2ºBBDC to 3ºABDC	29ºATDC to 36ºATDC
.200	21ºABDC to 31ºABDC	55ºATDC to 64ºATDC
Max	.233 " maximum	.233 " maximum
.200	76ºBTDC to 65ºBTDC	43ºBBDC to 33ºBBDC
.150	48ºBTDC to 4OºBTDC	13ºBBDC to 6ºBBDC
.100	28ºBTDC to 21ºBTDC	6ºABDC to 13ºABDC
.050	10ºBTDC to 4ºBTDC	23ºABDC to 31ºABDC

EZ Spin: start 45º to 60º ABDC

EZ Spin lift base: .013" minimum, .019" maximum, 30º minimum duration, .001" maximum drop during duration.

40.3.14: Briggs 5 hp Jr. Restrictor Plates

Flat style only with sharp edge. No beveled or swaged holes. Maximum hole diameter is as follows; Purple = .425", Turquoise = .500" and Gold = .575".

SECTION 40.4: OHV 200 ("Clone") ENGINE STANDARDS

40.4.1: Approved Engines

OHV engines with a maximum displacement of 200 cc's. Box Stock
Project, Dyno, Ducar, Moree, Tillotson 196r/rs (sealed version) are legal. Contact NKA with questions on older models.

40.4.2: Eligible Engine Components

40.4.2.1: All OHV200 components from approved engines must be original OEM items in their stock state unless otherwise specified. Honda GX200 parts and components are NOT LEGAL in the OHV200 class.

40.4.2.2: Parts that are introduced into the supply chain are not automatically considered OEM, and are not to be construed as legal or approved. The NKA holds no responsibility for unapproved or ineligible parts being distributed for sale.

40.4.3: Approved Removal of OEM Parts

Removal of unnecessary OEM items such as exhaust system, air cleaner, fuel tank, governor, low oil sensor, etc. is permitted. If you are unclear contact the NKA National Office for assistance.

40.4.4: Block & Side Cover Repair/Modification

40.4.4.1: Welding or epoxy repair permitted to the block and side cover. Repair may not be a functional modification (performance enhancing) of the OEM part.

40.4.4.2: Decking of the block is permitted. No pop-up of the piston is allowed.

40.4.4.3: Deburring of excessive flash is allowed but not to alter OEM specification or appearance. Deburring to the eyebrow area of intake or exhaust port is prohibited.

40.4.5: Open Exhaust System

40.4.5.1: Maximum length 24 inches-measured through inside of pipe w/.250 wide tape measure. Remove silencer and pull tape measure tight. If any portion of the length of pipe is below 24 inches--pipe is legal.

40.4.5.2: Complete Pipe & Silencer cannot extend past rear bumper and must be totally contained inside the kart frame.

40.4.5.3: Height must be 10 inches maximum from the top of the header flange.

40.4.5.4: Header pipe wrap required from the header flange to the silencer. Must be overlapping with no part of header showing.

40.4.5.5: Header must be braced. Header and muffler must both be secure (tight) at the end of the race -this is grounds for disqualification.

40.4.5.6: Ceramic coatings permitted on pipe only. Coatings on any other part of the exhaust is prohibited.

40.4.5.7: Studs on exhaust may be replaced with regular threaded bolts of equal diameter and must be safety wired.

40.4.5.8: Silencer RLV B-91 series model 4104 is mandatory with all baffle plates on inside and be as supplied from manufacture. Coating is prohibited. Outside baffle holes .1285" ID max. Internal baffle holes .1285" ID max.

40.4.5.9: Silencer must be supported by clamped on brace. No welding of brace to silencer or pipe. Silencer must be able to be removed for inspection.

40.4.5.10: Silencer cannot be parallel to the ground. It must point towards the rear bumper or ground. The lowest part of the silencer can be a maximum of 9.0" above the mounting surface of the block.

40.4.5.11: Loop or Loop type pipes are prohibited.

40.4.5.12: Gasket and/or silicone allowed to seal header pipe to head.

40.4.5.13: Pipe must be safety wired.

40.4.5.14: Header Flange: maximum thickness .510".

40.4.6: Mini/Weenie Exhaust System

40.4.6.1: Pipe should have threaded fitting at the end of pipe to screw RLV B-91 mini silencer into it (no welding). Silencer must be tightened all the way in the threaded portion of the header to prevent the escape of exhaust gasses. All exhaust gasses must exit through the end of silencer. Silencer can be checked with the clamps loose or off. Silencer cannot have any movement when checked. Any attempt to divert the exhaust gasses around or through the threaded connection will be grounds for disqualification.

40.4.6.2: Mini pipe must be round .750" OD steel tubing & constant diameter for entire length of pipe. (No multi stage)

40.4.6.3: Entire length of pipe not to exceed 15 inches in length & 10 inches minimum length including silencer.

40.4.6.4: Height must be 14.5" from bottom of block, measured from the bottom of block mounting surface to the bottom edge of silencer.

40.4.6.5: Header pipe wrap required from the mounting surface of head to silencer (safety tech item). Must be overlapping with no part of header showing.

40.4.6.6: Header must be braced. Header and muffler must both be secure (tight) at the end of the race.

40.4.6.7: Silencer should have all baffle plates inside and be stock as supplied from mfg. No grinding of inside of silencer. ID .685 +/-.005. Silencer must be able to be removed to inspect. Outside baffle holes.1285" ID max. w/No-Go. Internal baffle holes .0965" ID max. w/No-Go

40.4.6.8: Aftermarket coatings on pipe approved. Coatings on silencer are prohibited.

40.4.6.9: Studs on exhaust may be replaced with regular threaded bolts of equal diameter and must be safety wired.

40.4.6.10: Gasket and/or silicone allowed to seal header pipe to head.

40.4.6.11: The maximum thickness of the mounting flange of the header is:
0.500"

40.4.6.12: Pipe must be safety wired and/or double nutted.

40.4.6.13: No welding more than 1" above the pipe flange.

40.4.7: Fuel
87-octane pump gas; all fuel subject to inspection/comparison against a standard set by the event technical director.

40.4.8: Fuel Tanks
Floor mounted fuel tanks are required. OEM tank must be removed from the engine.

40.4.9: Fuel Pump
Any pulse type fuel pump permitted and can be pulsed from the crankcase, side cover or valve cover.

40.4.10: Clutches
Stamped steel drum shoe type clutches, disc clutches, and machined billet drums are approved.

40.4.11: Carburetor

40.4.11.1: Approved Carburetor
Stock Huayi or Ruixing type carb only. There must be a factory edge, not rounded or smoothed over, all the way around the entrance and exit to the venture of carburetor. Can

be compared to a stock carburetor. No extra holes drilled in carburetor anywhere. No sanding or machining of carburetor mounting surfaces.

40.4.11.2: Choke Assembly

40.4.11.2.1: Choke assembly must be in place and functional.

40.4.11.2.2: Choke lever must be stock.

40.4.11.2.3: Drilling holes to mount choke lever is prohibited.

40.4.11.3: Venturi

40.4.11.3.1: Venturi .608" Must-Go

40.4.11.3.2: . 615" Max blade-type No-Go

40.4.11.3.3: Throttle bore .751" No-Go

40.4.11.4: Minimum Protrusion into Venturi

40.4.11.4.1: Huayi: .488

40.4.11.4.2: Ruixing: .478

40.4.11.5: Throttle Shaft

Throttle shaft is .115" minimum thickness; material is non-tech.

40.4.11.6: Butterfly

Butterfly is .037" min thickness; butterfly screw minimum length 0.305".

40.4.11.7: Jets

Main metering jet and low-speed idle jet are non-tech.

40.4.11.8: Filter/Filter Adapter

40.4.11.8.1: Filter adapter max 1.375" height. No "ram air". Any filter that is open on the end must be covered over with tape or pre-filter that will not allow any air to enter filter from the end of filter. Air must enter filter from the sides. If this type of filter is used, turn them toward the rear of kart.

40.4.11.8.2: Grinding or modifying spacer between filter adapter and carburetor is prohibited.

40.4.11.9: Emulsion Tube

40.4.11.9.1: Through hole maximum ID of 0.066" No-Go.

40.4.11.9.2: Minimum length is 1.092" and must have 20 holes on top; hole diameter must be 0.036" No-Go. Bottom holes can be either 2 or 4 holes.

40.4.11.9.3 : The minimum length on the emulsion tube is 1.092".

40.4.11.9.4: The minimum diameter is 0.154".

40.4.11.10: Phenolic Insulator

40.4.11.10.1: Black phenolic insulator plate must be run between carburetor and block.

40.4.11.10.2: Plate hole and finish of plate are non-tech.

40.4.11.10.3: Fuel bleed off slot must be unaltered.

40.4.11.10.4: Thickness must be maintained at .257" minimum. Plate must be flat and maintain consistent thickness at all points.

40.4.11.11: Carburetor Gaskets

Only one gasket is allowed between the carburetor and phenolic spacer, and if a restrictor plate is used a total of two gaskets are permitted.

40.4.12: Piston

40.4.12.1: Must be of a three ring design.

40.4.12.2: Minimum weight of 145 grams with Oil Expander Ring and two rail rings installed.

40.4.12.3: Piston length is 1.935" max, 1.910" minimum. .580" max top of wristpin hole to top of piston as measured with a dial caliper.

40.4.12.4: Standard bore is 2.685", maximum overbore allowed is 2.700".

40.4.12.5: The piston is not allowed to be any higher than the deck of the block at TDC, zero tolerance (zero deck height).

40.4.12.6: No flat top piston allowed, must be dished-OEM w/no modifications.

40.4.12.7: Aftermarket pistons and/or sizes up to .25mm (0.010") over are permitted.

40.4.12.8: Machining of the piston is prohibited.

40.4.13: Piston Rings

40.4.13.1: It is mandatory that all three rings to be intact and functional.

40.4.13.2: Top ring must be the chrome face ring

40.4.13.3: No alterations of rings are permitted.

40.4.13.4: Ring Sizes

- **Top Ring** .058" +/-.005" height & .115" maximum width.
- **Middle Ring** .058" +/-.005" height & .115" maximum width.
- **Oil Expander Ring (reference)** .095" +/-.005" height & .092" +/-.005" width

40.4.14: Ring Tension Requirement

40.4.14.1: Top two rings must support themselves in the cylinder when removed from piston. They cannot fall through cylinder.

40.4.14.2: Bottom ring is a non-tech item regarding tension. Bottom expander ring & two rail rings, when mounted on piston and rod in place should support piston in cylinder when inserted upside-down.

40.4.15: Ring Tension Inspection Procedure

- Top 2 rings must support themselves without assistance in cylinder.
- Each of the top two rings should be placed, individually, approx. one inch (1") down in cylinder.
- Square ring with piston turned upside down.
- If ring supports itself it is legal.

40.4.16: Crankshaft

40.4.16.1: Standard OEM item with stock stroke length of 54mm or 2.126" (+/- .007").

40.4.16.2: No alterations permitted.

40.4.16.3: Journal diameter must be between1.180"-1.168".

40.4.16.4: If needed to prove lack of modification, crankshafts minimum weight would be over 1700grams.

40.4.17: Ignition Coil

40.4.17.1: Ignition coil must be OEM for all classes.

40.4.17.2: Timing is non-tech.

40.4.18: Flywheel

40.4.18.1: Flywheel key may be altered and is non-tech; key is not required to be installed.

40.4.18.2: Flywheels must have a minimum weight of 3.3 pounds.

40.4.18.3: Modification or removal of fins is prohibited.

40.4.18.4: Approved Flywheels

- RaceSeng RSP-13-075 & 077 Rev Wheel NF-S1 ™
- ARC-6619 flywheel ™ • ARC-6618 flywheel ™
- ARC-6689 flywheel ™
- Dyno PVL 211-900 flywheel ™
- Ambush Flywheel Part Number 1116 ™
- King Wheel Billet Steel DJ-168F-16200-A ™
- King Billet Aluminum Slipstream Flywheel ™

40.4.19: Cylinder Head

40.4.19.1: Approved Heads

Only “JT” 4-bolt heads and “TG-1” heads will be allowed. Any other heads need to be approved with NKA prior to competition.

40.4.19.2: Sanding and Machining: No sanding or machining of carburetor or exhaust mounting surface.

40.4.19.3: Valve Seats

40.4.19.3.1: Valve seats can have up to three angles as cut by the manufacturer:

- 60-degrees bottom relief
- 45-degrees top relief
- 30-degrees to angle relief

40.4.19.3.2: Porting, grinding or matching to the ports or combustion chamber is prohibited.

40.4.19.3.3: No angle milling of head. Measurement taken from gasket surface: depth check to combustion chamber floor cannot vary more than .005” in any direction.

40.4.19.4: Minimum Combustion Chamber Volume

- Minimum combustion chamber volume when mounted on engine @ TDC is 26.5 cc’s.
- This is to be done after the event and when the engine has cooled down to a reasonable temperature.
- Head gasket required, but thickness is non-tech and can be either steel or aluminum. Multiple head gaskets are allowed.

40.4.19.5: Head Dimensions

40.4.19.5.1: Maximum Head Thickness: 2.640” as measured from the valve breather mounting surface to in-between the valve seats and the combustion chamber.

40.4.19.5.2: Head thickness from the valve breather mating surface to in-between the valve guides is 1.150” Max.

40.4.19.5.3: Intake Port: DELETED

40.4.19.5.4: Exhaust Port: DELETED

40.4.19.5.5: Port Depth: Measured from the top of the valve seat to the port floor; Intake: .880” Max Exhaust: .830” Max. Valve bowl height gauge is the preferred measurement tool.

40.4.19.6: Intake/Exhaust Seat

40.4.19.6.1: Intake Seat: .899” Max

40.4.19.6.2: Exhaust Seat: .862” Max

40.4.20: Valve Train

40.4.20.1: Valves

- Steel or Stainless Steel valves with 45° angle only and no lightening or polishing.
- Polishing or sandblasting of valve stem up to port entrance is allowed; however, polishing of whole valve is prohibited. Cannot be visible above the valve guide.

40.4.20.2: Valve Dimensions:

40.4.20.2.1: Intake valve OD: .975” minimum.

40.4.20.2.2: Exhaust valve OD .937” minimum.

40.4.20.2.3: Intake valve length: 2.525” maximum

40.4.20.2.4: Exhaust valve length: 2.555” maximum

40.4.20.2.5: Stem Diameter: SUSPENDED UNTIL FURTHER NOTICE

40.4.20.2.6: Minimum valve weight: 21 grams

40.4.20.3: Rocker Arms:

40.4.20.3.1: 1:1 ratio rocker arms only.

40.4.20.3.2: Rocker arms must be steel and are subject to magnetic test.

40.4.20.3.3: Rocker arms are allowed to be ground on valve stem location only, or on bottom of rocker arm to allow running lift to be compliant. Grinding on the sides of the rocker arm is prohibited. No minimum thickness checks.

40.4.20.4: Valve Springs

40.4.20.4.1: Maximum Length: 1.225” For Reference Only NON-TECH AT THIS TIME

40.4.20.4.2: Maximum Outside Diameter: 0.795” For Reference Only NON-TECH AT THIS TIME

40.4.20.4.3: Maximum Inside Diameter: 0.655” For Reference Only NON-TECH AT THIS TIME

40.4.20.4.4: Maximum Coil Diameter: 0.071”

40.4.20.4.5: Number of Coils: 4

40.4.20.4.6: Valve Spring Retainers Minimum Weight: 4.0 grams

40.4.20.4.7: Spring Shims are allowed, no thickness check and must maintain .815” height check including shims.

40.4.20.4.8: Springs must be made of a magnetic material.

40.4.20.4.9: Install height .815 minimum, check with must go gauge .815 with retainer in place. Gauge must go in both directions with minimal pressure (by hand), with retainers and shims in place as raced.

40.4.20.4.10: Lash caps on exhaust valve only. Intake retainer must retain stock appearance –no length or thickness check. Material must be magnetic.

40.4.20.4.11: Inside diameter of valve seats: Intake .899" No-Go and exhaust .862" No-Go.

40.2.20.4.12: Top of the valve cannot be below floor of combustion chamber (i.e. cannot "sink" the valves).

40.2.20.4.13: Upper valve stem seals are optional, seals may be used on both intake and exhaust. Thickness and rubber "wiper" are non-tech.

40.2.20.4.14: Valve Stem Seals: Bottom of seal must be flat, must be OEM shape. Cannot swedge seal. The valve spring cannot pick up valve stem seal. The valve stem seal cannot stick inside of the valve spring. If oil is causing the seal to stick, wipe off oil and re-check. Valve spring must sit on bottom of seal.

40.4.20.5: Valve Guides:

40.4.20.5.1: Valve Guide minimum length: 1.055"

40.4.20.5.2: Valve Guide must be stock with no modifications and can be compared to a new stock head with a valve guide.

40.4.20.5.3: Valve guide must be in stock position with clip touching head all the way around clip.

40.4.20.5.4: Evaluation for guide can be done using valve guide tool. The tool cannot stick out of valve guide and bar stock cannot touch tool when sliding bar stock across valve breather mating surface.

40.4.21: Spring Legality (reference)

40.4.21.1: Spring Coil Check

NKA retains the right to use the "Spring Coil Check" with a .250" ground tool steel as No-Go gauge

40.4.21.2: Spring Square Check Deleted

40.4.21.3: Weight Check NKA allows the use of the "weight check". Listed below are the steps for performing the weight check:

- Maximum Tension: 10.8lbs. @ height of .850" & 18lbs @ height of .650"
- Procedure to Check Spring Weight:
  - Place weight check instrument on flat table or surface plate.
  - Place .850 spacer over center post.
  - Spring must drop over center post freely on its own –do not force onto post.
  - Gently set 10.8 lb weight over shaft and on top of spring.
  - Push weight down till it bottoms out and release.

- Weight should bottom out on spacer.
- Use flashlight to visually inspect the spring under the weight.
- If daylight is visible all the way around spacer (360 degrees) between weight and spacer spring is deemed Illegal.
- If the spring touches in one spot it is legal.
- Remove the .850 spacer and replace with .650 spacer.
- Spring must drop over center post freely on its own –do not force onto post.
- Gently place both weights on top of spring.
- Push down on top of weight until it bottoms out and release.
- Repeat visual with flashlight.
- If daylight is visible all the way around spacer (360 degrees) between weight and spacer spring is deemed Illegal. If the spring touches in one spot it is legal.

40.4.22: Pushrod

40.4.22.1: 5.285” Maximum, No Minimum Length Please contact NKA with any questions.

40.4.22.2: Must be of a 3-piece design.

40.4.22.3: Minimum Weight: 9 grams

40.4.23: Lifters

40.4.23.1: Length: 1.350”-1.390”

40.4.23.2: Outside Diameter: .935” maximum

40.4.23.3: Minimum Weight: 18 grams

40.4.24: Valve Breather

40.4.24.1: Bending tab up to fit into valve breather is approved. The tab must be intact and not broken or missing.

40.4.24.2: Flapper must be operational and in stock position.

40.4.25: Fasteners

Non-tech, but must retain their original factory size. Heli-coils, studs, etc. allowed for repair purposes. Solid dowel pins allowed. Washers allowed under head and crankcase bolts

40.4.26: Camshaft

40.4.26.1: Stock appearing camshaft cores only with the ez-spin assembly unaltered and in stock condition is mandatory.

40.4.26.2: Cam lobe base circle diameter min/max is .860” - .875”.

40.4.26.3: Duration taken from pushrod. Intake duration of 221 degrees at .050 lift and 88 degrees at .200 lift. Exhaust duration of 224 degrees at .050” lift and
99 degrees at .200” lift. Camshaft tolerances: +2 degrees with no minimum duration check

40.4.26.4: Intake lift at pushrod is .215”-.225”. Exhaust lift at pushrod is .222”.232”.

40.4.26.5: Intake lift at retainer .238” max. Exhaust lift at retainer is .242” max. Lift will be checked as raced.

40.4.27: Gaskets & Sealer

40.4.27.1: Gaskets must be OEM configuration and are non-tech and sealer may be applied unless otherwise specified. No Sealers Allowed on Intake or Carburetor side!

40.4.27.2: Crankcase gaskets: Maximum 2 gaskets and/or sealer allowed.

40.4.27.3: Non-performance enhancing marking, “engraving”, sanding or other minor modifications to gasket mating surfaces to improve/enhance sealing capabilities is allowed.

40.4.27.4: Paper gasket between air filter adaptor and carb is legal.

40.4.28: Bearings

Crankshaft bearings shall be of metallic (magnetic steel) construction (excluding retainers) and be of conventional design and stock appearing and the same dimensions as the OEM bearings. This includes inner and outer races as well as the balls and rollers. No other materials allowed.

40.4.29: Coatings & Polishing

Coating, tumbling, and/or polishing of internal parts, including carburetor and head, is prohibited.

40.4.30: Crankcase Breathers

Crankcase breathers are to be routed internally through the valve cover as originally intended in OEM configuration. No additional breathers allowed.

40.4.31: Blower Housing Assembly

Pull starter must be present and remain stock. Angle of installation is non-tech.

40.4.32: Air Filter Adapter

40.4.32.1: Air filter adapter maximum length is 1.375”.

40.4.32.2: Loss of filter during event is not grounds for disqualification.

40.4.33: Rod

40.4.33.1: Billet rods are prohibited.

40.4.33.2: Honing is allowed but must maintain factory defined edge.

40.4.33.3: Oil Hole Size is Non-Tech

40.4.34: Rod Dimensions

40.4.34.1: Rod length: 2.350”-2.375”

40.4.34.2: Rod Minimum Weight: 133g with cap and bolts

40.4.35: Wrist Pin Dimensions

40.4.35.1: Wrist pin inside diameter: .555” maximum

40.4.35.2: Wrist pin outside diameter: .707” +/-.005”

40.4.35.3: Wrist pin length: 2.100”-2.200”

40.4.36: Restrictor Plates

40.4.36.1: Modification of the restrictor plate is prohibited. The anodizing shall not be removed around the holes.The plate must be flat, holes must be as produced with no rounding of the edges. All holes must align perfectly with a stock ARC plate. If a restrictor plate is used, there must be a gasket on both sides.

40.4.36.2 Available restrictor plates, checked with blade type NO-GO gauge.

- Blue: .550"
- Purple: .500"
- Green: .425"
- Red: .375"

SECTION 40.5: BRIGGS ANIMAL ENGINE SPECIFICATIONS

40.5.1: Approved components

All components to be OEM unless otherwise specified. Gaskets and fasteners non-tech unless otherwise specified. Gasket sealer acceptable on all machined surfaces unless otherwise specified. All parts to be stock appearing and are subject to be compared to a known stock OEM part.

40.5.2: Blocks

40.5.2.1: Must be OEM and can be repaired for broken rod or other damage providing the repair cannot be considered a performance enhancement.

40.5.2.2: Ball and roller bearings shall be of metallic (magnetic steel) construction (excluding retainers) and be of conventional design. This includes inner and outer races as well as the balls and rollers. No other materials allowed. The repair of both coil post is allowed.

40.5.2.3: Piston Pop Up
.005” max. (Machining of block deck surface allowed to adjust pop up.) When measuring piston pop-up, it should be accomplished with bar stock on parallel with the piston wrist pin and, using a dial indicator check the piston pop-up in this area. Without moving the dial indicator rotate the bar 90 degrees on the center line of the piston and check the pop up; it should not exceed 0.005”.

40.5.3: Maximum Cylinder Bore 2.725”, which provides for approx. 035” over bore.

40.5.4: Crankshafts

40.5.4.1: OEM only with stock factory timing gear. No modifications allowed.

40.5.4.2: Stroke is 2.204” max and crankpin journal diameter min/max is 1.094” - 1.100”

40.5.5: Connecting Rod

40.5.5.1: Any aluminum connecting rod is approved (insert bearing optional).

40.5.5.2: Length from bottom of wrist pin bore to top of crankshaft journal bore 2.414” “ minimum, 2.429“ maximum.

40.5.2.3: Rod grinding/clearancing is acceptable providing that it is in an area that needs clearance.

40.5.2.4: Connecting rod bolts and Oil Hole Diameter are non-tech.

40.5.6: Pistons

40.5.6.1: OEM or Burris pistons only.

40.5.6.2: Length from top of piston to top of wrist pin bore .658” minimum. Minimum overall piston length is 1.762”.

40.5.7: Rings

40.5.7.1: Three rings are mandatory.

40.5.7.2: Compression (top) ring to have chamfer (or dot) facing up.

40.5.7.3: Scraper (2nd) ring to have the inside chamfer down and dot up.

40.5.7.4: Rings must be in one piece when removed from block.

40.5.7.5: Minimum width top two rings .095”.

40.5.7.6: Thickness top two rings .059”- .064”.

40.5.7.7: Oil expander ring minimum width .065”, ring groove must be present. Expander ring must be installed. Oil expander ring thickness .098” - .102”.

40.5.8: Wrist Pin Must be magnetic steel. .624” to .626” OD, .414” max ID and 1.901” min length.

40.5.9: Crankcase Side Cover SideCover must remain stock OEM item.

40.5.10: Cylinder Head

40.5.10.1: Stock OEM cylinder head part #555635.

40.5.10.2: Machining of gasket surface only allowed. No grinding/machining of ports allowed. Depth of head at shallow part of head .011” min.

40.5.10.3: The measurement on the shallow side of the combustion chamber will be taken with a depth gauge on the push rod side of an imaginary line drawn from dowel pin to dowel pin on valve side of the dowel. It will also be taken over the spark plug area. The rest of the recess area in the head has no depth dimension, but the recess must remain visible.

40.5.10.4: Depth at floor of head is .319" min.

40.5.10.5: Depth to top of valve seat is .360" max.

40.5.10.6: Head thickness measured from head gasket surface to head plate gasket surface is 2.420". Head thickness to be checked in four places through the valve guides and the push rod holes with gauge.

40.5.10.7: Width of combustion chamber at the widest part across the valve seats area checked with a 2.640" NO-GO at a depth of 0.200" in the combustion chamber.

40.5.11: Valve Seats

40.5.11.1: To be one angle only. Seats are non-tech and be stock appearing. A .952" No-Go can go parallel to the port, one way.

40.5.11.2: Intake seat inside diameter, .966" GO - .972" No-Go.

40.5.11.3: Exhaust seat inside diameter, .844" GO - .850" No-Go.

40.5.11.4: Exhaust and intake seat 45-degree angle.

40.5.12: Valve Guides

40.5.12.1: Valve guides non-tech and to be stock appearing.

40.5.12.2: Maximum depth from cylinder gasket surface to top of valve guide is 1.255.

40.5.13: Ports

40.5.13.1: To have stock configuration. No porting or modifications of any kind allowed.

40.5.13.2: Intake inlet: .918 No-Go. When checking 90 degrees to stud pattern No-Go will be straight. When checking in line with stud pattern No-Go will set on floor port at bottom and stop at upper edge of port on top. 0.864" .No-Go cannot touch the valve guide of the intake port .860".

40.5.13.3: Plug gauge will be used as a visual check of the eyebrow area. This is not a No-Go but a visual assist tool.

40.5.13.4: Exhaust Outlet: .980 No-Go

40.5.14: Head Gasket

OEM or after market head gaskets are allowed. No aluminum or copper head gaskets allowed. .049” Min. thickness measured in four places between head bolts. Measurements to be made with micrometers from inside of gasket. The fire ring gasket shall be .042”.

40.5.15: Cylinder Head Plate Must be OEM item. Cylinder head plate gasket must be stock configuration .060” maximum thickness.

40.5.16: Rocker Arm Studs To be stock factory item.

40.5.17: Rocker Arm Pivot Ball

Stock factory item. Min/max diameter to be .590” - .610”.

40.5.18: Push Rod Stock factory item. Min/max diameter is .185” - .190”. Min/max length is 5.638” - 5.656”.

40.5.19: Rocker Arms

Must be stock as from the factory. Minimum overall length is 2.825”.

40.5.20: Valve Spring Retainers

Stock OEM item. Min/max thickness is .055” - .075”.

40.5.21: Camshaft

40.5.21.1: All cam profile readings must be taken with zero valve lash and degree wheel at top dead center (TDC) of compression stroke. Readings shall be measured from push rods. Set dial indicator at zero and do not reset during the profile process.

40.5.21.2: Only OEM camshaft cores are permitted; part numbers 555532 and 555584.

40.5.21.3: Lobes may be ground, but not to exceed .870 base circle.

40.5.21.4: Mechanical compression relief non-tech.

40.5.21.5: Camshaft lobes must remain flat and of original width.

40.5.21.6: Maximum valve lift of 0.255” taken directly off the valve retainer at zero valve lash. Place dial indicator on valve retainer, then tighten ball rocker until indicator moves 0.001” to 0.002”. This will assure that all the lash is taken out of the valve. Set dial indicator to zero and then check lift. When checking the lift off of the valve retainer the only dial indicator holder that will be used is threeleg holder.

Camshaft Profile Limits

Intake Degrees	Lift	Exhaust Degrees
18 to 13 BTDC	0.020	61 to 56 BBDC
0 TDC to 4 ATDC	0.050	44 to 40 BBDC
16 to 20 ATDC	0.100	27 to 23 BBDC
33 to 37 ATDC	0.150	11 to 7 BBDC
42 to 46 ATDC	0.175	1 BBDC to 3 ABDC
53 to 57 ATDC	0.200	10 to 14 ABDC
67 to 71 ATDC	0.225	24 to 28 ABDC

Min. Lift	0.252	Min. Lift
Max. Lift	0.257	Max. Lift
39 to 35 BBDC	0.225	78 to 74 BTDC
25 to 21 BBDC	0.200	64 to 60 BTDC
15 to 11 BBDC	0.175	53 to 49 BTDC
5 to 1 BBDC	0.150	43 to 39 BTDC
12 to 16 ABDC	0.100	27 to 23 BTDC
28 to 32 ABDC	0.050	10 to 6 BTDC
44 to 49 ABDC	0.020	5 to 10 ATDC

40.5.22: Valves

40.5.22.1: Stock valves only and to be one angle.

40.5.22.2: Valves may not be polished or lightened. If working area (that portion of the valve stem translating with the valve guide area) of valve stem is cleaned, no material may be removed, such as linear grooves, cross-hatching, etc.

40.5.22.3: Minimum intake and exhaust valve length 3.250".

40.5.22.4: Intake Valve: 45 degree seat face. Valve head min/max diameter is 1.055" - 1.065". Depth of dish in valve .099" - .119".

40.5.22.5: Exhaust Valve: 45 degree seat face. Valve head min/max diameter is .935" - .945". Depth of dish in valve .084" - .104".

40.5.23: Intake and Exhaust Spring

40.5.23.1: Maximum spring length is .930".

40.5.23.2: Min/max wire diameter .103" - .107" as measured in three places on spring. Inside diameter of spring .615" minimum, .635" maximum.

40.5.23.3: Must be stock appearing and have 4/4.5 coils.

40.5.24: Valve Lifter

40.5.24.1: Stock OEM lifter.

40.5.24.2: Head of lifter to have a min/max diameter of .820" - .860".

40.5.24.3: Min/max length of lifter 1.515" - 1.525".

40.5.25: Valve Cover

Stock OEM valve cover. Includes the breather hole for the tube that runs to the catch can. Threading of hole prohibited.

40.5.26: Intake Manifold

40.5.26.1: Stock OEM intake manifold only. No modifications allowed except machining of gasket surface is permitted to meet rule specs.

40.5.26.2: The gasket surface must remain flat for proper gasket seal the intake to head.

40.5.26.3: The intake carburetor mounting holes may be drilled out to 0.328" max, and the width of the intake to carb slotted hole will be checked with the same max dia.

40.5.26.4: Min/max length 1.740" - 1.760.

40.5.26.5: Inside diameter min/max .885" - .905".

40.5.26.6: Intake to block max gasket thickness .070".

40.5.27: Carburetor

40.5.27.1: "PZ Model 22" only. OEM factory carburetor only. Parts inside the float bowl or that can be removed through the float bowl are non-tech. Any 1/4" bolts may be used to attach carburetor to intake. No studs allowed. Carb to intake sealer is by O-Ring only. No sealer allowed. Air must enter carb at air horn only. Choke must be stock appearing as from factory except choke maybe secured in open position. Adapter will be allowed on end of fuel inlet of carburetor for attachment of 1/4" fuel line.

40.5.27.2: Throttle Bore max diameter is .874" must be as cast.

40.5.27.3: Choke Bore max diameter is 1.149" and must be as cast.

40.5.27.4: Venturi Vertical max width is .792". This measurement shall be made with the No-Go held parallel to the bore of the carburetor. Horizontal max width is .618" for top and bottom of Venturi (widest part), and .602" max will be the horizontal check for the narrowest part of Venturi, and this No-Go may not enter slide area. Air pick off hole maximum diameter .061".

40.5.27.5: Throttle slide shall be OEM item only. Minimum length top edge of slide to deepest part of cut away Alternate method is to check the depth of the cut away on the slide by placing it on a flat surface and attempting to run a .075" No-Go pin into the .074" max cut away.

40.5.27.6: Main jet metering rod min/max length is 1.677" to 1.692". Taper on needle must not be less than .070" at .500" from the tip.

40.5.28: Air Filter

Air filter is optional and any air cleaner permitted. If air filter is used it must be installed directly to carb and no filter adapter is 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.

40.5.29: Fuel Pump

Pulse-type fuel pumps allowed. Fuel pump to be externally mounted and has to be pulsed only from the crankcase upper oil fill cap.

40.5.30: Ignition

40.5.30.1: JR Flywheel

The coil must be stock OEM coil part # 55704, and be utilized in unaltered form. No slotting of mounting holes or machining of attaching bolts is permitted. There must be

resistance from ground to the plug wire. Spark Plug Connector must be stock factory type. Rubber plug boot allowed. Min weight 4 lb. 8 oz.

40.5.30.2: PVL Flywheel
The coil must be utilized in unaltered form. No slotting of mounting holes or machining of attaching bolts is permitted. There must be resistance from ground to the plug wire. Spark Plug Connector must be stock factory type. Min weight 4 lb. 1oz.

40.5.31: Flywheel
Key, coil air gap, spark plug boot and flywheel nut and washer non-tech. Any 14mm commercially allowed.

40.5.32: Recoil Starter
Non-tech and optional. Any style starter nut is allowed.

40.5.33: Header

40.5.33.1: Exhaust header must not extend past rear bumper (including silencer, where applicable) and have no exposed sharp edges.

40.5.33.2: Header shall have a maximum length of 24” to be measured in the ID using a .250” wide tape measure. Measurement to be made with silencer off of pipe and tape tight. If any part of the pipe is less than maximum the pipe is legal.

40.5.33.3: Header must at all times be intact.

40.5.33.4: Loop header pipes are prohibited.

40.5.33.5: Header/exhaust pipe protruding into exhaust port is prohibited.

40.5.33.6: Header to be of fixed design. Any form of non-fixed design is prohibited.

40.5.33.7: No extra tubes or extra holes allowed except hole for heat sensor probe if sensor is used.

40.5.33.8: All header pipes must be of continuous length from the flange to end of pipe with stages or butt welds permitted (no chamber, infusers, or covers of any type allowed on muffler, etc.)

40.5.33.9: A Header support brace and safety wiring of header bolts or studs is mandatory to assure header bolts remain tight. It is required that the safety wire wrap around pipe to insure that bolts remain with pipe in case they are stripped out of block.

40.5.34: Silencer

40.5.34.1: Silencer RLV B-91 series model 4104 is mandatory with all baffle plates on inside and be as supplied from manufacture.

40.5.34.2: Baffle holes: Outside baffle holes .1285” ID max. No-Go. Internal baffle holes .1285” ID max. No-Go

40.5.35: Shrouds and Covers

40.5.35.1: Engine shroud and covers and control bracket to be intact and stock appearing. The exception is the control cover, which can be modified to attach fuel pump (fuel pump must be visible) and throttle bracket also cylinder cover maybe cut for thermal coupler, intake manifold, and exhaust flange clearance.

40.5.35.2: New OEM air shield/guard “Part #555680” may replace plastic control cover and control bracket.

40.5.35.3: Cutting cover down to first seem is approved.

40.5.36: Engine Seals
The engine will be sealed with two wires one wire will run between a valve cover bolt and a intake to engine bolt to a the nut side of a carb to intake bolt the other wire seal will seal the front side of the cover bolt.

40.5.37: Clutch Dry clutches only.

SECTION 40.6: Briggs & Stratton LO206cc SPECIFICATIONS

The section for the 206 is located as a PDF www.nkaonline.com/rulesThe NKA is providing this set of rules with the express consent of Briggs & Stratton.