

# Waterloo Regional Kart Club

## General Competition Rules, Technical Rules, and Procedures 2021

This document may not be reproduced in whole or in part without the express written permission of the Waterloo Regional Kart Club. Copyright © 2021 Waterloo Regional Kart Club

WATERLOO REGIONAL KART CLUB .....	1	22. Bodywork.....	30
INTRODUCTION.....	2	23. Bumpers and Nerf Bars.....	32
DISCLAIMER .....	2	24. Seat.....	33
2021 WRKC BOARD OF DIRECTORS.....	3	25. Installation of Transponder .....	33
SPIRIT AND INTENT .....	4	26. Use of Cameras on Karts .....	34
KNOWLEDGE OF THESE REGULATIONS .....	4	27. Miscellaneous.....	34
ACKNOWLEDGMENT OF THESE REGULATIONS .....	5	ENGINE SPECIFICATIONS .....	35
SOCIAL MEDIA, BLOGGING AND INTERNET		28. General Engine Specifications .....	35
GUIDELINES FOR PARTICIPANTS .....	5	29. Cylinder Block .....	35
ZERO TOLERANCE POLICY FOR PHYSICAL AND		30. Crankshaft and Bearings .....	36
VERBAL ABUSE.....	5	32. Piston and Rings.....	37
THE WATERLOO REGIONAL KART CLUB BOARD		33. Camshaft .....	37
WILL ENSURE .....	6	34. Cylinder Heads.....	39
AWARDS .....	7	35. Combustion Chamber Volume.....	39
DRIVER QUALIFICATIONS.....	8	36. Valve Seats.....	39
1. Membership Requirements .....	8	37. Valves and Valve Springs .....	39
2. General Driver Rules.....	9	38. Muffler .....	41
3. Competition Procedural Rules .....	10	39. Header and Silencer .....	41
4. General Racing Rules.....	10	40. Carburetor and Fuel System.....	42
5. Pit Rules .....	15	41. Ignition .....	44
6. Flag Rules.....	16	42. Engine Gaskets.....	45
7. Safety Equipment .....	18	43. Miscellaneous.....	45
8. Protests .....	18	TECHNICAL INSPECTION PROCEDURES.....	46
9. Race Officials.....	20	44. Purpose.....	46
CLASS STRUCTURES AND POINT SYSTEM.....	21	45. PRE-RACE TECHNICAL INSPECTION .....	46
10. Class Structure .....	21	46. General.....	48
11. Heat Style Events - Starting Line up.....	23	47. Fuel .....	50
12. Endurance Style Events:.....	23	48. Oil .....	50
13. Qualifying Style Events: .....	24	49. Camshaft .....	50
14. Points.....	24	50. Header / Silencer.....	51
GENERAL KART REGULATIONS .....	26	51. Combustion Chamber .....	51
15. Frame and Overall Dimensions.....	26	ENGINE PAINT MARKING - HONDA .....	54
16. Wheels and Tires.....	27	ENGINE PAINT MARKING – BRIGGS .....	55
17. Axles and Hubs .....	27	APPENDIX.....	56
18. Steering .....	28	Pit Steward (if appointed): .....	56
19. Brakes.....	28	Safety Director (if appointed): .....	56
20. Driveline Components.....	29		
21. Fuel System.....	29		

# Introduction

The Waterloo Regional Kart Club Board would like to welcome all competitors, spectators, families and friends to our events. We trust this season will be an enjoyable and rewarding experience. We invite you to become involved in your club by taking an active role in assisting the club in events.

These Rules and Regulations give everyone the knowledge to conduct themselves in a proper manner during practices and race events. Rule changes will be made by the WRKC Board only. Rules may be amended at any time. Any subsequent additions, deletions, or modifications will be, amended by a WRKC Supplementary Bulletin, **and/or** presented at the drivers meetings, **and/or** posted at the track, **and/or** in a newsletter, **and/or** on the Website. If you would like a change to the rules, please submit a proposal to the Board, who will take the proposal under consideration.

**The WRKC regulations are supplemental to the 2021 Kartsport Canada Technical Regulations.** A link to the Kartsport Canada regulations can be found on the club website <https://www.wrkc.on.ca/> under the “DOCUMENTS” tab.

**The WRKC regulations are also supplemental to the 2021 Briggs 206 Canadian Rule Set.** Unless specifically stated within the WRKC rules, the Briggs 206 Canadian Rule Set will be referenced on all technical matters related to the Briggs & Stratton engines. A link to the ASN regulations can be found on the club website <https://www.wrkc.on.ca/> under the “DOCUMENTS” tab.

**All participants must be familiar with these rules and regulations. All participants must be aware of any amendments or supplemental rules/clarification.**

# Disclaimer

The Rules and/or Regulations set forth herein are designed to provide for the orderly conduct of racing events and to establish minimum acceptable requirements for WRKC events. By participating in these events, all members of the WRKC are deemed to have complied with these rules. No expressed or implied warranty of safety shall result from publication or compliance with these Rules and/or Regulations. These rules are intended as a guide for the conduct of the sport and are in no way a guarantee against injury to participants, spectators, or others.



## 2021 WRKC Board of Directors

Position:	Name:	Hometown:	Term:
<b>President:</b>	Jody Prince	Wellesley	2 of 2 years
<b>Vice-President:</b>	Jake Collison	Cambridge	2 of 2 years
<b>Treasurer:</b>	Jason Bowden	Sheffield	2 of 2 years
<b>Secretary:</b>	TJ Marshal	Brantford	2 of 2 years
<b>Board Members:</b>	Jeremy Riopelle	Burlington	2 of 2 years
	Valerio DeMenna	Cambridge	2 of 2 years
	Steve Adams	Milton	1 of 2 years
	Andrew Grinyer	Puslinch	1 of 2 years
	Dean Ramsbottom	Flamborough	1 of 2 years

*If you have questions, please ask a member of the Board.*

*or you can contact the Club using*

*[info@wrkc.on.ca](mailto:info@wrkc.on.ca)*

## **Spirit and Intent**

The objectives of the WRKC are to promote 4-cycle kart racing in Ontario and to minimize the costs of this sport. Karting is a sport that is designed for fun and enjoyment for the whole family.

The following rules are the standard by which karting will be guided. Officials at the club events are authorized to decide if a change or design is an attempt to beat the rules. They can and will disqualify any entry for a violation. Should you find any area not spelled out or not clearly defined in this rulebook, ask for clarification before you consider implementing a change.

WRKC Board or authorized representatives shall have the right to initiate action correcting a hazardous condition or a condition not in compliance with the spirit and intent of these regulations. Should a gray area exist, you will be found non-compliant if you do not bring it to the attention of the Board ahead of time.

## **Knowledge of These Regulations**

- Every person, body, group of persons, etc., promoting, organizing, or participating in a competition or event, by and upon applying for an agreement, sanction or permit or license of any kind from the WRKC shall by doing so be deemed to and recognize that:
- They have acquainted themselves with these Regulations.
- They have submitted themselves without reservation to the consequences resulting from the application of these Regulations.
- Have renounced, under pain of disqualification, the right to have recourse to any arbitrator or judicial tribunal not provided for in these Regulations.
- Have agreed to exonerate and keep indemnified all bodies; sponsors and their agents, racetrack owners, race organizers and their officials and agents, WRKC and its directors, officers, officials and its subsidiaries, agents and associate members, from and against all liability whatsoever to any such person or body or group of persons respectively in respect of, or in connection with any meeting, competition, or event held under these Regulations, from whatever cause arising or alleged to arise and notwithstanding that the same may have been contributed to, or occasioned by, the negligence of the said bodies, their agents, officials, servants, or representatives.
- In the case of entrants and drivers in events, have agreed in the circumstances (as set out in the preceding paragraph) to exonerate and keep indemnified all and any other competitors, their servants, and agents, from and against any liability whatsoever, including direct liability, to such entrants or drivers in connection with the driving of karts or any other act, omission, or occurrence during a competition or official practice.
- Have agreed as set out in this Regulation with each and all the persons and bodies referred to in these Regulations and so that each and any of those persons or bodies shall be entitled to the benefit of such agreements.

## **Acknowledgment of These Regulations**

- Every driver, entrant, official, promoter, organizer or other participant in an WRKC-sanctioned event, and every person who is issued an WRKC licensee agrees, without reservation, to conduct themselves in accordance with these Regulations.
- In case of a disagreement or dispute regarding the meaning or application of these Regulations, the interpretation and application by WRKC officials present at an event shall prevail.
- In order to promote the sport of kart racing and to achieve prompt finality in competition results, all WRKC members and license holders expressly agree that decisions by WRKC officials as to the applicability and interpretation of these Regulations are not subject to litigation.
- WRKC members and license holders covenant that they will not initiate or maintain litigation of any kind against WRKC or anyone acting on behalf of WRKC, with the intention of reversing, modifying, or obtaining relief from such decisions.
- If a member or license holder initiates or maintains litigation in violation of this covenant, the member or license holder agrees to reimburse WRKC for all the costs of such litigation, including attorney's fees.

## **Social Media, Blogging and Internet Guidelines for Participants**

- It is acceptable for a participant to do a personal posting, blog, or tweet. However, any such postings, blogs or tweets should be in a first-person, diary-type format and should not be in the role of a journalist - i.e. they must not report on competition or comment on the activities of other participants or accredited persons, or disclose any information which is confidential or private in relation to any other person or organization. A tweet is regarded in this respect as a short blog and the same guidelines are in effect, again, in first-person, diary-type format.
- Postings, blogs, and tweets should always conform to the highest standards of behaviour and sportsmanship, be dignified and in good taste, and not contain vulgar or obscene words or images.
- When participants choose to go public with any comments, opinions, and any other material in any way, including on a posting, blog, or tweet on any social media platforms or on any websites, they are solely responsible.
- Participants post their opinions and any other materials at their own risk and they should make it clear that the views expressed are their own. Violations of these guidelines may result in penalties being applied including fines, exclusion, and suspension.
- Any abusive comments on social media (Facebook, Twitter, etc.) between members, competitors, officials, organizers, or any other person associated with WRKC will be held responsible and liable for their action.

## **Zero Tolerance Policy for Physical and Verbal Abuse**

- The mission of the Waterloo Regional Kart Club is to provide a safe, fair, positive and respectful environment where all drivers, families, officials, and spectators can enjoy the sport of racing.
- Any and all club events must be free of negative factors, such as abuse, discrimination, intimidation, hateful words and deeds, and physical violence in any form.
- The Waterloo Regional Kart Club will not tolerate:
- Violence of any kind
- Harmful, threatening, or actual acts of violence
- Any activity which places the safety of drivers, officials, or spectators at risk of personal injury
- Verbal abuse of any form, including the limitations regarding social media as outlined below:

## The Waterloo Regional Kart Club Board will ensure that:

- Every member of the Waterloo Regional Kart Club receives a copy of the “Zero Tolerance Policy”
- Officials will respond appropriately, without delay and in a consistent fashion when dealing with an incident
- There are serious consequences for any individual who is in violation with this policy, including, but not limited to:
  - **Disqualification for a heat race** resulting in zero points for the heat
  - **Disqualification for qualifying/pre-final race** resulting in last place starting position for next session
  - **Disqualification for a final race** resulting in zero points for the race day
  - **Disqualification for the race day** resulting in a DQ, which cannot be dropped from seasons points, for the race day
  - **Suspension from the next race day or given # of Race Days** as decided by the Executive, plus a probationary period
  - **Expulsion from the Waterloo Regional Kart Club** for the remainder of the season and a probationary period
  - Offenders may be asked to **leave the property**
  - Repeat offenders will be dealt with more severely and violation with this policy may result in **indefinite or permanent expulsion from the Waterloo Regional Kart Club.**

The purpose of this policy is to:

- Provide opportunities for officials to develop the skills necessary to handle incidents of verbal and physical abuse in a consistent manner
- Promote long-term prevention of verbal and physical abuse, and violence by preparing individuals to manage themselves in non-abusive way

Waterloo Regional Kart Club begins the 2021 Racing season with this zero-tolerance policy. As a member, official or individual associated with the Waterloo Regional Kart Club we expect you to do your part and set the example by complying with this policy.

# Awards

## Weekly Awards

Awards will be presented to the winners in each division at the end of the race day to recognize their accomplishments. WRKC Board encourages all members and their families to stay for the award presentations and 50/50 draw.

## Year End Awards

At the end of every season, the club holds an awards banquet. Trophies and prizes are presented to honour the winners of the class championships and special awards.

To be eligible for year end awards a driver must have raced **60%** of the races in that regular season. The executive will review all awards and settle any ties.

- **Chris Turnbull Award** – the Board selects the driver who exemplifies what racing is all about. Whether they win or lose they are always respectful of fellow competitors, show good sportsmanship and help with tasks that need to be done for the club. This award is in memory of Chris Turnbull.
- **Jim Morrow Memorial Award** and **Club Appreciation Award** - these two awards are given to individuals who made a significant contribution to the club. The Board chooses the recipients.
- **Most Sportsmanlike Driver** - drivers from each class choose the recipients of this award for their own class by vote late in the season.
- **Best Appearing Kart** - drivers from each class choose a recipient from each class by vote late in the season.
- **Junior High Points** and **Senior High Points** - given to the drivers who have accumulated the highest total seasons points before drops.
- **Hard Charger Trophy** - given to the driver in a Senior or Masters class who makes the most passes during the season.
- **Rookie of the Year** - awarded in each class to a driver who began racing in the current year. This driver is required to start at the back for the first five race days. The winner is determined by totaling the rookies' best nine (9) races. The rookie with the highest total will receive the award.
- **Most Improved Driver** –awarded in each class to the driver who makes the greatest improvement in average race day finishes over the previous season. i.e. Average race day finish previous year was 8<sup>th</sup> based only on the races competed. Next year, average race day finish was 3<sup>rd</sup>, based only on races competed. This is not necessarily an improvement in points position from 1 year to the next. The recipient may or may not have been in the same class the previous year but must have raced 60% of the races in that season. The final decision is subject to review by the Board.

# Driver Qualifications

## 1. Membership Requirements

- 1.1 All participants of the WRKC events must be members in good standing of the WRKC or other recognized clubs/organizations.
- 1.2 A member is an individual who has filed an application for a membership. Every member shall be entitled to one vote at a meeting of members if such member is at least 18-years of age. If the driver is not 18 years of age, such driver member may appoint a guardian to vote on their behalf.
- 1.3 Members of recognized clubs/organizations may enter a maximum of three (3) WRKC races before being required to pay the WRKC membership fee.
- 1.4 The **membership year** runs from February 1st to January 31st.
- 1.5 All drivers are required to sign an insurance waiver and provide a signed medical release prior to being accepted for membership. The parent or legal guardian of drivers under 18 years of age must also sign the insurance waiver.
- 1.6 **Age Requirements:** The competitor's **age as of Jan 1** will be used to determine the eligibility of various classes or meet the minimum age requirements. Drivers may exceed the maximum age requirement in a class beyond their Birthday until the end of the current calendar year.
- 1.7 A **membership card** will be issued shortly after the club secretary receives membership fees and all completed documents in the membership package. A membership package consists of a Membership Form, Release and Waiver of Liability, Drivers and Parents Pledge Form, Volunteer List, Physical Examination Form, Parental Waiver and a copy of the birth certificate (for Cadet class).
- 1.8 **License Classes:** The purpose of licensing is to ensure that drivers have adequate experience before being allowed to compete in the faster classes. As WRKC races involve only 4-cycle engines, a "Class I" license is not required and will not be granted. All members will be granted a "Class II" license in one of the following grades:

<b><u>F Class II</u></b>	Cadet	Age 7-9.
<b><u>E Class II</u></b>	Novice	Age 7-11.
<b><u>D Class II</u></b>	Junior Light	Age 8-13
<b><u>C Class II</u></b>	Junior Heavy	Age 12-15
<b><u>B Class II</u></b>	Senior Light	Age 15+
	Senior Medium	Age 15+
	Senior Heavy	Age 15+
	Masters	Age 35+

- 1.9 **Rookies:** The rear number panel must be marked with a RED "X" (max 1-inch line width) for a period of one year for all new drivers. The "X" should go from corner to corner, and the number must remain legible.
- 1.10 **Numbers:** Karts must be registered, and kart numbers obtained before using the track.



- I. Numbers are assigned by the Chief Scorer before the first race of the season.
  - II. There will be no duplication of numbers in any class.
  - III. The previous years' members will be guaranteed their number (if re-registering in the same class) before the specified date on the membership package. All unclaimed numbers will be open.
  - IV. No one may use another driver's number without the express permission of the Chief Scorer. The only exception will be special events run with racers from other clubs, at which time the Chief Scorer will make sure there are no duplicate numbers in the same class.
- 1.11 **Cadet Class:** Drivers can compete in Cadet for two race seasons before they are required to move to a subsequent class. Exceptions may be made for partial race seasons

## 2. General Driver Rules

**2.1 Membership Card:** It is the responsibility of the driver to present a current membership card for the purpose of registering for any event at WRKC

**2.2** Participants in an WRKC sanctioned competition shall conduct themselves according to the highest standards of behavior and sportsmanship, particularly in relations with other competitors, officials, sponsors, and their products, and in manner that shall not be prejudicial to the reputation of WRKC, promoters, sponsors, organizers, or to karting sport in general. Sportsmanship means any person's conduct and behavior while participating in a sport. Examples are fairness, respect for one's opponent, and graciousness in winning or losing. Failure to do so may result in penalties.

- I. Drivers are at all times responsible for the conduct of their parents/legal guardians.
- II. Incidents of verbal or physical abuse are unacceptable and will be dealt with by the Race Director and/or Board.
- III. Penalties may include disqualification or suspension.

**2.3 Prohibited Substances:** All participants entering the pits/restricted areas shall be sober and not under the influence of any substance that may impair their ability to participate in a safe and orderly manner.

- I. It is the responsibility of the participant to withdraw from competition if they are taking medication that may display side effects that would impair their ability to safely compete.
- II. If, in the judgment of the officials in charge, an individual is under the influence of alcohol, marijuana, any other substance or is in any way impaired during the period of the event, they may be ejected from the restricted area and/or event site immediately. The Board will also review this situation.

**2.4 Restricted Area:** All individuals entering the restricted areas of a WRKC event must sign and execute all insurance-related documents as prescribed for the event. Failure to comply will subject the individual to disqualification and/or suspension of membership status. Restricted area being comprised of Track and Grid Area.

### 3. Competition Procedural Rules

#### 3.1 Event Registration

- I. Drivers must register. Failure to register before entering the track will result in a penalty of a last place starting position for the first 2 heats, or forfeit their qualifying position. A driver may arrange to have someone else register for them if they still comply to the next point below.
- II. Drivers must sign the insurance waiver form before they will be allowed into the grid area for practice. Failure to sign the insurance waiver form will result in a penalty of a last place starting position for the first 2 heats, or forfeit their qualifying position
- III. Registration will be open 1 hour before practice start time and will be open for 1.5 hours, track conditions permitting. Late registrations will not be accepted
- IV. Driver's meeting will be before or after practice.
- V. The race order will be posted on the bulletin board.
- VI. The first heat race or first qualifying session begins 5 minutes after the driver's meeting when the drivers' meeting is after practice.
- VII. The entry fee is set by the Board and may be adjusted as required throughout the season. Non-members must pay a premium in addition to the entry fee.
- VIII. Senior drivers may enter more than one eligible class. Full entry fees must be paid for all classes entered.

### 4. General Racing Rules

**4.1 Standard Karting Penalties:** A standard penalty guideline titled *Waterloo Regional Kart Club – Standard Karting Penalties* has been compiled to guide race officials in determining penalties for standard cases. The race director has the authority to implement the guidelines as required and may choose to differ from the guidelines when necessary.

**4.2 Course Markings:** Course markings such as curbs, pylons or other markings so designated by the Race Director must always be observed by all drivers. If, in the opinion of the Race Director, a participant is purposely ignoring course markings, the participant will be subject to a penalty or disqualification from the heat.

**4.3 Sportsmanlike Driving:** The spirit and intent of sportsmanlike race competition is to proceed onto the track without touching or endangering the vehicles of fellow participants. If, in the judgment of the presiding officials, a participant is bumping, crowding, chopping, blocking or pushing other participants or makes contact with another competitor, that participant may be penalized in a manner deemed appropriate for the infraction.

**NOTE:** Any kart responsible for an accident may be penalized or disqualified from that heat race and any remaining heat races at the discretion of the Race Director.

**4.4 Disqualification:** Should you receive an open black flag. Failure to comply may result in immediate disqualification from that race/session and any remaining races/sessions.

**4.5 Direction of Travel:** It is mandatory that all competitors strictly observe the designated direction of travel around the track. Failure to do so, by driving or pushing a kart opposite to the designated direction of travel, unless specifically directed by a race official, will result in disqualification from the heat.

**4.6 Pre-Race Inspection:** Pre-tech inspection is self-declaration and a random class(es) may be called on any given Race Event for inspection. Pre-Tech must be completed before practice begins. See [Section 45](#) for detail explanation. Failure to pre-tech before practice will result in the driver beginning the first 2 heat races or pre-final from the back of the grid. The President, Pit Steward or Official will inform the Driver(s) involved in this rules violation.

**4.7 Post-Race Inspection:** The Race Director or Tech Committee (inspector) may require any competitor to submit to a technical and/or safety inspection. See Section 44 for detailed explanation.

**4.8 Practice:** Extreme caution must be exercised during practice sessions due to the mixed experience of many drivers.

- I. Controlled practice sessions may start at the discretion of the Race Director or Start/Finish Flagman
- II. Junior karts must practice in the class entered, unless special arrangements have been made with the Race Director.
- III. Any unauthorized kart on the racing circuit may be disqualified from the next heat race or session. Only the Race Director may grant a two-lap test session.
- IV. All karts must practice with legal engine parts, for example appropriate restrictor plate for the class. Karts in violation will be placed at the back of the grid for the first 2 heat race or pre-final.

**4.9 Wet Race Procedure:** Racing conditions are assumed to be dry, requiring dry tires. In the instance of rain, the Race Director may consider the conditions to be wet, resulting in a wet race. If the Race Director declares a wet race, all karts will be allowed 15 (fifteen) minutes to change to wet tires. Drivers may choose between wet or dry tires based on the track conditions, with no concessions being made to an incorrect or non-ideal tire selection. The Race Director has the option to mandate wet tires for specific classes based on track conditions, in which case dry tires will not be permitted.

**4.10 Drivers Meeting:** A driver's meeting will be held in the grid area after practice and before the first heat. The Race Director may establish special conditions and/or regulations at that time. All drivers must attend, or they will be placed at the back of the field for the first 2 heats (pre-final on qualifying days) unless the Race Director has granted special permission.

**4.11 Grid:** When you are called for your heat and arrive at the grid you are controlled by the Grid Marshal.

- I. It is your responsibility to check the bulletin board for your starting position and line up accordingly in the pre-grid area.
- II. It is the responsibility of each driver to inform the Grid Marshal if anything is hindering their line up.
- III. In the event a competitor is unable to line-up for their grid position all karts will move up within their row (formation lane).
- IV. In the event of a broken re-coil, the grid will be held until one (1) re-coil is repaired/replaced. The engine must have a re-coil properly installed before proceeding to the race course.
- V. Each class will enter the track immediately after the previous class has finished its session. If a driver is late for the grid line up, the driver must join and start at the back of the field. Due to the time limit regarding the rental of the track, there will be no grace period.

**4.12 Race Start:**

- I. Once your class has started on the pace lap you are controlled by the Start/Finish Flagman.

- II. The Start/Finish Flagman is responsible for ensuring safe and fair starts, and relaying information to the racers through the use of the various flags. No one is to approach the Flagman during a session unless summoned for a consultation.
- III. It is the responsibility of the two front karts to maintain a constant speed during the pace lap. No one may pass the front karts on the pace lap.
- IV. An acceleration zone will designate where drivers may accelerate. The start of the acceleration zone will be defined by soft cones (1 cone on each side of the track) and the end of the acceleration zone will be defined by a second set of cones and/or the Start/Finish line.
- V. The pole sitter may choose at their discretion when to begin accelerating upon entering the acceleration zone and before the end of the acceleration zone. If the off-pole accelerates first prior to the start signal being displayed penalties may be applied.
- VI. The Start/Finish Flagman will assess the formation of the front karts and will display the start signal if the formation is satisfactory. If the start signal is not displayed, a restart will be required. Yellow flags will be displayed by the corner workers and a RESTART board may be displayed. Drivers must return to their starting position.
- VII. Formation lanes (tram lines) are painted on-track, beginning before the beginning of the acceleration zone and ending at the start/finish line. Drivers must keep their kart entirely within the painted margins of their marked lane prior to the Start Signal.
- VIII. Drivers must maintain position in their own lane for the start and are not allowed to pass until the Start Signal is given. A driver significantly leaving their lane prior to the Start Signal being displayed is liable to be penalized by the Officials.
- IX. Anyone attempting to push another kart, or jump-start will be penalized from the race session. All karts should start at the same speed.
- X. If more than two restarts are required, the front two karts may be moved back one row at the discretion of the Officials. If the Officials determine that it was karts further back in the starting lineup that created the need for a re-start those karts deemed responsible may be moved to the back of the field.
- XI. It is the intent of the WRKC to start all karts for the initial Green Flag. WRKC will make every effort to get a participant's kart running prior to the Green Flag. Original grid line-up will be used, always, prior to the green flag.

**4.13 No Tire Scrubbing:** Any kart found weaving during the pace lap will be put to the back of the field.

#### **4.14 Restarts:**

- I. If either kart starting in the front row is made uncompetitive in the opening corners, or if 25% or more of a class is made uncompetitive by a single accident on the first lap, the race may be completely restarted. Whether a race start requires a re-start is at the discretion of the Race officials.
- II. It will be at the discretion of the race officials whether a jumped/fouled start occurred; who was responsible for it and what corrective action will be taken.
- III. In subsequent laps if a race is restarted because of an accident or blocked track
  - a. other than on the first lap, scoring will go back to the **last completed lap** as determined by timing/scoring system in use that day.
  - b. All karts involved in the accident will restart at the back of the field.
  - c. All karts will restart in single file.
  - d. Racing begins when the green flag is displayed by the Start/Finish Flagman.

**NOTE: It is up to each driver to take their proper position for a restart. If a driver fails to show sportsmanship and another driver protests, the offending driver will be disqualified from that heat.**

**4.15 Race Stopped Because of Red Flag:**

- I. Should it be necessary to stop a race due to an accident, the red flag will be shown by the starter at the start/finish line and simultaneously at all Marshal posts around the track.
- II. Karts may not be worked on by the driver or crew when they are stopped during a red flag situation.
- III. Once the track is returned to a yellow flag condition, repairs to a damaged kart may be made *by the driver only*.
- IV. Every reasonable effort will be made to allow racers to restart the race. The Race Director oversees all activities on the track at this time.
- V. The race will be completely restarted in original grid positions when the red flag occurs on the first lap.

**4.16 Accidents:** Karts involved in an accident may be required to stop for inspection by the officials in charge. No pit personnel are permitted on the track while a race is in progress.

**4.17** Any competitor –who is, or appears to be, injured; or who is involved in any incident necessitating a red flag, shall be placed at the back of the field for the restart, if they are judged to be capable of restarting.

**4.18 Scoring a Red Flag Race:** If a race is stopped by a red flag, and not restarted, the race will be scored according to all positions on the previous complete lap, **except** for the karts involved in the red flag occurrence. These karts must be scored at the end of the order.

**NOTE: At the discretion of the Race Director a race session may be considered complete if there are less than two laps remaining.**

**4.19 Lapped Karts:** Participants about to be lapped by faster competitors are responsible for being aware of the approaching faster karts and must yield to the faster karts while maintaining a consistent path. Lapped karts will observe the passing (blue) flag or subject themselves to penalties or disqualification.

**4.20 Stopping on Course:** If for any reason a competitor is forced to stop on or near the course during a practice or heat:

- I. It is the responsibility of the competitor to assist in removal of their kart from the track as quickly as possible to inside of racing line if safety permits.
- II. The kart may not be serviced or repaired within three kart lengths of the racing surface.
- III. If a competitor is forced to stop on the racing surface during a practice or an event, the competitor must raise their arm to signal approaching competitors that they are immobile.
- IV. Any violation may result in disqualification from the heat.
- V. Competitors stopped on the race surface must always wear a helmet.

**4.21 Re-entry to Course:** When a competitor leaves the course other than to a designated pit lane during a practice or event,

- I. they must re-enter the racing surface at a point as far from the racing "line" as possible and may not enter at another point on the course that will provide them any time or distance advantage.
- II. Drivers must abide by the directions of the Corner Marshals or officials in charge.

- III. Drivers who have gone off course must wait until the track is clear and shall not re-enter with on-coming karts approaching.
- IV. Any violation may result in either a position penalty or full disqualification in that race session.

**4.22 Passing:** Caution must be given when overtaking another kart.

- I. It is the responsibility of the overtaking kart to pass in a safe manner.
- II. There must be no contact made on a passing maneuver. Contact may result in a penalty.
- III. All karts must be alert to overtaking traffic and maintain a consistent path on the track.
- IV. Karts entering a corner together have equal rights to the corner.
- V. Any time your rear wheels are broken (passed) by another kart's front wheels, you must give the other driver room to race. If contact is made, you may be penalized or disqualified from the heat.
- VI. Should contact be made when overtaking, it could be judged by the officials that both drivers were not being good sportsmen and both could be penalized or disqualified from the heat.
- VII. Certain portions of the track may be designated as no passing zones by the Race Director.

**4.23 Slowing on Course:** When a kart slows from racing speed on course, the driver must signal to approaching competitors, by raising a hand high enough, to be clearly visible from behind. This requirement includes slowing to enter a pit entrance lane during a heat.

**4.24 Exiting Track:**

- I. Once the checkered flag has ended your heat race, you must continue around the entire track.
- II. Do not enter the grid area immediately after your heat.
- III. **All karts exiting the track must immediately proceed to the scale area or they will be disqualified from the race session.**

**4.25 Weigh Scale:** Once you arrive at the scale you are controlled by the Scale Marshal.

- I. Parents or Crewmembers are not permitted in the scale area during competition (weigh in). An exception is made for Cadet Class. One parent/guardian can help their driver in the Cadet Class maneuver their cart through the scale area. A penalty may be applied.
- II. When approaching the scale, all drivers must stop, exit kart and push their kart onto the scale. Any driver not slowing down when approaching the scales and/or driving onto the grass or gravel around the scale will be subject to disqualification from the heat.
- III. Every competitor who finishes must cross the scales in the condition the kart crossed the finish line after the race and make the stated minimum weight (kart and driver) for their class and equipment.
- IV. No jumping on the kart is permitted while on the scale. Mechanics or parents may not touch the kart or bring anything which may add weight to the kart. Disqualification is the penalty for this situation.
- V. Should your kart weigh in light, you will immediately be given 2 opportunities to roll off the scale, have the scale "zeroed" and roll back onto the scale before being disqualified from that heat.

**4.26 Combining Classes:** The Race Director may combine classes; classifying entrants into groups according to driver experience, lap times, or other factors for purposes of safety or event expediency.

- 4.27 Proper License and Equipment:** A competitor shall be deemed improperly entered and subject to disqualification from the event if improperly licensed or equipped to compete in class(es) on track either in practice or a race situation.
- 4.28 Control of Kart:** Removing both hands from the steering wheel will result in immediate disqualification from the race session.
- 4.29 Damage:** Damage severity will be assessed by the race director and track officials who will determine if the damage presents a safety concern to the driver or other competitor which may result in a meatball flag. Missing or loose bodywork and bumpers (i.e. partially connected rear or side bumper) may receive a meatball flag. Parts that are missing when the kart exits the racing surface must be excluded when the driver and kart are scaled.

## **5. Pit Rules**

**5.1 Violations:** Violations of any of the following pit rules may result in a penalty, at the discretion of the officials

### **5.2 Control of Restricted Areas:**

- I. The restricted area of the track is under complete control of assigned officials.
- II. Race officials may limit the number of persons that can enter this area to a set number per entry.
- III. All persons entering this area, whether connected to an entrant or not, are subject to all regulations regarding deportment and behaviour, and may be ejected from this area by the officials.
- IV. No person may enter the race course without the express permission of a race official
- V. Penalties, as deemed appropriate by race officials, could be assigned for disregarding pit rules

**5.3 Insurance Regulations:** Persons entering the pit and/or restricted areas must comply with all insurance regulations and registration procedures. Failure to do so or entrance by fraud, deceit, or passage into the area except by designated gate(s) will subject the individual to immediate removal from the restricted area and possible suspension of membership privileges.

### **5.4 Fire Safety:**

- I. The use of open flame devices in the pit or grid area is prohibited.
- II. No smoking or vaping is permitted in the grid, scales areas or infield. (see prohibited refueling area outlined on track map)
- III. No fuels or lubricants or other hazardous substances may be disposed of in the restricted/pit area except in containers specifically designated for such purpose. Failure to comply will subject the individual to suspension of membership privileges.
- IV. The club has fire extinguishers situated around the track. (Please refer to the map at the end of this rule book)
- V. All club members are required to have their own ABC type fire extinguisher.

**5.5 No Driving in Pits** All karts must be walked through the restricted/pit and paddock area. Failure to comply will result in a disqualification for the day, which is not droppable.

## 5.6 Grid Area:

- I. Only the number of individuals designated per racing kart by officials in charge may enter the grid area.
- II. Entry to the grid area is strictly under control of the race officials and failure to comply with their directives will subject violators to immediate removal from the restricted/pit area and possible suspension of membership privileges.
- III. Karts may NOT be parked in the grid area between practice and race sessions
- IV. Scrubbing tires is not permitted on the grid area.
- V. When exiting the stands area pedestrians are not to J-walk through the grid, they must proceed to the back of the grid before crossing.

**NOTE: This rule is not only to eliminate congestion on the grid, more importantly it's for the safety of your guests and the spectators. Please ask your guests to view the races from a safe area.**

## 5.7 Use of Unmanned Aerial Vehicle (UAV) or Drone

- I. Refer to the Transport Canada website regarding the use of UAV (Drone) Unmanned Aerial Vehicles. [http://www.tc.gc.ca/eng/civilaviation/standards/general-recaviuav-2265.htm?WT.mc\\_id=1zfjhj#safety](http://www.tc.gc.ca/eng/civilaviation/standards/general-recaviuav-2265.htm?WT.mc_id=1zfjhj#safety)
- II. The use of an unmanned **non-permitted** aerial vehicle (UAV), commonly known as a drone, for any purpose is always prohibited.

**5.8 Refueling:** Karts are to be refueled in the pit area only. The kart must be three karts lengths from the grid pavement. During refueling, engines must be stopped, and the driver must vacate the kart. No refueling on the grid or scales unless specified by an official. [\(see prohibited refueling area outlined on track map\)](#)

**5.9** It is the responsibility of each driver and crew to keep each pit area clean of paper, pop cans, tires, oil etc. Used tires, oil and karting components must be removed from the property at the end of each race day. Try to leave your pit cleaner than when you arrived.

**5.10 Kart stands** and rolling stands must remain in the designated area away from the grid and scale areas. [\(see designated area outlined on track map\)](#)

**5.11 No motorized vehicles** are allowed in the grid or scale areas, or past the concession stand, once practice has begun.

**5.12 Removal of the scoring sheets** from the official notice board will result in a full DQ for the day.

**5.13 Skateboards, Bicycles, Scooters,** etc. (power or manual) are specifically prohibited in the Pit Area during any WRKC event.

**5.14 Penalties** applied for violations in this section are not subject to Protest or Appeal.

## 6. Flag Rules

**6.1 Green flag** indicates track is clear for racing.

**6.2 Yellow Flag** indicates a need for caution on the course, reduce speed and no passing is permitted.



- I. Specific instructions for the event may be provided at the driver's meeting.
- II. When the Start/Finish Flagman displays the yellow flag, the entire circuit is under caution. Karts are to maintain a single file at a close interval to the kart directly ahead.
- III. When a corner marshal displays a yellow flag, only that section of the track is under caution. Drivers should slow down and passing is not allowed through that section.
- IV. Passing during a yellow flag will result in a penalty.

**NOTE: From time to time during practice sessions, there may be water on the track, so the yellow flag will be shown. Drive slowly and DO NOT PASS through that section of the track.**

**6.3 Red flag** indicates that all competitors must either stop immediately, or at a point designated by officials on the course.

- I. Raise your arm,
- II. slow down,
- III. move to the side of the racetrack and
- IV. stop safely as soon as possible.
- V. The heat will be red flagged if any kart flips upside down or if any Flag Marshall feels a serious or potentially serious injury has occurred.

**6.4 Blue flag** indicates you are being lapped and you must yield to the faster karts while maintaining a consistent path.

**6.5 Open Black Flag** indicates the penalty is effective immediately, but you have two laps to come off the track safely. Failure to comply will result in immediate exclusion from the event and further discipline may be applied.

**6.6 Rolled-Up Black Flag**, when pointed at a competitor, is a warning that they are in danger of being black-flagged for an on-course violation such as blocking, rough driving, etc. and that a penalty may be imposed.

**6.7 Black with Orange Circle (Meatball)** indicates you must proceed immediately to the scale area. The meatball flag may be given to any entrant during a race for a mechanical defect of which the driver may or may not aware. This could be an engine or mechanical violation (i.e. defective brakes, leaking fuel, leaking oil, flat tire, defective steering, etc.). For points purposes this is not considered a disqualification. The entrant receives points for the finishing position he or she attains. Failure to exit the racing surface may result in an open black flag

**6.8 White flag** indicates there is one (1) lap to go in the event.

**6.9 Checkered flag** indicates the event is completed and you are to proceed to the scale area.

**6.10 Checkered flag with Black flag** indicates completion of event under Race Official's protest. This may result in immediate disqualifications and/or adjustment of race finish based upon late-race rules violations and/or to avoid confusion among participants during the running of the event.

**6.11 Restart board:** In the event of a restart, officials will direct drivers to proceed with caution to the start/finish line where a restart board will be used to set the restart order.

## 7. Safety Equipment

### 7.1 Helmet: Revised as per ASN 2019 regulations.

- I. A full coverage (full face) helmet including but not limited to one of the following standards is required: (There is an identification sticker inside the helmet to identify the standard in which that the helmet was tested.)
  - a. SNELL Foundation Standards: including, K2010, M2010, SA2010, SAH2010, K2015, M2015, SA2015, SAH2015.
    - i. All helmets with a 2010 SNELL Foundation Standards sticker will not be valid after December 31, 2023
  - b. Snell FIA Standards: including CMS2016, CMR2016 (Children's Helmet)
  - c. SFI Foundation Inc. Standards: including SFI 24.1 (Youth Helmet), SFI 41.2A
  - d. FIA Standards: including FIA 8860-2010, 8859-2015, 8860-2018
- II. Helmets must fit according to the manufacturer's specifications.
- III. Helmets must be worn and properly fastened during all track sessions.
- IV. Damaged helmets may be refused at any time.
- V. The helmet visor must be in the down (closed) position any time a kart is in motion.

### 7.2 Helmet Cushion: Collar-type, unaltered helmet cushion designed for motor sports use is always highly recommended while a driver is in the kart

### 7.3 Rib Protector: A rib protector designed for motor sports must always be worn while a driver is in the kart. The usage of **sternum protectors** is highly recommended for Cadet and Novice drivers.

### 7.4 Driver Apparel: Drivers are required to wear full-length leathers, racing suits or similar apparel approved by the Technical Committee. No track pants or ripped clothing will be tolerated. Shoes, long socks, and full-fingered gloves must be worn during all driving activities. No bare skin can be showing.

### 7.5 Balaclava: If hair extends appreciably beneath helmet level it is mandatory that the participant wear a "balaclava" or head-sock to prevent hair from extending outside helmet. Also, no items such as bandannas, sweater hoods, loose belts, etc., will be permitted.

### 7.6 Footwear must be secured to the foot in such a way that it will not come off in the event of a crash. Shoelaces must be tied tightly and tucked in or taped so that they cannot bounce around. High top shoes are recommended. Footwear is subject to tech committee approval.

### 7.7 Safety Tech: All driver personal safety equipment is subject to pre-tech inspection. See instructions for exact procedure in Section 45

## 8. Protests

### 8.1 The Technical Committee may disallow any piece of equipment once brought to their attention by a fellow competitor. Any suspect piece of equipment must be approved by the Technical Committee and the board **30 days prior to use**. This includes clutches and headers etc.

### 8.2 Only drivers in the same class may protest one another. For example, Senior drivers cannot protest Masters drivers.

**8.3** Track Marshals and Flagmen can and will be asked for an interpretation of racing action in the event of a protest.

**8.4** All protests must be filed in writing with any of the following: Race Director, Pit Steward, or Chief Scorer. The protest will be held in the scoring tower and any appropriate officials will be notified immediately. The protest must be filed before the next round of heats. Any Protest after the Third Heat/Final must be submitted within 30 minutes of posting of the results. The Protest must be accompanied by a Protest fee, which will be returned if the protest is upheld.

The protest fees are:

- |                                       |          |
|---------------------------------------|----------|
| 1) Rule violation (all non-technical) | \$100.00 |
| 2) Engine violation (technical)       | \$200.00 |

- Protests for #1 above will be handled before the next round of heats.
- Protests for #2 above will be conducted by the end of the day, time permitting. The engine will be painted, and serial number recorded.

**8.5** Safety and/or technically protested karts or engines will be marked with paint, removed to an impound area and only allowed to be serviced under the supervision of the Technical Director (inspector).

**8.6** The protester and any witness must be available at the end of that round of heats for questioning by the Race Director and/or Technical Committee. Video will not be used in a protest

**8.7** Technical Protests:

- I. Only the owner of the engine or delegate (not both) and the Technical Committee will be allowed in the Tech area.
- II. If a technically protested engine is found to be illegal, the protester will receive the \$200.00 protest fee back. If a technically protested engine is found to be legal, the owner of the engine will receive \$150.00, and the club will receive \$50.00.
- III. Any engine found to be illegal will have its serial number recorded, will be withdrawn from competition, and must be proven legal to the Technical Committee before being allowed in a club event.
- IV. Any engine or parts deemed to be illegal maybe confiscated or permanently marked (i.e. etched and/or retained).
- V. The driver will be disqualified and will lose all seasonal points accumulated that day. That race event cannot be dropped for the purposes of determining championship points. The Race Director, Pit Steward, and/or Technical Committee will review each disqualification.

**8.8 Refusal:**

- I. Refusal to have the engine inspected will result in the engine being considered illegal.
- II. The same penalties as those for an illegal engine will be applied.
- III. Two refusals to tear down by the same competitor in the same season will result in a 12-month suspension.

**8.9 New Kart Racers:** Before you race any used equipment, it is recommended that your engine(s) be looked at by a member of the Technical Committee. It is your responsibility to make sure your equipment is legal.

## **Policy and Procedures for Protests and Appeals**

### **(Post Race Technical Inspection)**

#### **LEVEL 1- MUST BE SUBMITTED PRIOR TO THE END OF RACEDAY**

Post race inspections – any issues arising during post race inspections will be brought to the attention of the Head Technical Delegate. If a competitor is found illegal by the Head Technical Delegate, the competitor will be issued a Notice of Infraction (verbal or written). The competitor has the option to submit a written protest form and applicable fees as outlined in the WRKC rulebook. This will escalate the dispute to level 2.

#### **LEVEL 2- MUST BE SUBMITTED PRIOR TO THE END OF RACEDAY\*\***

Paid protest - and issues arising during a post- race inspection that cannot be resolved between the technical inspectors or competitors will be brought to the attention of the Executive. The Executive will review the situation, inspect parts or components in question, and discuss with all parties involved to resolve the conflict. Once resolved, post race tech is official. In the rare occasion that a dispute cannot be resolved, the issue will be escalated to level 3.

\*\*Level 2 protests must be submitted at the track before tech is declared official and concluded for the day. No extensions will be considered for competitors who attempt to file protest after the race-day is concluded and results are declared official.

Level 2 protests will be dealt with immediately at the track, with the only exception allowed if the tech volunteers are unable to stay for a resolution

#### **LEVEL 3**

WRKC officials or a competitor's written protest will escalate a Tech dispute to level 3. A dispute that reaches a level 3 will be resolved at the next regularly scheduled WRKC board meeting. The situation, applicable WRKC rules, findings, parts in question, and any other information deemed relevant by the WRKC board of directors will be reviewed at that time.

The WRKC board of Directors will vote on the issue at that meeting, and the results will be final and binding, the issue will be considered completed at that time.

## **9. Race Officials**

- 9.1 **Race Director:** The official having complete charge of karts while on the track. The Race Director may direct the Start/Finish Flagman to warn competitors, using the pointed rolled black flag, of potential disqualification or may direct disqualification of a competitor from a heat by presenting the black flag. The Race Director is in direct charge of the Corner Marshals.

**NOTE: In the event that a separate Race Director is not present at the track, the Start/Finish Flagman will assume the duties of the Race Director.**

- 9.2 **Grid Marshall:** The official in charge of the pit and grid areas, including all competitors and other officials in these areas. The Grid Marshall shall direct gridding of events and maintain orderly conduct in these areas. A member of the Board shall also handle all properly submitted written protests.

- 9.3 **Start/Finish Flagman:** The official in charge of making flag signals to drivers via contact with the Race Director. The Start/Finish Flagman and Race Director may conduct the pre-event driver's meeting to brief competitors regarding use of flags, special conditions, etc.

- 9.4 **Chief Scorer:** The official in charge of scoring. All official finishes shall be posted by the Chief Scorer or designate.

**9.5 Corner Marshals:** The officials posted around the course assist the Race Director in safe and orderly conduct of the event. Corner Marshals will be located in designated areas around the track in each corner. Corner Marshals should make sure they are equipped with a radio and red and yellow flags.

**NOTE: Individuals under the age of 13 cannot Corner Marshal on their own. An adult must be present.**

**9.6 Technical Inspector:** The official in charge of pre-race and/or post-race technical inspections, both specification compliance and general safety. The Technical Inspector and assistants will verify compliance with stated specifications to certify event finishes as official.

**9.7 Pit Steward, Safety Director: SEE APPENDIX**

## **Class Structures and Point System**

### **10. Class Structure**

**10.1** Drivers at the WRKC are split into different classes according to age, experience, and weight. In some classes the output of the engines are purposely reduced to slow down the class. The intent is to provide a logical progression through the various classes for Junior drivers. As a result, once a Junior driver progresses to a "higher" class or licence, at any WRKC karting event, they are no longer eligible to compete in any "lower" classes or licences.

Class	Age	License	Weight	Restrictor Size	Engine Honda	Exhaust
Cadet	7 – 9	F Class II	225 lb.	.350"	160/K1/T1	Muffler
Novice	7 - 11	E Class II	240 lb.	.450"	160/K1/T1	Muffler
Jr. Light	8 - 13	D Class II	265 lb.	.500"	160/K1/T1	Header
Jr. Heavy	12 - 15	C Class II	280 lb.	n/a	160/K1/T1	Header
Sr. Light	15+	B-Class II	330 lb.	n/a	GX200	Header
Sr. Medium	15+	B-Class II	350 lb.	n/a	GX200	Header
Sr. Heavy	15+	B-Class II	365 lb.	n/a	GX200	Header
Masters	35+	B Class II	385 lb.	n/a	GX200	Header
<b>Briggs engines may compete in the following classes</b>						
Class	Age	License	Weight	Slide	Briggs	Exhaust
Jr. Light	8-13	D Class II	275 lb.	red	206	Header
Jr. Heavy	12 - 15	C Class II	305 lb.	yellow	206	Header
Sr. Light	15+	B-Class II	320 lb.	black	206	Header
Sr. Medium	15+	B-Class II	340 lb.	black	206	Header
Sr. Heavy	15+	B-Class II	355 lb.	black	206	Header
Masters	35+	B Class II	375 lb.	black	206	Header

Based on the number of regular memberships each year for the Senior classes, the Executive may decide to divide the Senior Medium class into Senior Light and Senior Heavy classes.

10.2 The splitting of classes on race day will be decided after registration is completed.

- I. When registrations warrant more split classes than time allows The Race Director and Chief Scorer will decide which classes will be split and which classes will not be split.
- II. Novice and Cadet classes will be split at the discretion of the Race Director and Chief Scorer.
- III. The Board will use its discretion in placing an inexperienced driver in their appropriate class.

10.3 There must be a minimum of seven karts per class (except for Cadet). Trophies and/or awards may be adjusted to reflect class size.

10.4 **Masters Exception** – When there is only one Senior class, a driver may race in the Masters class they are either:

- I. 30 years of age or older with less than 2 years racing experience or
- II. 30 years of age or older and weighs over 210 pounds without equipment

## **11. Heat Style Events - Starting Line up**

11.1 Random selection by the scoring system, determines the starting position in heat #1. The reverse starting order is used for heat #2.

11.2 For split classes,

- I. The outside column of karts from the heat #1 grid in the "A" division will be placed on the inside column of the "B" division for heat #2.
- II. The inside column of karts from the heat #1 grid in the "B" division will be placed on the outside column of the "A" division for heat #2.
- III. The heat lineups will be inverted to determine the starting grids for heat #2.

11.3 Rookie status

- I. The initial placement for rookie (new) drivers is at the rear of their class's two heat races for a period of 5 WRKC race days in which they participate. This is for the safety of all competitors. A rookie may receive their qualifying position for pre-final and final races.
- II. Drivers may request placement at the back of the grid at any time.
- III. Drivers from other clubs must indicate whether or not they are a rookie.

11.4 Third Heat (Non-split Classes):

- I. The points accumulated in the first two heats will determine the starting order for the third heat; the driver with the most points will start at the front.
- II. In the case of a tie after the second heat, the driver with the better finish in the second heat will start ahead.

11.5 Third Heat (Split Classes):

- I. The third heat line-up will be determined by the accumulation of total points in the first two heats.
- II. The top half of the drivers will race in "A" for the third heat, and the bottom half in "B".
- III. In the case of a tie after the second heat, the driver with the better finish in the second heat will start ahead.
- IV. Should a tie still exist, the driver with the better finish in the first heat will start ahead.

## **12. Endurance Style Events:**

12.1 Endurance races will consist of two equal heats of a set duration.

12.2 The race day winner will be determined by accumulating the points for both heats.

12.3 Based on season championship points, the entire class is inverted except rookie drivers in the 1st heat.

12.4 Top ten finishers in the 1st heat will be inverted for the 2nd heat.

12.5 Large classes will be split into "A" and "B" according to seasonal points (without drops). Both classes will begin the race separated and will run together. Guests from other clubs will start the race from the back of the "A" grid. The "A" grid will start in front of the "B" grid.

## 13. Qualifying Style Events:

13.1 The race day will consist of a qualifying session, pre-final race and a final race for each class.

13.2 Grid positions for qualifying sessions will be determined by kart number.

13.3 Start positions for the pre-final will be determined by the times recorded during official qualifying. Fastest times at the front of the grid. Rookie drivers will start at the back of the grid.

13.4 Start positions for the final will be based on finishing positions of the pre-final.

13.5 When qualifying, drafting is not allowed. Karts will be spaced at the start of qualifying to allow for running room. Should a faster kart come upon a slower kart during qualifying, every effort should be made to execute a pass as quickly as is safe. Drivers must pull out from behind the leading kart when running down any significant straight sections of the track so as neither kart will benefit from the draft. Failure to do so is grounds for a penalty to the offending driver.

13.6 Season points will be awarded based on the results of the final race.

## 14. Points

14.1 **Heat Points:** The following table will be used when awarding heat points:

Position	Points		Position	Points		Position	Points
1 <sup>st</sup>	200		9 <sup>th</sup>	90		17 <sup>th</sup>	45
2 <sup>nd</sup>	175		10 <sup>th</sup>	80		18 <sup>th</sup>	40
3 <sup>rd</sup>	155		11 <sup>th</sup>	75		19 <sup>th</sup>	35
4 <sup>th</sup>	140		12 <sup>th</sup>	70		20 <sup>th</sup>	30
5 <sup>th</sup>	130		13 <sup>th</sup>	65		21 <sup>st</sup>	25
6 <sup>th</sup>	120		14 <sup>th</sup>	60		22 <sup>nd</sup>	20
7 <sup>th</sup>	110		15 <sup>th</sup>	55		23 <sup>rd</sup>	15
8 <sup>th</sup>	100		16 <sup>th</sup>	50		24 <sup>th</sup>	etc.

14.2 Any kart that competes in the heat will receive points for that heat.

14.3 The sum of points from all three (3) heats determines event-finishing position. Transponders, if used, will be for scoring purposes only. Race procedures will continue without changes. On qualifying days – Only the final counts towards year end points.

14.4 If a tie occurs in the daily points totals, the driver with the highest finishing position in the third heat will be awarded the position for the daily awards. Both drivers will receive the same number of championship points.

14.5 **Seasonal points** are accumulated after each race event. Only WRKC members will be eligible to



accumulate championship points. You will receive championship points as per your finishing position according to the following table:

Position	Points		Position	Points		Position	Points
1 <sup>st</sup>	40		9 <sup>th</sup>	29		17 <sup>th</sup>	21
2 <sup>nd</sup>	38		10 <sup>th</sup>	28		18 <sup>th</sup>	20
3 <sup>rd</sup>	36		11 <sup>th</sup>	27		19 <sup>th</sup>	19
4 <sup>th</sup>	34		12 <sup>th</sup>	26		20 <sup>th</sup>	18
5 <sup>th</sup>	33		13 <sup>th</sup>	25		21 <sup>st</sup>	17
6 <sup>th</sup>	32		14 <sup>th</sup>	24		22 <sup>nd</sup>	16
7 <sup>th</sup>	31		15 <sup>th</sup>	23		23 <sup>rd</sup>	15
8 <sup>th</sup>	30		16 <sup>th</sup>	22		24 <sup>th</sup>	etc.

**14.6 Volunteering:** It is the responsibility of the drivers and/or family members (for drivers under the age of 12) to volunteer for 15 minutes assisting in the weekly tasks required to operate a race day. One class will be selected weekly for mandatory participation (i.e. Track clean-up). Failure to comply may result in a 10-point penalty.

A comprehensive list of necessary weekly tasks is available on the club website for reference.

**14.7 Points Inquiries:** Must be made within 7 days of the championship points being posted on the Web site.

**14.8 Split Classes:** The winner of the "B" class will receive 1 less club championship point than the last place finisher in "A" class.

**14.9** Should a race event be shortened for any reason with a tie in points, each driver will earn an equal number of seasonal points. Points will be awarded according to your finishing position. For example, if there is a tie for first, each of the drivers will get 40 points, and the next driver will get third place points (36).

**14.10A** race day will consist of no less than two heats for all classes or on a qualifying day the race event can be considered complete at the conclusion of the Pre-Final.

**14.11** The number of races to count toward the seasonal points will be determined before the season by the Board. The maximum number of races to be dropped is two (2), this includes missed race days.

**14.12** In the event of a tie in year end points, the driver with the greatest number of event wins (not heat wins) will be awarded the higher position. If there is still a tie, event seconds will be counted, then thirds, etc.

**14.13** No relief drivers are allowed to accumulate seasonal points for another member.

14.14 Drivers may only compete in the class in which they are registered.

14.15 Should a driver change classes during the season, they will not carry any points into the new class.

## General Kart Regulations

### 15. Frame and Overall Dimensions

15.1 Besides compliance with the spirit and intent of the rules, overall quality of workmanship will be considered in the acceptance of a kart presented for competition. Frames shall be free from cracks or projections and deemed safe by the Technical Committee.

**NOTE: Tubular steel frame technology is the only method currently considered to be within the spirit and intent of the rules.**

15.2 When normally positioned in the kart for competition, the driver must be entirely within the specified width and length dimensions of the kart.

15.3 **Frame:** Of proven safe design, mainframe members shall be constructed of nominally round tubing, allowing for normal distortion and elongation near bend radii. Minimum diameter for mainframe members is 1.0" (25.4mm) and maximum diameter is 1.4" (35.6mm). Minimum tubing wall thickness at 1.125" (28.6mm) OD is .078" (1.98mm). Minimum wall thickness at 1.125" (28.6mm) OD or greater is .060" (1.53mm). Frame material shall be, at minimum, cold-rolled, electric welded (ERW) steel tubing or other material of at least equal strength.

15.4 **Wheelbase:** Maximum 1100mm, minimum 1010mm, as measured longitudinally between the true axle centres. Except Cadet, Novice and Jr. Light class minimum wheelbase is 940mm.

15.5 **Minimum Tread Width:** Outside edge of rear tires may be 1" (2.5cm) narrower than outside plane of each sidepod, or 28.0" as measured from outside of one tire to inside of opposite tire laterally.

15.6 **Maximum Width:** 50" (127cm) Overall. Nothing may protrude beyond the 50" (127cm) except for a soft air cleaner. A violation will result in disqualification from that race session.

15.7 **Maximum Length:** 72" (182cm) Overall without front or rear bodywork.

15.8 **Height:** Maximum of 26.0" (66cm) measured from ground to uppermost part of kart, without driver.

15.9 **Floor pan and seat back** shall be of a design that would prevent any portion of driver's body to pass between these components to the track surface. The floor pan must be made of rigid material that stretches only from the central strut of the frame to the front frame cross member of the kart, remaining within all confines of the chassis

15.10 **Minimum Kart Weight:** Dry weight fully equipped including single engine is 120 lb.

- I. All ballast weights added to meet minimum kart/driver weight requirements must be bolted securely to the main kart frame or seat.
- II. Bolts of a minimum 5/16" (8mm) diameter must be utilized to secure weights, and must be safety-wired, cotter-keyed, double nutted or self-locking nut in new condition.
- III. Mounting of weights to nerf bars, bumpers or bodywork is prohibited.
- IV. Lead shot in the frame is not recommended.

- V. No weight will be on the driver's person or taped to the kart. A violation of this rule will result in immediate disqualification from that heat.
- VI. Use minimum 1" (25.4mm) washer inside fiberglass seats. Use two 5/16" (8mm) bolts for lead attachments exceeding 10lbs.

15.11 Use of suspension components of any type, including springs, shocks, etc., is prohibited.

## 16. Wheels and Tires

16.1 **Tires:** the only tires legal for competition in WRKC events are:

- I. Dry: Vega SL NordAm (Blue) with ONT stamping  
The specified dry tire size for all classes will be:  
Front Tires: 10 x 4.60 – 5  
Rear Tires: 11 x 6.50 – 5  
10 x 4.60 – 5 (Optional - Cadet and Novice only)
- II. Wet: Vega W5 (White)  
The specified wet tire size for all classes will be:  
Front Tires: 10 x 4.20 – 5  
Rear Tires: 11 x 6.00 – 5  
10 x 4.20 – 5 (Optional - Cadet and Novice only)
- III. No tire softeners or chemicals are permitted for treating the tires.

16.2 **Wheels:** Material optional but must be a proven design capable of maintaining tire bead seal in competition conditions. Wheels must be void of any structural defects. Wheel widths –

- I. front maximum 135 mm
- II. rear maximum 185 mm.
- III. rear minimum 170 mm
- IV. rear maximum 135 mm (with 4.60/4.20 tires)

16.3 **Clip-on Wheel Balancing Weights:** Are not permitted. Additional security is suggested when utilizing stick-on weights.

16.4 **Specified front tires** must run on the front of the go-kart and specified rear tires must run on the rear of the go-kart

## 17. Axles and Hubs

17.1 **Wheel Hubs:** Wheel hubs must be constructed of metallic materials. Both rear hubs must be keyed properly to the rear axle.

17.2 **Wheel Bearings:** Only ground ball or roller-type bearings may be used. Split race bearings are not acceptable. Wheel bearings must be adjusted so there is no excessive wheel play.

17.3 **Front Axle:** Spindle nuts must be c-clipped, snap-ringed, wired or cotter-keyed. Front axle spindles must be machined to accept c-clips or snap rings or have a hole drilled for wire or cotter-pins or utilize self-locking nuts in original condition.

**17.4 Rear Axle Assembly:** Axles may be solid or tubular one-piece design. Axles must be constructed from magnetic iron or steel based materials (i.e. Aluminium, stainless steel, titanium and carbon fiber axles are not allowed). Minimum outer diameter is 25mm. Minimum cross-sectional tube thickness is:

- I. 1.9 mm for a 50 mm axle
- II. 2.4 mm for a 40 mm axle
- III. 4.9mm for a 30 mm axle.
- IV. Solid for axles less than 30mm

**17.5** No portion of the front axle assembly (spindle, studs, etc.) nor any portion of the rear axle assembly (axle, axle nut, etc.) may protrude outside a vertical line defined by placing a straight edge against the tire/wheel assembly on the centreline of the axle(s).

## **18. Steering**

**18.1** Steering must be direct, mechanical type. All steering assembly bolts and nuts, including spindle bolts, must be cotter-keyed and/or safety wired, or utilize self-locking nuts in original condition. All bolts will be minimum 14,000 lb. tensile strength and be minimum 6mm. diameter, and at least Grade 5 rating. All rod ends must have universal type swivel joints.

**NOTE: Any fastener (nut or bolt, etc.) of a component that would enable movement or adjustment of spindle(s), such as for castor, camber, etc., must be drilled for and utilize either a cotter pin or safety wire, c-clip or snap ring.**

### **18.2 Steering Shaft Specifications:**

- I. Solid: Minimum .625" diameter cold-rolled steel, one-piece design. Wheel attachment must be secured with a quality nut or cap screw in an axial position with the centerline of the shaft. Welding the steering wheel to the hub or the hub to upper shaft is not allowed. No shaft extensions are allowed.
- II. Hollow: Minimum .700" diameter steel tubing, one-piece design with minimum .070" wall thickness with minimum 5/16" diameter fastener at end. Steering hub (one piece, not welded) will be secured through the axis with a min. 1/4" dia. (6mm) bolt (Grade 5 or better) parallel to the axis point.

**18.3 Steering Wheels:** Steering wheels may be essentially circular closed loop, minimum 10" (25.4cm) diameter and minimum three (3) spoke design.

## **19. Brakes**

**19.1** Karts must have brakes working in such a manner to, at minimum, brake both rear wheels equally and adequately. All brake components that are bolted must utilize a properly installed cotter pin, safety wire, c-clip, snap ring, or utilize self-locking nuts in original condition. Brake pedal must be secured to the kart.

**19.2** Master cylinder bolts and master cylinder roll pins must be cotter-pinned, or safety wired or utilize self-locking nuts in original condition.

**19.3** Brake must be foot pedal operated and brake both rear wheels equally and adequately. No scrub-

type brakes are permitted.

## 20. Driveline Components

20.1 **Engine mounted, centrifugal clutches** that will allow the engine to idle without moving the kart are mandatory in all classes. The clutch must be a centrifugal type dry clutch with a fixed gear ratio. No axle clutches may be used in any WRKC club point's race. No homemade clutches are allowed. Clutches used on Briggs and Stratton engines must conform to the rules as written in the Briggs 206 Canada Rules Set.

20.2 **Clutch Guard:** A metallic clutch guard must be fitted to the engine in such a way that the guard completely covers the clutch assembly when viewed from above.

20.3 **Chain Guard:** A chain guard constructed from either metallic or shatterproof plastic material shall completely cover the chain (when viewed from above) from the rear-most edge of the clutch guard, around the top of the rear sprocket to at least the horizontal centreline of the rear axle.

20.4 **Exposed Sprockets:** Exposed sprockets are prohibited.

20.5 **No transmission, gearbox** or other device which permits a change of gear/sprocket ratios while the vehicle is in motion is allowed. Torque converters are prohibited.

20.6 **Chain oilers** are prohibited.

20.7 **Belt drives** are prohibited.

## 21. Fuel System

21.1 Fuel tanks must be securely mounted to primary structure/frame of the kart. Fuel tank must be located within mainframe rails beneath the steering shaft.

21.2 Maximum of one (1) fuel tank permitted with maximum nine (9) litre capacity. Fuel line will be of adequate length to connect between fuel tank and carburetor. Excessive fuel line will not be allowed.

21.3 Fuel tanks must be constructed of puncture-resistant material and have a secure, leak-proof fill closure.

21.4 No pressurized fuel systems allowed except for approved unaltered fuel pumps. Any vacuum operated fuel pump maybe used. There shall be a maximum of two (2) openings on the pulse side of the fuel pump. One shall be used for the connection to the engine and the other as a pulse chamber vent. The diameter of this orifice must conform to the normal size for that manufacture of pump.

21.5 Fuel lines must be safety-wrapped at all connecting points.

21.6 Cooling cans are not allowed.

21.7 Fuel tank must be removed from the engine.

21.8 The fuel pump mounting apparatus must be fastened to the engine using only 1 or 2 fasteners. The mounting apparatus, or any material other than the bolts, shall have a maximum area of 25 square inches total. The area of any holes in the apparatus is not subtracted from the total. No part of the apparatus may be used for close proximity retention or deflection of air in the internal flywheel shroud area

21.9 Unleaded gasoline is the only fuel allowed. Spec fuel will be 91 Octane.

**NOTE: WRKC reserves the right to take fuel samples for laboratory analysis. Spec. gas is purchased the morning of the race, not the night before. Please ensure you have cleaned out your fuel tank if you are not sure what was in it previously.**

**NOTE: SPEC GAS Station–**

**Esso Station at 1129 on Hwy #5, Dundas, Postal code L9H 5E2**

**NOTE: It is recommended that each team has a designated fuel container specific to the Spec Gas Station to prevent cross-contamination. When filling, it is recommended that the fuel line of the pump is purged into a vehicle or separate waste container before filling the designated fuel container to ensure there is no contamination caused by other grades of fuel. A minimum recommended purge quantity is 2L.**

## **22. Bodywork**

### **22.1 Components – Material and Usage**

- I. All chassis must have CIK-FIA Homologated bodywork.
- II. Required bodywork components are: one steering column fairing, one nose cone, two side pods with the associated mounting brackets, and rear wheel protection.
- III. The combination of CIK-FIA Homologated bodywork (steering column fairing, nosecone, sidepods) of different makes or models is authorized. Both side pods must be used as a match set.
- IV. Side pods must remain attached at their normal attachment points to the kart after the completion of any session/race
- V. Nose cone must be attached to the kart with the appropriate Homologated apparatus. Any form of reinforcement such as clamps, nuts/bolts, tie wraps, tape, wires etc. is not allowed
- VI. No element of the bodywork may be used as a fuel tank or for the attachment of ballast
- VII. Plastic used for the bodywork must not be able to splinter, shall have no sharp angles and shall not be made of plexiglass-type materials.
- VIII. No cutting of bodywork elements is allowed.
- IX. No attachment of bodywork elements is allowed except for decals, side pod protection, and allowed cameras and mounts

### **22.2 Nosecone:**

- I. CIK approved nosecones are mandatory. However, if the nosecone is lost during the race it does not mean disqualification, but the driver and kart must meet minimum weight in the condition that the kart crossed the finish line.

- II. All members of Jr. Light, Jr. Heavy, Sr and Masters classes require CIK-FIA homologated front fairing mounting kit (1/CA/20 01/01/ET), also known as “push-back” or “drop-down” nosecone system. Technical drawings are provided on the WRKC website. Post-race technical inspections will be completed to ensure compliance.
  - a. If one side of the mounting kit is pushed back, the system will comply, and no penalty will be issued
  - b. If two side of the mounting kit are pushed back, the system will be non-compliant and a minimum one (1) position penalty will be issued. No consideration will be made as to how, where or why the nosecone was pushed back.
  - c. Any attempt to alter the push-back positioning before post-race technical inspection will result in exclusion from the session. Multiple infractions may lead to a suspension.
  - d. If the nosecone is not present post-race, this will be interpreted as non-compliant and will result in a minimum one (1) position penalty.
  - e. A nosecone must be capable of being removed without tools. Fasteners or adhesives intended to increase the force required to push-back the nosecone will be considered illegal and may result in a technical disqualification. Zip-ties may be permitted to secure mounting clamps to a bumper bar assuming the clamp remains functional.
  - f. Non-members may participate in two (2) events without the required provisions but will be excluded from the final standings including points and prizes.
  - g. Malicious attempts to cause non-compliance may result in a minimum one (1) position penalty for the offending driver. Additional penalties may be applied.

### **22.3 Steering Fairings:**

- I. The top of the steering fairing must not be located above the horizontal plane through the top of the steering wheel
- II. A gap of at least 50mm between the steering wheel and top edge of the steering fairing is required
- III. It must not protrude beyond the front edge of the nose cone
- IV. It must neither impede the normal functioning of the pedals nor cover any part of the feet in normal driving position
- V. The required width at the widest section must be 250mm minimum to 300mm maximum
- VI. Its lowest part must be solidly attached to the front part of the chassis-frame directly or indirectly. Its top part must be solidly attached to the steering column support with one or several independent bar(s).
- VII. A space for competition numbers must be provided
- VIII. The driver’s seat must be positioned to provide adequate site over the top of the steering fairing.

### **22.4 Side Pods:**

- I. The side pods must under no circumstances be located above the plane through the top of the front and rear tires (with the front wheels in the straight-ahead position)
- II. Side bodywork relative to the outside plane of a rear wheel may be located outside by 25mm maximum and inside by 40mm maximum.
- III. Side pods must have a ground clearance of 25mm minimum and 60mm maximum
- IV. The surface of the side bodywork must be uniform and smooth; it must not comprise of holes or cuttings other than those necessary for their attachment
- V. Gap between front wheels and front of side pod: 150mm maximum
- VI. Gap between rear wheels and rear of side pod: 60mm maximum

- VII. No part of side bodywork may cover any part of the driver seated in his normal driving position. The side bodywork must not overlap the chassis-frame seen from underneath. They must be solidly attached to the side bumpers
- VIII. On the outer rear vertical surface close to the rear wheels there must be a space for competition numbers

#### 22.5 Numbers and Number Panels:

- I. Four (4) numbers are to be displayed on the kart, one at the front centre of the kart as viewed from the front; on both sides in a vertical plane between front and rear wheels; and at the rear of the kart as viewed from behind.
- II. Numbers must be black on a 6"x 6" or larger white or yellow square background and must have a stroke width of ½" minimum and be a minimum of 5" high.

**NOTE: If your number cannot be read, you will not be scored!**

## 23. Bumpers and Nerf Bars

23.1 Front and side (nerf bars) bumpers are compulsory. All bumpers must be made of magnetic steel.

23.2 Due to the non-CIK-FIA class status, bumpers should conform to the appropriate CIK-FIA Homologation for front and side bumpers. Some deviations may be allowed by the Technical Director that do not affect safety based on chassis age.

#### 23.3 Front Bumper:

- I. The minimum outer diameter of the tubing is 15mm (0.590")
- II. All front bumpers must be, at some point in the horizontal section of any of the frontal contact portion of the bumper, present when measured at 15cm to 22cm from the ground as raced.
- III. The front bumper must be mounted vertically above the chassis front member and attached to it in up to four places
- IV. The upper bumper bar cannot extend beyond the lower bumper bar by a reasonable amount
- V. There shall be front and lateral protection. The bumper must not project beyond a line drawn through the outside of the front and rear wheels at hub height, with the front wheels in the straight-ahead position

#### 23.4 Side Bumpers (Nerf Bars):

- I. Side bumper bars must be constructed of minimum 18mm diameter steel tubing, must be secured by 6mm diameter bolts, and must allow for secure mounting of side pods
- II. The overall length of the side bumper shall be a minimum of 400mm, measured from the backside of the side bumper bar closest to the rear tire, in a straight line to where it attaches to the kart at the front.
- III. The rear portion of the side bumper may not protrude laterally beyond the rear tire, unless otherwise noted.

#### 23.5 Rear Bumper:

- I. Full width plastic rear bumper protection is compulsory for all classes. Plastic rear protection must be made of molded plastic without foam filling, and the wall thickness must be constant to provide uniform strength
- II. Adjustable plastic rear protection is allowed



- III. The surfaces of the rear protection must be uniform and smooth. The rear protection must not comprise of holes or cuttings other than those necessary for its attachment and/or present at the homologation.
- IV. Have an overall width not exceeding the rear width of the kart at any time, measured outside the rear wheels or tires, whichever is the greater.
- V. Cover at least 50% of each rear wheel/tire assembly at all times measured at the center-line of the tire.
- VI. Gap between the rear tire and the rear bumper of 100mm maximum
- VII. Ground clearance: 25mm minimum to 60mm maximum at a minimum of 3 locations of 200mm minimum length (extension of rear wheels and center-line of chassis)
- VIII. Minimum height of 200mm at a rear vertical surface, with a minimum height of 100mm immediately above the ground clearance at a minimum of 3 locations of 200mm minimum length (extension of rear wheels and center-line of chassis)
- IX. Rear overhang: 400mm maximum
- X. Chassis attachment: Minimum 2 locations at the main chassis-frame tubes
- XI. The construction of the rear protection must not present any danger in regard to safety

## 24. Seat

24.1 Sprint-style "bucket" seats only, no lay-down seats allowed.

24.2 Seat must be of one-piece or molded construction.

24.3 Seat must securely locate driver laterally and longitudinally.

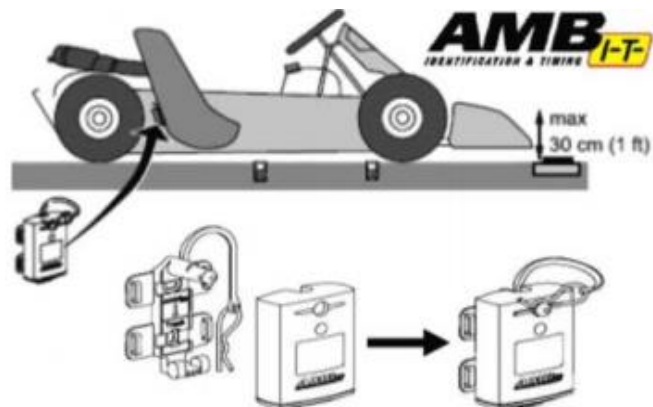
24.4 Seat must bolt securely to the frame and not be adjustable while the kart is in motion.

**NOTE: It is recommended that seat struts be reinforced where the struts touch the seat to prevent possible piercing through the seat on impact. A minimum 1" washer is recommended.**

## 25. Installation of Transponder

The competitor is responsible for securing the scoring transponder to the kart to prevent loss of the transponder. The transponder must be mounted on the centre of the rear of the driver seat. Minor offset from the centre of the seat is permitted

- I. The transponder must be mounted vertically (inscription readable normally) with the centre of the transponder installed 25cm +/- 5 cm from ground level.
- II. The space, in a straight line, between the transponder and the ground must be free, i.e. no lead, chassis tubing, or other element which can block the signal between the transponder and the detecting loop.
- III. Fasten the transponder in the holder using the supplied fixing pin.
- IV. Push the pin all the way through!



- V. Warning: A detached transponder can be very dangerous. Make sure the transponder and holder cannot be detached.

## **26. Use of Cameras on Karts**

- 26.1 Cameras may be used on specified locations only, listed below. A camera is not permitted to be mounted on a helmet or on the driver's body.
  - I. Upper fairing mount position – A second mount behind the existing one allowing for a camera to be positioned to face the driver
  - II. Lower fairing mount position – Below existing lower mounting hole on fairing
  - III. Rear seat mounting position – Must not protrude above, below bottom plane of seat when viewed from the side in a level position
  - IV. Left side pod mounting position
  - V. Front chassis mounting position – Between 'A-Bend' and spindle mount. Mount must be metal with metal bolts and locking nuts or pinned/wired fasteners. Must not drop below lowest portion of frame. Must not interfere with pedals, feet, steering mechanism, spindle, or wheels and tires
- 26.2 Mounts must be from the manufacturer of the camera, be designed specifically for the camera, or be manufactured out of metal, secured by one 1/4" bolt or two 1/8" bolts that are pinned/wired or secured with locking or pinned/wired nuts.
- 26.3 Cameras, camera mounts and mounting locations must be inspected at track prior to use and approved by the Race Director and the Technical Inspector.
- 26.4 Any camera and/or mount can be deemed ineligible at any time at the discretion of the Race Director and/or Technical Inspector. If a camera is deemed ineligible, it must be removed before the kart will be permitted back onto the track

## **27. Miscellaneous**

- 27.1 Throttle must be foot operated and be equipped with a positive acting throttle return spring. Dual springs are recommended.
- 27.2 Seat belts or other driver restraints are prohibited.
- 27.3 Rear view mirrors are not allowed. All devices whether mechanical electronic or other, mounted on the kart driver or elsewhere, that provide the driver with information about the track behind him/her are strictly prohibited. The determination of whether an item violates this rule is solely at the discretion of the race day officials. (This includes but is not limited to cameras mirrors reflective chassis/body work coverings, sensors, Heads up displays, on board electronics)
- 27.4 Electronic devices that allow voice communication between a driver and crewmember or between two (2) or more drivers are not allowed. Any device (electronic physical or otherwise) that allow communication between a driver and crewmember or between two (2) or more drivers are not allowed. The determination of whether an item violates this rule is solely at the discretion of the race day officials. (This includes but is not limited to cameras mirrors reflective chassis/body work coverings, sensors, Heads up displays, pit boards, on-board electronics)
- 27.5 Telemetry: Any transmission of data between a moving kart and an outside entity is forbidden.

# Engine Specifications

## 28. General Engine Specifications

- 28.1 These specifications are for reference to prevent disqualification. Machining to these specifications is not allowed, unless otherwise stated in this manual, and will result in disqualification. In general, removal of any metal from any engine part in any manner is illegal and will result in disqualification. The cylinder head gasket surface and block deck surfaces are the **ONLY** exception to this rule but must still be within states specs after machining – see sections 0 & 0. Any part, hole, shape dimension or measurement not listed in these regulations, whether mentioned specifically or not in this rulebook, is subject to inspection.
- 28.2 ALL engine parts must be standard, unaltered, genuine Honda parts:
- I. available in Canada through Honda Canada. or
  - II. approved by the WRKC executive a minimum of 30 days prior to use and.
  - III. manufactured for the particular engine unless otherwise stated in this manual.
- 28.3 The 2011 or newer Honda GX160 engines and parts thereof are not permitted to be used.
- 28.4 The 2011 or newer Honda GX200 engines and parts thereof are not permitted to be used.
- 28.5 The Technical Committee will decide the legality of any engine part that does not conform to the specifications stated in this manual. All engine parts will be compared to genuine Honda parts purchased through Honda Canada.
- 28.6 Any repair or damage to the engine block or components must be inspected and approved by the technical inspector before the engine can be used for the competition. This approval must be in writing. This approval must be drawn to the attention of the inspector before post-race inspection on that engine begins.

## 29. Cylinder Block

- 29.1 ALL engine parts must be standard, unaltered, genuine Honda parts, manufactured for the particular engine, unless otherwise stated in this manual.
- 29.2 **Bore Sizes:**
- |               |   |
|---------------|---|
| GX160(K1, T1) | 2.677" (68mm) min. – 2.720" (69mm) max. |
| GX200         | 2.677" (68mm) min. – 2.720" (69mm) max. |
- The only standard overbore sizes allowed are: 0.25, 0.50, 0.75mm.
- 29.3 **Fasteners:** Any bolt hole, except ignition, may be rethreaded and/or fitted with a helicoil or thread insert. Any bolt may be replaced with a stud or socket head cap screw.
- 29.4 **Governor Holes:** Holes left by the removal of the governor must be plugged.
- 29.5 **Fuel Impulse Fitting:** Block may be drilled and tapped for one (1) fuel impulse fitting, maximum size being 1/8" pipe thread.
- 29.6 **Fuel Tank Mounting Ears:** May be machined flat.

29.7 **Paint:** The cylinder block, head, and side cover must be in “as cast” condition. No painting, coating, anodizing, or any other coating.

29.8 **Shroud:** All pieces of the factory supplied stock Honda cooling shroud must be present and properly installed. Shrouds must not be altered in any way to alter the airflow or change appearance, except for chrome plating or painting. Covered fan shroud intakes are allowed only in the pit lane and must be removed prior to entry onto the racing surface. No enclosed recoils may be used.

29.9 **Block and Deck:** Block height shall be 4.620” min. as measured between the deck surface and the surface of a 25.0mm (.983” min.) shaft inserted through the crankcase bearings. Side cover, dowel pins and gasket must be used and bolted tight. This measurement is for 5.5 HP engines. There is no tech on this machined surface.

29.10 **Cylinder Deck Height (GX200):** Piston must remain 0.020” minimum below deck throughout the full rotation of the crankshaft. The finish of the deck is not subject to Technical Inspection.

## 30. Crankshaft and Bearings

30.1 **ALL** engine parts must be standard, unaltered, genuine Honda parts, manufactured for the particular engine, unless otherwise stated in this manual.

30.2 <b>Stroke:</b>	GX160	1.758" min. – 1.776" max.
	GX200	2.120" min. – 2.130" max.

30.3 **Crankshaft Rod Journal:** 1.174" min. - 1.180" max.

30.4 **PTO Shaft:** The power take-off end of the crankshaft may be machined to accommodate the clutch hub.

30.5 **Camshaft Gear:** the camshaft drive gear may be rotated to change camshaft timing.

30.6 **Main bearings** must remain as a press fit after engine has reached ambient temperature. No locking material may be used as an aid. Main bearings must be standard, unaltered, genuine Honda parts manufactured and listed for the particular model of engine being inspected. The bearing part # must be legible on the bearing surface.

## 31. Connecting Rod

31.1 **ALL** engine parts must be standard, unaltered, genuine Honda parts, manufactured for the particular engine, unless otherwise stated in this manual.

31.2 **Rod Length:** 2.350" min. - 2.370" max.

31.3 **Rod Big End Bore:** 1.177" min. - 1.184" max.

31.4 **Wrist Pin:**

Outside diameter:	0.705" min. - 0.712" max.
Inside diameter:	0.557" (14mm+) max.
Length:	2.120" min.

## 32. Piston and Rings

32.1 ALL engine parts must be standard, unaltered, genuine Honda parts, manufactured for the particular engine, unless otherwise stated in this manual.

32.2 **Piston:** Re-sizing, knurling or lightening of the piston is not allowed. The use of Teflon, or other material "buttons" is not permitted. Coating the piston with Teflon or other substances is not allowed. The piston must be properly installed, with the indicator mark pointing towards the lifter gallery.

32.3 **Piston Length:** Long - 2.102" min. Short - 1.920" min.

32.4 **Pistons:** Unaltered stock, flat or dished type Honda pistons, must be used.

32.5 **Rings:**

- I. All three piston rings must be used and properly installed.
- II. Rings must be installed with the identification marks toward the head.
- III. Ring expanders must not be used under the top two rings.
- IV. Only Honda factory supplied expanders may be used under the three-piece oil rings.
- V. Ring tension may not be increased or decreased by heating or other means.
- VI. Ring gaps may be altered, and any ring gap may be used however the ends of each ring may only be altered in a way that appears in the same known unaltered stock Honda ring for the appropriate type/model Honda engine.
- VII. The oil control ring (3rd ring) may be of either single or 3 piece design provided that it is a stock GX series ring, appropriate and approved for the type/model of engine used.

## 33. Camshaft

33.1 ALL engine parts must be standard, unaltered, genuine Honda parts, manufactured for the particular engine, unless otherwise stated in this manual.

33.2 General rules

- I. No alterations, additions, removal of material, modifications, or machining of any kind are allowed, apart from the removal or partial removal of the governor apparatus.
- II. Camshaft must be installed properly with the timing marks aligned.
- III. All camshafts must fall within the profile limit parameters listed below.
- IV. All measurements are after top dead centre. A variant from allowable specification of more than one degree is allowed only twice on each lobe.
- V. if one or more of the parameters including overlap, duration, and maximum lift are NOT met. This is a situation where Technical Inspection does not end when an illegality is found, and the camshaft should be visually checked.

### 33.3 GX160 Camshafts:

<b>Lobe heights:</b>	Exhaust: 1.085" min. – 1.095" max Inlet: 1.085" min. – 1.092" max.	
<b>Overlap:</b>	8 Min – 15 Max	
<b>Duration:</b>	Exhaust: 231 – 237 degrees 225 + * (in table below) Inlet 215 – 220 degrees 003 + ** (in table below)	
<b>LIFT</b>	<b>EXHAUST *</b>	<b>INLET **</b>
0.000"	065-070	288-304
0.010"	110 - 113	332 - 339
0.020"	135	357
0.050"	151 - 154	012 - 015
0.100"	169 - 172	029 - 031
0.200"	215 - 217	073 - 077
Max lift:	0.230" @ 250 - 256 deg.	0.227" @ 105 – 108 deg.
0.200"	286 - 291	135 - 140
0.100"	332 - 336	181 - 184
0.050"	349 - 352	197 - 201
0.020"	006 - 012 *	212 - 217 **
0.000	074 - 081	274 - 285

### 33.4 GX200 Camshafts:

<b>Lobe heights:</b>	Exhaust: 1.085" min. – 1.095" max. Inlet: 1.085" min. – 1.092" max.	
<b>Overlap:</b>	21 Min – 28 Max	
<b>Duration:</b>	240 – 245 degrees	
<b>LIFT</b>	<b>EXHAUST *</b>	<b>INLET **</b>
0.010"	105 - 113	329 - 340
0.020"	135	357
0.050"	150 - 157	013 - 019
0.100"	169 - 174	032 - 037
0.200"	215 - 223	080 - 086
Max lift:	0.230"	0.225"
0.200"	293 - 298	152 - 158
0.100"	342 - 352	202 - 208
0.050"	000 – 004.5	220 - 226
0.020"	015 - 020	237 - 242

## 34. Cylinder Heads

34.1 **Port Machining:** Certain cylinder heads are slightly machined at the outside edge of the ports and/or in the valve guide area for flash removal. Heads with excessive machining will be considered unacceptable manufacturer's deviations. Decision on legality by the technical inspector is final!

**NOTE: GX160 engine must use a GX160 cylinder head.**

Port diameters	K-1 / T-1
Intake	0.920" max.
Exhaust	0.870" max.

34.2 **Thickness:** Thickness as measured from machined head gasket surface to factory machined valve cover gasket surface:

I. All other, GX160(K-1, T-1), GX200 2.880" min.

II. There is no tech on this machined surface.

## 35. Combustion Chamber Volume

Engine	Head	Minimum volume
GX160	Any pre 2011	21.00 cc
GX200	Old style- ZLO #1,2,3,4	29.00 cc
	New style- ZOV or other pre 2011	28.00 cc

## 36. Valve Seats

36.1 The valve-seating surface of the seats may be re-ground or cut, but that surface must remain at an angle of 45 degrees.

36.2 The upper edge of that surface may be machined at an angle of 30 degrees; the lower edge may be machined to an angle to 60 degrees to reduce seat width.

Valve Seat diameters	GX200 / GX160 / K-1
Intake	0.910" max.
Exhaust	0.872" max.

## 37. Valves and Valve Springs

37.1 **Valves:** Stock GX160 (K-1, T-1), GX200 valves must be used. Stellite exhaust valves #14721-ZH8-810 are allowed.

37.2 **Valves must not be altered,** polished, lightened, welded, brazed or machined in any way except as allowed in valve refacing.

37.3 **Valve Refacing:** Refacing of valves and lapping of valves is allowed. The stock 45-degree angle

must be retained.

37.4 **Valve Keepers:** Only stock valve keepers may be used. The keepers may not be altered or modified in any way, and they must be properly installed.

37.5 **Valve Springs:** Only stock, unaltered Honda valve springs are allowed. The correct valve spring part number to be used is 14751-883-000 available through Honda Canada. When sourced through Honda Canada the label and package will state “Made in JAPAN”.

**Warning: There are other springs in Honda packaging with the same part number that are entering Canada through different suppliers and look very similar, except that the package will state: “Made in THAILAND”. These springs are not available through Honda Canada and are therefore illegal.**

37.6 **Valve springs** may not be heated and/or stretched in any way. Shimming of valve springs is not allowed. The technical measurements for ALL Honda valve springs must meet either Spec A or Spec B below:

<b>Spec A</b>	Minimum	Maximum
Wire Diameter	.075”	.081”
Coil Diameter	.790”	.820”
Post race free Length		1.455”
<b>Spec B</b>	Minimum	Maximum
Wire Diameter	.068”	.073”
Coil Diameter	.775”	.790”
Post race free Length		1.450”

37.7 **Valve Spring Tension** shall be no more than 94% of a new spec A or spec B valve spring (i.e. if a new spring requires 10.25 psig to compress it an additional .200" over static compressed length, then the spring in tech must not require more than 9.7 psig)

37.8 **Valve Guides:** The stock Honda valve guides may be knurled.

37.9 **Valve Stem Oil Seal:** must be removed.

37.10 **Valve Lifters**

<b>Engine</b>		<b>Minimum</b>	<b>Maximum</b>
GX160	Height	1.165”	1.210”
GX200	Height	1.355”	1.370”
	Base width	0.935”	0.945”
	Base thickness	0.073”	0.083”

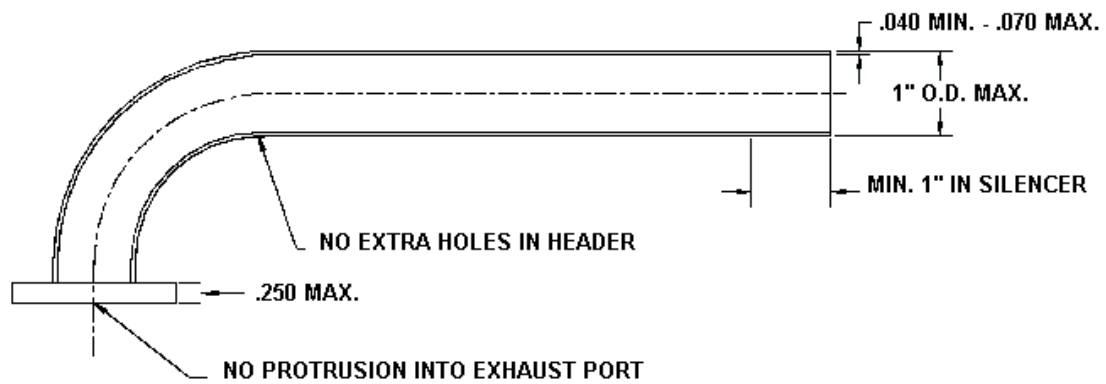


## 38. Muffler

- 38.1 **Muffler:** Muffler must be stock, unaltered part. All baffles must be intact. Exhaust gases from the engine may only exit through the outlet opening of the muffler and the OEM sized, unaltered drain slot.
- 38.2 **Heat Shield:** Heat shield bolt holes may not be left open. The muffler must have the muffler shield installed, either screwed or bolted on in an approved safe manner.
- 38.3 **Bracket:** Optional muffler bracket hole must be closed by using a fastener to fill the holes. A brace may be fastened to the muffler and then supported from the engine to eliminate breakage. This must be done in an approved fashion to eliminate a performance gain. The Technical Committee reserves the right to disqualify a muffler if it is deemed to have excessive welding.
- 38.4 **Welding:** No welding of any form is allowed on the muffler except for up to 3 small spot welds to hold the plug in the muffler.
- 38.5 **Mounting:** Muffler mounting nuts must be tight, and the gasket properly installed, such that the exhaust gases do not leak. Similarly, the muffler base flange must be flat. Leakage is acceptable from ¼ or less of the circumference of the centre orifice of the intact, unaltered, stock exhaust gasket.
- 38.6 **Inserts:** Exhaust port inserts may not be used.
- 38.7 **The legal standard mufflers are:**
- #18310-ZE1-010  
#183A1-ZE1-811

## 39. Header and Silencer

- 39.1 **Header:**
- I. Length: 8.0" - 12.0" (with silencer removed).
  - II. Header tube must have a constant diameter of .925" min. – 1.005" max., except in the bend area the diameter will be .900" min. – 1.050" max.
  - III. Header tube must be installed a minimum of 1.0" inside the silencer.
  - IV. Header tube must point rearward as installed
  - V. Tubing wall thickness must be .040" min. - .070" max.
  - VI. Port matching is allowed.
  - VII. Maximum header flange thickness is .255"
  - VIII. Header must also have an additional approved bracket to secure the header to the motor.
  - IX. External welding of a bracket or tab to the header or silencer is permitted.
  - X. It is also permitted, to weld a washer onto the header at a distance of 1" or greater from the end of the header to permit safety wiring of the silencer.



**NOTE:** A header that is broken, kinked or cracked in the tubing may be replaced at any time during the event under the supervision of a Technical Official. A header damaged during the event may pass post race inspection and the competitor will not be penalized, assuming the broken header/silencer remains attached to the kart (safety wire, bracket, etc). Any header/silencer not attached to the kart cannot be inspected by a technical official, resulting in exclusion from the event.

39.2 **Silencer:** Must use an unaltered RLV B-91 silencer and, when installed, must not exceed a height of 20" off the ground. All baffles must be stock, and in place. A minimum of 1" of the header must be inside the silencer at all times.

**NOTE:** Specified silencer must be installed on header pipe in such a manner as to prevent exhaust discharge from being diverted to any point except the unmodified discharge of the silencer. Any obvious attempt by the competitor to install the silencer so exhaust gases will be diverted from the designed discharge point will be cause for disqualification from the heat.

39.3 Coating of the header tube is allowed. RLV silencer may NOT be coated.

39.4 Heat protective wrapping of the header pipe and silencer is permitted and encouraged. Wrapping must be securely fastened to prevent loss during an event.

## 40. Carburetor and Fuel System

40.1 **Primary Jet:** A stock Honda main jet must be used. The jet may be drilled but must conform to the appropriate NOGO size. The jet must be tight.

GX160/K-1/T-1:	0.031" NOGO.
GX200:	0.035" NOGO

40.2 **Idle Control Jet:** The idle control jet may be drilled to any size.

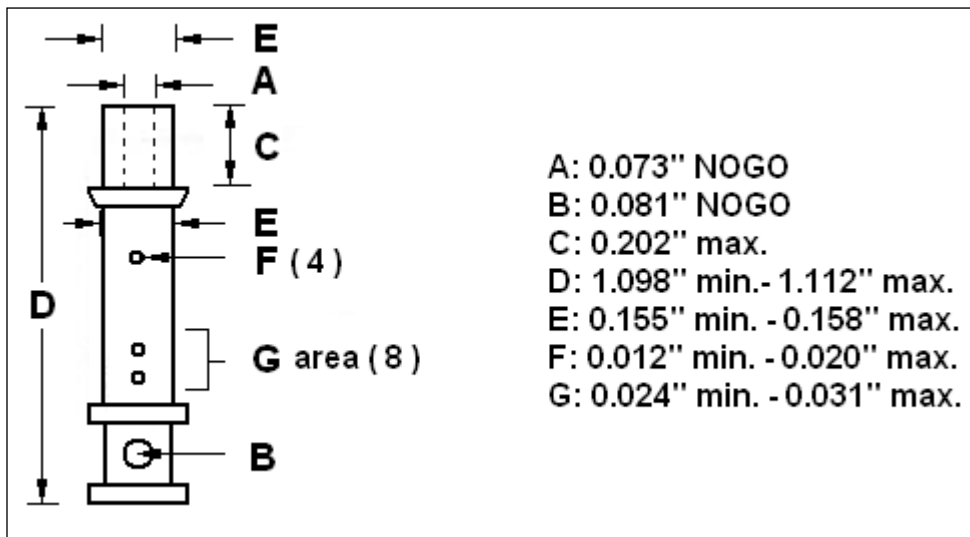
40.3 **Throttle Butterfly:** The throttle butterfly & screw must remain stock. The portion of the throttle shaft within any part of the body of the carburetor conform to the measurements of a stock unaltered shaft for the appropriate engine. The throttle plate retaining screw may be replaced by a fuel shut off retaining screw (Part #93500-03008-OG). The threaded end of this screw must protrude through the throttle shaft by at least one thread.

40.4 **Choke Assembly:** The choke assembly must remain completely intact and stock.

40.5 **Emulsion Tube:** The stock Honda emulsions tube, part number 16166-ZE1-005 must be used in all classes. Emulsion tube height measures the installed height of the tube in an unmodified venturi.

40.6 **Emulsion Tube Height:**

GX160(K-1, T-1)	0.408" GO, 0.432" NOGO
GX200:	0.436" GO, 0.462" NO GO



40.7 **Venturi Size:** The venturi must remain stock

GX160(K-1, T-1)	0.525" NOGO, 0.515" GO
GX200	0.575" NOGO

40.8 **California carburetors:** All rules regarding modifications to California emissions carburetors for GX160/K1/T1, GX200 motors will apply.

**NOTE: The Carburetor may be modified for use with any permitted Honda engine as follows:**

- I. Install an Allen set screw, not any other type of plug, to be threaded into the outer opening of the main metering air bleed hole. This set screw must be removable. It must be drilled longitudinally through its centre only, with a minimum #57 drill bit (.042" GO). The main metering air bleed hole must be .042" minimum. (.042" GO)
- II. Install an Allen set screw, maximum length 0.510", into the idle air bleed hole. It must be drilled longitudinally through its centre only and may be drilled to a minimum 0.036" (.036" GO).

40.9 **Air Filter and Adapters:** Stock Honda air filters and or adapters may not be modified to become air scoops or velocity stacks. The stock Honda air filter and adapter may be replaced with any aftermarket air filter and adapter that conforms to the following specifications:

- I. All aftermarket air filter adapters must be of one-piece design, and manufactured from billet, cast or molded material.
- II. No welding is allowed anywhere on the adapter.
- III. If the material used is non-metallic, metal sleeves must be installed into the mounting holes, of the same length as the width of the mounting flange to avoid compression of the flange.

- IV. No portion of the adapter may extend beyond the face of the flanged mounting portion into the carburetor opening. The flanged mounting surface must be flat.
- V. The centerline of the adapter and the filter shall be perpendicular to the mounting face in its entirety.
- VI. The only holes allowed are the two mounting holes and the central normal airflow hole.
- VII. The maximum length of any aftermarket air filter adapter is 2.310”.
- VIII. An air filter adapter gasket must be used. A single, original type, Honda GX air filter adapter gasket for the appropriate engine is the only gasket that can be used, but the minimum metal thickness is 0.090 and must be installed properly.
- IX. The filter may not be used as a tract lengthener, air flow diffuser, or air flow director, and must be approved by the Technical Inspector.
- X. Air filters shall have a maximum length of 7” and width of 4”. Maximum length of rubber flanged area is 2” Air filters must be straight.

40.10 Carburetor and air filter assembly must be attached using a standard nut.

**Use of prevailing torque nuts i.e. nyloc etc. are not permitted.**

40.11 **Phenolic Spacer:** Stock, except the fuel line guide may be trimmed to facilitate inspection.

- I. A GX160 spacer must be used on a GX160.
- II. A GX200 may use either spacer (GX160 or GX200).

40.12 **Restrictor Plate:** Restrictors must conform to WRKC specifications. Restrictors are issued by the WRKC. The current restrictor is black anodized. The \$15.00 cost is non-refundable. No modifications are allowed unless approved by the technical committee. If you are not sure whether your restrictor plate is legal have it checked by the Technical Committee. Just because a restrictor plate passes the go/no go test doesn’t mean it is legal.

- I. The appropriate NOGO tool must not even start to enter the fuel orifice from either side of the restrictor.
- II. The restrictor plate shall be flat, as measured on a glass plate.
- III. Restrictor plate must be of steel construction.
- IV. Restrictor plate is to be placed between the engine block and the phenolic spacer with an intake gasket on each side of the plate.
- V. Restrictor plate must be installed properly.
- VI. Mounting holes must be round and may not be larger than 0.270” on any axis.
- VII. The thickness of the restrictor plate shall be 0.055” min. - .065” max.
  - a) Cadet 0.350" NOGO
  - b) Novice 0.450" NOGO
  - c) Junior Light 0.500” NOGO

## 41. Ignition

41.1 **Flywheel:** stock unaltered Flywheel must be used.

41.2 **Flywheel Key:** The flywheel key may be offset by filing, grinding, or machining to obtain the desired ignition timing. Aftermarket key is permitted.

41.3 **Cooling Fan:** Stock unaltered Fan must be used. Only PT#19511-ZE1-000 will be permitted. All nylon blades must be intact.

41.4 Enlargement of coil mounting holes and/or resizing of mounting bolt diameter is not permitted.

#### 41.5 Spark Plug

- I. The spark plug may be of any manufacturer
- II. Spark plug is to be standard reach  $\frac{3}{4}$ " plug
- III. Measurement from seat of the spark plug, not including gasket, to the end of the 14mm threaded area, to be .770" maximum.
- IV. Ground electrode extending past the last thread will be single-wire side electrode type. No multiple electrodes or full circumference ground electrodes will be permitted. This rule is to eliminate the intent to defeat the CC rule, by displacing more combustion space with the spark plug.
- V. A plug gasket must be used unless the engine is equipped with a temperature gauge sensor installed in place of the gasket.
- VI. Different thickness gaskets may be used to index (position) the spark plug in its hole.
- VII. The gasket/sensor must be greater than .003" thick.

41.6 **Ignition Switch:** The ignition switch may not be removed and must function. A second, small, functioning toggle switch may be installed on/in the front fairing panel or on the steering column support portion of the main frame in all classes.

### 42. Engine Gaskets

42.1 **Induction Gaskets:** Must remain stock (2 carburetor gaskets).

42.2 **Side Cover Gasket:** Must be stock appearing.

42.3 **Exhaust Gasket:** Must be stock appearing with a max. 0.125" thickness.

42.4 **Carburetor Bowl Gaskets:** Must be stock appearing.

42.5 **Head Gasket:** Any thickness of head gasket may be used.

42.6 **Valve Cover Gasket:** The stock Honda valve cover gasket may be replaced with any gasket of the same basic shape as the stock Honda gasket.

42.7 **Air Filter Adapter Gasket:** An air filter adapter gasket must be used. A single, original type, Honda GX air filter adapter gasket for the appropriate engine is the only gasket that can be used, but the minimum metal thickness is 0.090.

### 43. Miscellaneous

43.1 Unaltered bolt-on aftermarket recoil and starter cup of similar appearance must be entirely in place on all Honda engines, and must be the only method of starting the engine.

43.2 **Governor:** The governor apparatus may be removed from the engine, and any holes caused by this removal must be plugged.

# Technical Inspection Procedures

## 44. Purpose

- 44.1 The intent of WRKC is to provide a technical level playing field for all competitors such that the ability of the driver to set-up and race their kart is the major factor determining the outcome of a championship. Deliberate attempts to gain advantage through a technical infringement are viewed as a direct challenge to the values by which the club is run.
- 44.2 The Technical Committee is qualified to determine the technical legality of a kart as presented; however, it is not qualified to, nor is it the role of the Technical Committee to assess whether any technical infringement was deliberate.
- 44.3 Any technical infringement such as illegal components, dimensions outside tolerance, illegally modified components and fuel outside specification, etc., will result in a disqualification from the race event, zero championship points and the driver may not drop the race event in the year-end championship.
- 44.4 A fifteen (15) point penalty will be applied to the competitor's final season points total for each Technical Disqualification incurred.
- 44.5 Multiple technical violations will be dealt with more severely, up to and including suspension for a calendar year.
- 44.6 A driver may protest a penalty imposed for a technical infringement only by submitting a written protest to the club together with the payment of a \$200.00 protest fee.
- 44.7 **Attitude:** The attitude of those individuals charged with the responsibility of conducting technical inspection should be:
- I. To help the competitor be aware of possible deficiencies in a timely manner that may pose a safety danger or could constitute a rules infraction.
  - II. To help establish that all entrants are competing under equal conditions.
  - III. That specifications and regulations established by this document are adhered to all competitors.

## 45. PRE-RACE TECHNICAL INSPECTION

### 45.1 Pre-Technical Inspection Self-Declaration

- I. Each participant must submit a fully completed Pre-Technical Inspection Self-Declaration form to the Technical Inspectors. Upon receipt of the completed Technical Self-Declaration form the competitor may be issued a Technical Inspection sticker. It is the competitor's responsibility to ensure the Pre-Tech Form is completed in its entirety providing all relevant and accurate information.
- II. Any changes required on the completed and submitted Pre-Technical Inspection Self-Declaration form must be completed and accepted by the Technical Inspectors before Heats or Qualifying sessions begin in any class or before a designated time.
- III. It is the competitor's responsibility to ensure that their kart meets the technical requirements for the class through the entire race event. Drivers found on the track without having completed and submitted a Pre-Technical Inspection Self-Declaration form are subject to

- penalty. Drivers who enter Post-Race Technical Inspection and are found to have not completed or submitted a Pre-Technical Inspection Self-Declaration form will be excluded.
- IV. Any Kart, safety equipment or apparel is subject to Technical Inspection at any time.
  - V. The Pre-Technical Inspection Self-Declaration form is retained by the Technical Inspector.
  - VI. At each event a specific class(es) will be required to bring their karts and all safety equipment for Pre-tech inspection.
  - VII. All karts may be pre-teched.
  - VIII. Blank copies of the pre-tech forms will be available to all drivers ahead of time at Registration or the club website @ [www.wrkc.on.ca](http://www.wrkc.on.ca)
  - IX. It is recommended that drivers do the following prior to arriving at the track:
    - X. Complete all necessary information requested on the pre-tech form
    - XI. Driver perform their pre-tech check
    - XII. Complete the driver check portion of the pre-tech form
  - XIII. Pre-tech inspections will start one hour prior to practice on race days
  - XIV. Please see a pre-tech rep to have your kart inspected and approved
  - XV. Late arrivals will be responsible to find an available pre-tech rep to perform an inspection (go to grid and ask for help)

**45.2 Race Damage:** Should equipment be damaged or defective (i.e. side pod, nose cone, bumper etc.) during an event, after the heat race the driver will be allowed to correct the defective part.

- I. Refer to Section 0 regarding engine repairs.
- II. The spirit and intent is to make sure each participant is treated in a fair manner. Because a piece of equipment bends or breaks does not mean that the driver is disqualified.

**45.3 Post-Race Inspections:**

- I. It is the responsibility of the top 5 finishers to proceed directly to the inspection area immediately after weigh-in at the conclusion of an event.
- II. Failure to report when instructed to will result in disqualification, 0 championship points and the driver may not drop the race event in the year-end championship.
- III. Once a vehicle or components of the vehicle are submitted for inspection, they may not be removed from the inspection area without express permission of the official(s) in charge.
- IV. The number of finishers to be inspected and the extent of the inspection of each is at the discretion of the official(s) in charge.
- V. There should be only one person in the Post-Race Technical area being either the driver or Parent/Guardian with each kart.
- VI. The Post-Race Technical area is defined on the facility maps at the end of these Rules & Regulations.

45.4 The technical inspection begins with the inspector checking the engine paint markings and verifying the submitted tech sheet.

**The 7 areas to be painted on a Honda engine are:**

- |  |                                    |
|--|------------------------------------|
| 1. Crankcase side cover to crankcase cover nut   | 5. Exhaust nut to exhaust flange   |
| 2. Flywheel shroud bolt to shroud                | 6. One exposed head bolt to head   |
| 3. Carburetor retainer nut to air filter adaptor | 7. Valve cover bolt to valve cover |
| 4. Carburetor float bowl retainer bolt to bowl   |                                    |

**The 9 areas to be painted on a Briggs engine are:**

- |   |   |
|---|---|
| 1. Exhaust bolt to exhaust flange                                     | 5. One exposed head bolt to the head                        |
| 2. Flywheel shroud bolt to shroud                                     | 6. One valve cover bolt to valve cover                      |
| 3. Carburetor retaining nut between intake manifold and carburetor    | 7. Carburetor float bowl retaining screw to carburetor body |
| 4. Carburetor retaining nut between cylinder head and intake manifold | 8. Centered carburetor drain plug to bow                    |
|   | 9. <u>Junior only</u> - carburetor slide cap                |

PLEASE SEE ENGINE PAINT MARKING section at the back of this Rulebook. Ensuring their engine is properly and completely painted is the responsibility of the driver.

## 46. General

46.1 **Personal Safety Gear:** Driver and personal safety equipment and racing attire must be ready for tech inspection.

46.2 **Workmanship:** General suitability for completion, workmanship and appearance of kart will be considered in approving an entry in an event.

46.3 **Entrant Responsibility:** It is the competitor's responsibility to ensure that all technical and safety requirements have been met, including safety-wiring and other items specified in other sections of this document.

46.4 **Post-race Tech:** It is recommended that post-race tech consist only of weight-check, fuel and engine tech or of items that may be changed in the course of an event affecting a performance gain, or which may cause a safety hazard. However, any item covered by this rulebook may be subject to inspection at the discretion of race day officials.

46.5 **Refusal to Tech:** Refusal to submit to post-race tech shall be considered an admission of non-compliance with specifications by the competitor, subjecting the competitor to disqualification for that event and possible suspension of membership privileges.

46.6 **Tech Tools:** The technical inspector may utilize whatever tools deemed necessary to accomplish tech procedures. The Technical Committee may, at their discretion, use any means necessary to determine whether an engine is legal or illegal. In the case of a discrepancy the tech inspector's tools will be used for any final decisions.



- 46.7 **Tech Area:** Inspection areas, impound areas and/or other areas so designated by the officials in charge are off-limits to all participants. Competitors may enter these areas only upon specific direction of the officials in charge.
- 46.8 **Inspection Marking:** Method of engine and/or tire marking is at the discretion of the officials in charge. Any means undertaken by a competitor to duplicate, counterfeit or otherwise avoid normal component-marking procedures is cause for immediate disqualification and possible suspension of membership privileges. Missing markings will be considered a full technical violation
- 46.9 It is the responsibility of the entrant to make sure their engine is painted (7 areas) when all engines are being painted during the race day.
- 46.10 Any broken or missing inspection marking(s) will result in a disqualification receive 0 points, you will be able to drop the penalty, but a 5-point championship point penalty will be applied.  
**NOTE: After "painting", there will be NO valve lash adjustment or inspection allowed under the valve cover seal.**
- 46.11 **Weights:** In all cases, minimum weight is defined as observed total weight of driver and kart in as-raced condition upon completion of event.
- 46.12 **Coatings:** Aftermarket coatings are expressly prohibited on all engine components unless a specific exception is contained in this rule book.
- 46.13 **Tachometer, temperature gauges,** etc. are allowed but are subject to technical inspection.
- 46.14 **NOGO Specifications:** When a NOGO specification is checked, the NOGO gauge must not start, at any point, to enter the hole being measured. NOGO gauges will be used for these purposes. When a go specification is checked the go gauge shall pass through in it's entirety without forcing gauge through.
- 46.15 **Engine:**
- I. The engine will be teched on the day it is raced whenever possible.
  - II. All portions of the engine will be subject to tech at the end of the race day.
  - III. In the case of broken parts, every effort will be made to tech the parts. It will be the decision of the tech officials to determine if the broken parts would have facilitated a performance gain.
  - IV. Cracked or broken parts may be replaced during an event after engine has been sealed and/or painted only with the express permission of the tech officials obtained prior to the repair.
- 46.16 During a WRKC event, you must use the same Kart/Engine combination once the engine has been painted.
- I. The approval and presence of a member of the WRKC TECH COMMITTEE must be sought **PRIOR** to any engine repair that alters a paint marking or the change of any engine that has been painted.
  - II. In the event of an engine failure, after the engine is painted, it will be determined by the Tech Committee as to whether that engine will be allowed to be repaired or replaced.
  - III. A member of the Tech Committee must be present to oversee any repairs or replacement.

- IV. If an engine is replaced, the driver must start the next race at the rear of the grid. The replaced engine will be held by the Tech Committee until the end of the race day. Before removing a painted engine, the approval and presence of a WRKC TECH COMMITTEE member must be obtained and the engine must be immediately upon removal be given over to the custody of that TECH COMMITTEE member.
- V. If the competitor then must go to tech after the final race both engines will be subject to Tech Inspection.
- VI. If either of the engines (removed engine or replacement engine) are found to be in violation of any technical rule will result in a disqualification from the race event, zero championship points and the driver may not drop the race event in the year-end championship and an additional 15 championship points penalty will be applied.

**Note that either engine is subject to inspection at the discretion of the tech committee regardless of where the participant finish in the final race.**

46.17 The Technical Committee may request an inspection on any kart at any time during the season. Items to be checked could include, but are not limited to, an assortment of engine equipment.

46.18 The decision of the Technical Committee is final.

## **47. Fuel**

47.1 Fuel may be tested at the request of the Board or Technical Committee at any time.

47.2 The meter reading must be within a range of plus or minus 10 of the test fuel used that day as tested with the club's equipment.

47.3 No additives of any kind may be used.

47.4 Any additional tests for gasoline that are deemed acceptable by the Technical Committee shall be admissible (i.e. specific gravity hydrometer, additives, water test, chemical test, etc.)

47.5 Failure to pass a fuel test will result in a non-droppable disqualification for the day.

## **48. Oil**

Engine lubricating oil is subject to testing for oxygen bearing and/or vapor producing substances that are prohibited. WRKC reserves the right to conduct oil sampling and testing at any time by any method. When testing with oil sniffer method. Snap On tester Model # ACT790 set on Medium / Normal range will be used.

## **49. Camshaft**

### **49.1 Measuring procedures**

- I. With head removed, attach dial indicator holder to block.
- II. Place the dial indicator over the exhaust lobe.
- III. Position the crankshaft so that the exhaust lobe is up 0.020" and set the degree wheel pointer at 135 degrees.

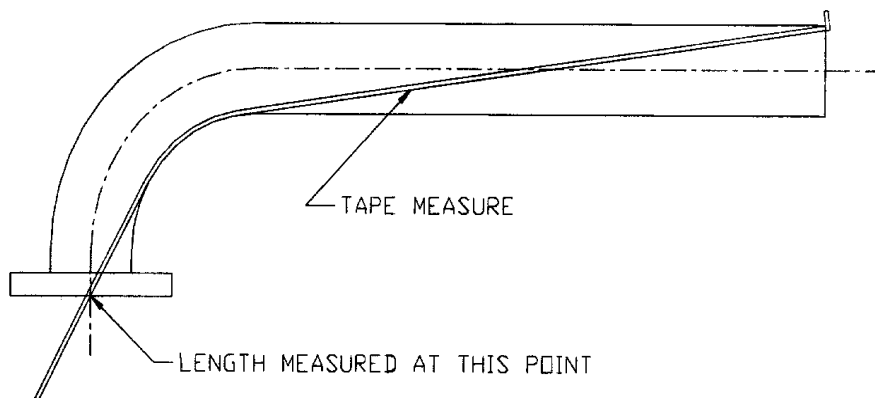
- IV. Turn the wheel to TDC. Read the appropriate lifts.
- V. Switch the dial indicator to the intake lobe, set the lobe up 0.020", and read. This is done to determine overlap.
- VI. Change the degree wheel to read 357 degrees, and take the intake readings.
- VII. A variant from allowable specifications of more than one degree is allowed only twice on each lobe.
- VIII. If one or more of the parameters including overlap, duration, and maximum lift are not met, this is a situation where technical inspection does not end, and the camshaft should be visually checked.
- IX. Camshafts may be further checked using a lobe base circle, on a centering device, especially if a ramp is on the edge of the specification.

#### 49.2 Checking rocker arm ratio:

- I. Actual valve lift at the retainer with zero lash may be determined using the appropriate tool.
- II. Maximum valve movement must be:  
     0.248" or less on the Intake valve  
     0.256" or less on the Exhaust valve.

## 50. Header / Silencer

50.1 Header length is to be measured as shown in diagram.



50.2RLV B-91 silencer internal baffle holes are to be checked with a .1285" NOGO.

## 51. Combustion Chamber

51.1 **Measuring Combustion Chamber Volume:** Mastercraft Dextron 3 transmission fluid is the only liquid acceptable for this test. Conduct the test only after the engine has cooled to approaching ambient temperature. No cleaning of the head or piston is allowed. The test must be performed with a graduated Grade A, GLASS burette and stopcock.

- I. Remove the spark plug.
- II. Remove pushrods.
- III. Place the engine in a position such that the machined top surface of the spark plug hole is level on both horizontal axes.
- IV. If an approved Technical spark plug adapter is NOT used for the measurement the technical inspector should ensure that the spark plug thread in the head is STOCK and unaltered, with

all threads present and no extra chamfer. If a thread-saving device is used it must be installed so that at its upper end there is no volume gain over a stock thread.

- V. If an approved Technical spark plug adapter is used, the checks in “a)” may be omitted for measurement purposes but are still relevant for determination of non-stock, out of specification, machining, etc.
- VI. The machined spark plug seal surface and/or adapter top surface should be relatively clean and dry.
- VII. Fill the burette with transmission fluid to approximately 0.5 cc above the “0” mark, carefully minimizing the amount of air bubbles formed during the filling process.
- VIII. Bleed all air from the stopcock and outlet stem. Run fluid from the burette until the top of the meniscus curve is on the “0” mark. Residual fluid remaining on the tip of the outlet stem should be removed.

*NOTE: The reason for using the top of the curve is that any lateral variation in the handling of the burette can be corrected instantly as the same reading must be obtained on the left and right side of the mark. A variation in the burette front to back also has less influence on the sighted level when using the top rather than using the bottom of the curve which can change considerably.*

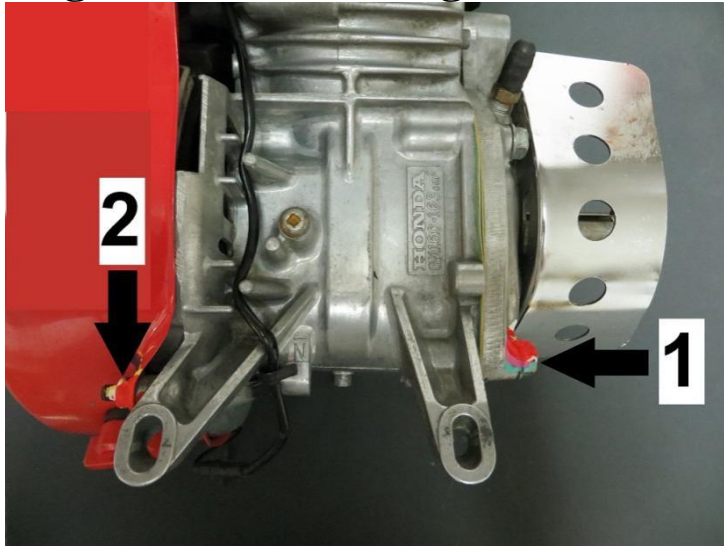
- IX. Turn the crankshaft in its normal rotation so that the piston is approaching TDC (approx. 15 degrees or 1 mm) BTDC or ATDC.
- X. Dispense the specified amount of fluid except for approximately 1 cc through the spark plug hole or adapter into the combustion chamber. The inspector should rock the engine slightly on both axes to allow any trapped air to escape.
- XI. Wait approximately 30 seconds after the addition for the fluid level in the burette to stabilize.
- XII. Dispense the remainder of the required amount of fluid into the spark plug opening or adapter. Any residual fluid remaining on the outlet stem should be added to the fluid dispensed.
- XIII. Slowly turn the crankshaft back and forth over TDC to determine the highest level for the fluid.
- XIV. When using the spark plug land as the determining level, if any fluid rises above the level of the top of the spark plug thread hole, the engine is not within specification.
- XV. When using the adapter as the determining level, if any fluid rises above the level of the top of the adapter, the engine is not within specification.

MAP STANDARD DIRECTION

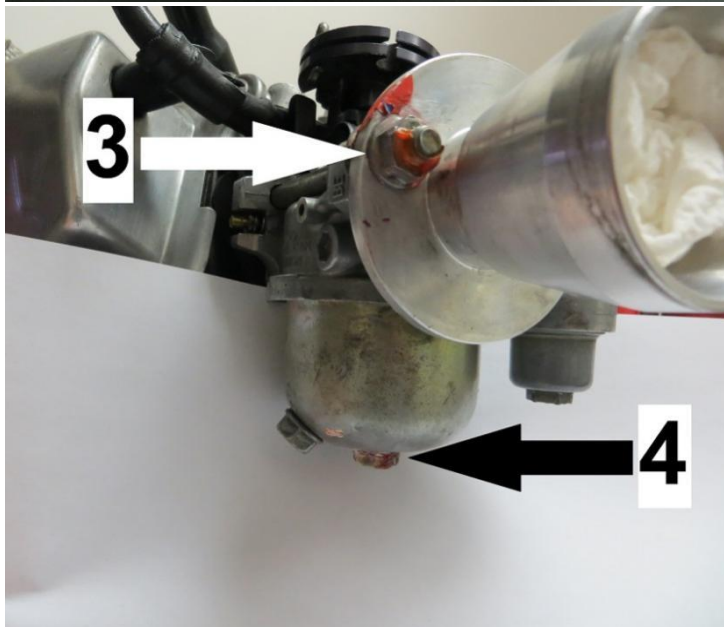




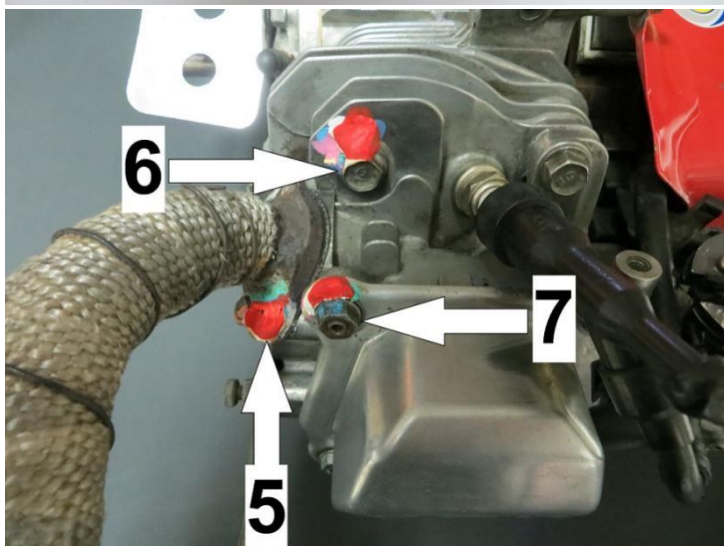
## Engine Paint Marking - Honda



- 1) Crankcase side cover to crankcase side cover nut
- 2) Flywheel shroud bolt to shroud



- 3) Carburetor retainer nut to air filter adaptor
- 4) Carburetor float bowl retainer nut to bowl



- 5) Exhaust nut to exhaust flange
- 6) One exposed head bolt to head
- 7) Valve cover bolt to valve cover

## Engine Paint Marking – Briggs



- |                          |                                       |
|--------------------------|---------------------------------------|
| 1. Carburetor Drain Plug | 6. Shroud Bolt                        |
| 2. Carburetor Float Bowl | 7. Carburetor/Intake Manifold Bolt    |
| 3. Exhaust Nut/Bolt      | 8. Intake Manifold/Cylinder Head Bolt |
| 4. Valve Cover Bolt      | 9. Slide Cap Bolt (Jr Classes Only)   |
| 5. Recoil Bolt           |                                       |

## **Appendix**

### **Pit Steward (if appointed):**

- Act as a liaison between the on-track Officials and Competitors to inform of penalties, incidents, and any further disciplinary action that may be applied.
- Receive protests and transmit them to the Race Director.
- Shall maintain a written Race Control Log of significant on-track activity and incidents during practice, qualifying sessions, heats, and races based on reports from officials. The event, class driver, time and details of the activity or incident are to be logged and maintained for future reference.
- Collect the reports of the Chief Scorer, Technical Delegate, and other Officials together as may be necessary for the determination of the results
- Liaison with the Chief Scorer or Grid Marshal to resolve any discrepancy(s) with respect to grid and starting positions
- Relay to all competitors any changes that may occur over the course of an event.
- Act as an Observer / Judge of Fact as assigned by the Race Director for purposes of reporting incidents which occur on the track.

### **Safety Director (if appointed):**

*As a valued resource to the members, directors, and officials of the Waterloo Regional Kart Club, the Safety Director will oversee the following areas.*

- Be a member on each committee, Ambulance and Insurance.
- Assist family members and/or spectators who are in distress, and or need medical assessment off track.
- Visit with competitors after involvement in on-track incidents to offer non-medical assessment of condition and advise Race Director as to whether competitor(s) shall continue a specific race or practice day.
- Administer and review any and all Return to Racing Forms before allowing a competitor to return to WRKC events after an injury that requires a person to leave a race event due to a medical emergency, during any WRKC event.
- Make sure race officials are wearing approved safety items and footwear.
- Inspect race official's equipment to insure it meets standards.
- Have knowledge and posted copy of the WRKC Emergency Handbook.
- Visit with on-site medical team to review equipment and supporting equipment before each race day and before racing can start.
- If necessary, confirm with race officials on areas such as barrier placement and on-track positioning of officials.
- Discuss with officials on procedures involving on-track accidents with respect to movement of competitors.
- Check and advise competitors, pit crew, and others on the rule 5.4 Fire Safety and 7.0 Safety Equipment