

## **KAWARTHA DOWNS SPEEDWAY GENERAL RULES 2010**

Kawartha Speedway is in the Entertainment Business. As a participant/supporter of a race team—you are considered a “representative of the track” while on the property during any speedway related activities (i.e.— race night, sponsorship gatherings, at the bar, the restaurant and in the casino). Kawartha Speedway is pleased that you have chosen to be a part of its organization. Without you—there is no show; without us there is no show. Please review the General Rules section. It is the responsibility of each individual to familiarize their self with the code and conduct that is considered standard at all Kawartha Speedway events.

The following rules and regulations are a “Handbook” for the conduct of the sport of automobile racing. They are in no way a guarantee against injury or death to a participant, spectator or official.

### **General Conduct:**

1. Please—alcohol is to be consumed only in designated areas for liability reasons. Those who wish to consume alcohol at the track are welcome to do so responsibly at the Casino, “The Finish Line” bar, the “Starting Gate Dining Room”, as well as the lower Main Grandstand and front apron area. Thank you in advance for your cooperation.
2. All illegal drug use is prohibited.
3. Prior to entering the Pit Area, an industry standard, liability release form must be signed by all persons. Any person under the age of eighteen (18) that enters the Pit Area must have an UNDER AGE WAIVER completed by a family member and/or guardian. Waivers can be obtained from Kawartha Speedway upon request as well as upon entry to the speedway.
4. All injuries occurring on Kawartha Speedway property must be reported to Kawartha officials immediately.
5. Any persons who participate in an act or actions deemed detrimental to motor sports or to Kawartha Speedway is subject to a fine and/or other penalties.
6. Any public use of profane or offensive language during any Kawartha Event may result in a fine and/or penalty.
7. Any persons who sign a Kawartha Speedway release sheet for another individual is subject to \$100.00 fine and/or other penalties.
8. Any persons who assault or threaten a Kawartha Speedway Official or persons serving under the direction of a Kawartha Official are subject to a \$500.00 fine and/or other penalties.
9. Any persons who, while participating in a Kawartha Speedway Event, under the influence of alcohol or any other illegal substance are subject to disqualification, a \$500.00 fine and or other penalties.
10. Any persons who participate in fighting at a Kawartha Speedway Event are subject to \$5000.00 fine and/or other penalties.
11. Any competitor or team member entering another team’s pit area in a threatening manner will be assessed a \$50.00 fine.
12. ANY SUSPENSIONS ISSUED BY OTHER TRACKS (including but not limited to Mosport, Peterborough, Barrie, Flamboro, Varney, Deleware, Capital City, Sunset Speedways) WILL FOLLOW YOU TO WHEREVER YOU COMPETE. TIME OFF AT ONE TRACK EQUALS TIME OFF AT ALL TRACKS.

### **Inspection Procedures:**

1. Prior to practice and/or competition on the racetrack, all cars must pass through technical inspection. All cars are subject to inspection by Kawartha Speedway at the time and in the manner determined by Kawartha Speedway Officials. All decisions by Kawartha Speedway and its Officials regarding the timing and manner of inspection, as well as which cars are inspected and the legality of cars, are final and not open for appeal.
2. Failure to comply with the technical inspectors request to facilitate inspection of the car may subject the competitor, car owner and any members of the team to disciplinary action.
3. If the Kawartha Speedway Chief Technical Inspector determines prior to the race that the car does not meet the applicable specifications, the car will not be allowed to compete unless, at the discretion of the Chief Technical Inspector, the deficiency will not affect safety, cannot be corrected in time for qualifying heats, and will not provide the competitor with an advantage over the other competitors, and is so insubstantial as not to warrant disqualification. If the official permits the car to compete, the competitor will be informed of the deficiency, and the car will be prohibited from competing in any future events until it has been corrected.
4. Kawartha Speedway has the right to confiscate any part or equipment that is deemed illegal by the Chief Technical Inspector. Failure to surrender the part or equipment may subject the driver car owner and crew to disciplinary action and/or fine.
5. Only those persons approved by the Kawartha Speedway Technical committee may be admitted to the inspection area.
6. After qualifying (Heat Races and/or Time Trials), all cars will proceed directly to the Tech Area for inspection at the discretion of the Chief Technical Inspector.
7. After Feature Race:
  - a) Top 3 finishers will proceed directly from Victory Lane to the designated Tech Area. Additional competitors may also be directed to the Tech Area for inspection.
  - b) Once a competitor had been instructed to proceed to the Tech Area, they must proceed there directly and no one may touch the car or its components en route.
  - c) While in the Tech Area, all competitors must take whatever steps are requested by Kawartha Speedway Officials, including tear down of the car, to facilitate the analysis of the car. Kawartha Speedway has the right to confiscate any part for additional inspection or one that fails to meet Kawartha Speedway Tech specifications during an event.
  - d) All cars are subject to inspection by Kawartha Speedway at any time and in a manner that is deemed necessary by the Chief Technical Inspector and/or Technical Staff. All decisions by Kawartha Speedway Officials regarding such inspections are final.
  - e) Failure to comply with any of the inspection procedures may result in a penalty and/or fine.
  - f) No car shall practice or compete on the track until all safety equipment, safety vehicles and safety personnel are in the respective positions.  
Only the driver is allowed in the race car while on the track surface. No passengers allowed in or on the race car at any time.

**Flags:** It is the responsibility of all competitors to understand the meaning of each flag.

1. GREEN FLAG—The GREEN FLAG indicates the start of the race. When the initial GREEN FLAG is given in each event by the Official Starter, cars must remain in their starting positions on the race track until they have passed the Start/Finish Line. Violators may be penalized. In all RE-STARTS, racing begins as soon as the GREEN FLAG is thrown.
2. YELLOW FLAG—The YELLOW FLAG signifies caution is necessary on the racetrack. Once the YELLOW FLAG is displayed, all cars will slow immediately, hold their position and move into single file behind the lead car. The caution vehicle will then enter the track and will be positioned in front of the lead car. If 2 cars are running side by side, the inside car shall take preference. Racing to the YELLOW FLAG is prohibited. Any cars passing other cars under YELLOW FLAG conditions may be penalized. Any cars returning to the racetrack from the pits under YELLOW FLAG conditions must wait for and take position at the rear of the field.
3. RED FLAG—The RED FLAG means the race must be stopped immediately.
  - Cars will remain stopped until the track is returned to YELLOW FLAG conditions, or assigned to move.
  - No repairs of any nature or re-fuelling will be permitted when the race is halted because of a RED FLAG.
  - Any driver failing to obey a RED FLAG at any time, shall be subject to disqualification and/or a fine.
  - On track assistance by official vehicles under the RED FLAG will result in no time penalties being imposed.
4. BLACK FLAG—The BLACK FLAG means the car must proceed to the Pits immediately and report to a Kawartha Speedway Official at the car's Pit Area. The car may be able to return to the race at the discretion of a Kawartha Speedway Official. Once the BLACK FLAG is displayed to a car, the driver has 3 laps to report to their pit area. Failure to do so will result in the car no longer being scored and/or other penalties.
5. PASSING FLAG—The PASSING FLAG (blue with a diagonal orange stripe) signifies that faster traffic is over taking cars being signalled and that cars being given this flag should yield to the inside groove of the speedway to allow over-taking traffic through.
6. WHITE FLAG—The WHITE FLAG indicates to a driver that he is entering the final lap of the race. No car may receive any intentional assistance (example: one car pushing another) after said car has received the WHITE FLAG.
7. CHECKERED FLAG—When the CHECKERED FLAG is displayed, the race is finished. The first car to complete the required distance will be the winner. Once the CHECKERED FLAG has been shown to the leader, the rest of the cars will receive the CHECKERED FLAG. Finishing positions will be determined by the most distance traveled in the least amount of time.
8. SPECIAL FLAGS—SPECIAL FLAGS may be used at the discretion of the Starter and the Officials, but must be fully explained to all competitors before the race event (example: "Pit Road Open/Closed").
9. Final disposition of any FLAG dispute will be decided by the track official in charge.

## **Race Procedures:**

1. Decision of Kawartha Speedway Officials on Race Procedures will be final, and there shall be no appeal or protest thereof. Interpretation of Race Procedures and Rules include, but are not limited to, the Line-Up of cars, the Start of the Race, the Control of the Cars, decisions to Stop or Delay a race, the positioning of cars on Re-Starts, the assessment of Lap and Time Penalties, along with the interpretation of technical rulings regarding a cars legality for competition.
2. At all events, the driver assumes responsibility for the actions of his/her pit crew, including any unpaid fines for violation of conduct. Unpaid fines and/or other related charges may be deducted from driver purse or point fund monies.
3. Lap or time penalties will be executed by bringing the violator to the Pits immediately, and a penalty will be imposed. These infractions include, but are not limited to, passing the pace car, running the Stop Paddle at the entrance of the race track and Pit Road infractions. Final lap scoring corrections are permitted prior to posting of official race report.
4. No driver may qualify more than one car in Qualifying Heats or Time Trials.
5. In the event that any car does not appear for the Qualifying Heat to which it is assigned, it will forfeit that Heat and start last in its next assigned Qualifying Heat.
6. Any car not making the original line-up for the Feature Event on time will take position at the rear of the field under Kawartha Speedway procedure policy or at the discretion of the Official in charge.
7. After the Feature Line-Up is posted, and the Pace Car starts the parade lap, if a car does not fire or pulls off the track, the field will adjust on the next lap by filling vacancies by that line moving up.
8. Preliminary laps may be set at the discretion of the Starter, who will then start the race.
9. Any car missing the initial GREEN FLAG of any race will not be allowed to enter the race.  
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10. Cars must take Starting flag to receive prize money.
11. Any cars involved in causing a YELLOW FLAG condition, may be placed at the rear of the field. The Race Director shall have total authority to determine which cars were involved and will be placed at the rear.
12. Any competitor who intentionally causes or attempts to cause a YELLOW FLAG by stopping, spinning out or other action will receive a one lap penalty.
13. When race is stopped before the completion of one lap, there shall be a complete re-start in the original starting positions with the exceptions of the cars (if any) causing the caution. Those cars will re-start at the rear.
14. The initial start of all race events will be double file. Any re-starts there after, the field will line up double file as they fall. Lapped cars will take their position as they fall in the current running order of said event.
15. A grid for all feature line-ups will be posted with in 15 minutes of the completion of the final qualifying event. All teams are responsible to have cars gridded for main event at posted time on black board. If not in stationary grid position, then starting position will be on a first come, first serve basis at the rear of the starting field.
16. The final 5 laps will be run under GREEN FLAG condition (does not have to be 5 consecutive laps).
17. Driver must register and present car for inspection prior to the GREEN FLAG of the first event of the race meet. From that point, only the registered car may be used. Another qualified car may be used for main events only.
18. All races shall be run until the leader covers the advertised distance. Should any

circumstances prevent the completion of the advertised distance, the race shall be considered officially completed after the half way mark has been reached, provided circumstances make it impossible to continue the race within a reasonable time period after it has been stopped.

19. For scoring purposes no two cars shall carry the same number. All numbers must be clearly distinguishable between one another on competing cars. All numbers must be in bold size and in contrasting colour. Kawartha Speedway will reserve the right to issue numbers and or distinguishing letters (eg. X) for special event races that include non-regular cars. Duplicate numbers will be dealt with by Pit Stewards for heat races and by scoring officials for feature events. Highest qualified car will retain original number for feature event in the event of a duplication.

#### **DRIVER ELIGIBILITY**

1. Kawartha Speedway will allow the use of a maximum of two drivers to earn points throughout the season in the following divisions.
2. Late Model and Thunder Car drivers may register one other driver to compete in their place due to scheduling conflicts and/or family emergencies.
3. All event points and money earned will be awarded and paid to registered driver. Second driver may compete up to a maximum of three (3) times during the season in order to earn points towards the registered drivers standings.
4. All occasional drivers must be approved by Kawartha Speedway officials. Kawartha Speedway will reserve the right to determine that their racing experience is suitable, based upon the class in which they will compete as a substitute.

#### **MINI STOCK DRIVER ELIGIBILITY**

The Mini Stock division only, will allow the use of up to two (2) drivers per car, to earn points towards the season long championship.

Neither eligible driver shall have any racing experience that exceeds that of the Mini Stock division. One or both drivers may be rookies.

If at any time Kawartha Speedway determines that a drivers eligibility exceeds the intentions of this rule, all points earned to time of infraction, will be lost.

**LATE MODEL RULES 2010**  
**OPTION 1**  
**ACT LEGAL LATE MODEL WITH ZZ4 1ST EDITION**  
**GM# 24502609 SPEC MOTOR**

**Frame, Chassis & Cages:**

1. Tubular frames on all models main frame rail members shall have a minimum of:
  - i. 10 inch perimeter tubing AND .095 wall thickness
  - ii. 12 inch perimeter tubing
  - iii. 16 inch perimeter tubing .083 wall thickness
2. Sections extending such as front and rear clips must be a minimum of:
  - i. 10 inches in perimeter AND have a minimum of .083 wall thickness and extend 10 inches minimum beyond wheel base.
  - ii. Rear clip must extend beyond fuel cell area.
3. Main frame rails must be no less than 28 inches outside of rail to centre line of chassis.
4. Main frame rails and clips may not be pierced or drilled or otherwise altered for the purpose of reducing weight.
5. Frame and roll cage must be of perimeter design. Maximum off-set allowed is 1 inch from centre line of tread width. All cars required to have a 4 point roll cage constructed of a minimum 1 3/4 diameter, .095 wall tubing. Roll cage must be symmetrical in all directions. Off-set/straight-rail style cars will not be permitted.
6. 4 curved horizontal door bars on driver's side required with minimum of 2 vertical bars between each horizontal bar. Minimum height of door bars 22 1/2 inches from bottom of frame rail. Must be constructed of minimum 1 3/4 diameter, .095 wall tubing.
7. Minimum length of door bars 42 inches.
8. X bars on right side of cage will be allowed.
9. Total height of roll cage to be 40 1/2 inches from bottom of frame rail. Halo to be no less than 1 inch lower. Width of halo to be no less than 46 inches from outside to outside of tubing.
10. Dash bar required, along with an "X" type member across and behind driver.
11. One piece of tubing running perpendicular between halo in top of cage, centred, is required.
12. A so called, "Petty Bar" must be present to support right front corner of halo from collapsing in event of a roll over.
13. Left leg protection bar must be installed between roll cage and left front frame rail.
14. All main cage structure must be constructed of minimum 1 3/4 tubing .095 wall thickness. Material must be D.O.M. or seamless steel.
15. Factory production, stock width front frame clip or a fabricated clip (minimum 2x3 .083 tube) are allowed.
16. Under-slung style rear clip is allowed.

**Interior:**

1. Interior of car must be completely enclosed in respect to engine compartment, track surface, tires and rear fuel cell compartment. Interior panels must be a minimum of .040 thickness aluminum or steel.
2. 20 gauge sheet metal is mandatory 18 inches high at foot firewall, 9 inches high along driver's tunnel and 18 inches high behind seat.
3. Right side interior panel may begin beside drivers seat and extend on an angle to the inner edge of the top of the passenger door panel.

4. A full width dash is required in all cars. Vertical surface of dash must project in a single plane across car. Top horizontal plane of the dash should carry forward to the firewall and enclosed entire area beneath windshield.
5. Only 1 rear view mirror is allowed.
6. **No Side Mirrors Allowed, unless driver is utilizing an approved Head and Neck Restraint.**
7. Roll bar padding mandatory.

### **Eligible Bodies:**

1. ABC/Template style body is mandatory.
2. Bodies that are not ABC are to be template style (eg. Five Star, ARP) and must meet the following criteria. Bodies must be after market made of steel, aluminum or fibreglass. Rubber front and rear bumper covers are recommended. Approved 5 Star/ARP rubber/plastic fenders are recommended.  
**NO CARBON FIBER BODY PANELS ALLOWED.**
  - a) No wedge style, slab side bodies.
  - b) No high performance bodies.
  - c) No DIRT NOSES
3. Following Models allowed:
  - a) Dodge Charger/Intrepid
  - b) Ford Fusion/Taurus
  - c) Pontiac Grand Prix
  - d) Chevrolet Monte Carlo/Impala SS
  - e) Toyota Camry
4. Bodies must meet Kawartha Speedway Tech visual approval. Weight penalties may be imposed at Tech Director's discretion for violations. Only approved bodies will be allowed to compete.
5. Rub Rails are allowed. Must be neat in appearance.
6. All body panels must be complete in length and width. Overall workmanship shall be a determining factor as to whether a car shall be approved for competition. Specified components' compliance to templates and over all level of workmanship and appearance will be considered by technical inspectors.
7. Roof Height will be 47 inches measured from ground to centre of roof 10 inches back from edge of windshield.
8. Front nose height shall be no less than 4 inches above ground.
9. Rocker panels shall be no less than 4 inches above ground.
10. **All heights will be measured with driver in car.**
11. Rear spoiler must be made of .090 minimum thickness smooth aluminum or lexan and be a maximum of 60 inches wide and 5 inches high. If ABC body is not used, the maximum height from ground to top of spoiler will be 39 inches. No side enclosures, no lips, or bends in upper portion of spoiler and must be flush to vertical surfaces of deck lid. Spoilers must be non-adjustable.
12. Hood and trunk must be removable or hinged. If hood is removable, must have at least 4 front pins and 2 rear pins. If hinged, minimum of 4 front pins allowed. If trunk is removable, 4 pins are required, 1 at each corner. If hinged, 2 rear pins will be allowed.
13. A full dimension windshield is mandatory and must be constructed of 1/8 inch minimum thickness lexan. 2 internal windshield braces spaced at least at 5 inch centres and roughly centred in windshield constructed of minimum 1 inch wide by 1/8 inch thick material are mandatory.

14. Models with rear 1/4 windows may have openings covered with securely mounted, solid clear lexan. Rear side windows may have approved air vents.
15. A full dimension rear glass constructed of minimum 1/8 inch thickness lexan is mandatory and must be held securely in place with a minimum of 2 external straps. Back window must be securely braced internally to prevent significant bowing or distortion at racing speed.
16. Side vent windows will be allowed at the A-Post area only. Vent window will measure no more than 6" in any direction. No other vent type or air deflection devices of any sort will be allowed in door window opening area's.
17. A quality paint job is mandatory on all cars with high contrast numbers for legibility, day or night. Bodies must be kept neat and painted at all times. No metallic numbers.
18. A minimum 24 inch high, 3 inch stroke number is required on the door area on both sides of the car. A minimum of 30 inch high, 3 inch stroke number is required on top of roof facing the passenger side of car. A block style number on right head light cover and right tail light covered is required. All numbers must be Kawartha Speedway registered and/or assigned. Number alterations may be required at any time by Kawartha Speedway to avoid duplication.
19. If ABC body is used, all heights and measurements must meet criteria laid out in ABC mounting instructions. These will be the dimensions you will be inspected with. ABC body dimensions will vary from those listed above.

#### **Heights:**

1. Frame heights will be a minimum of 4 inches measured at lowest point of chassis to ground.
2. Engine height will be a minimum of 11 inches measured from centre of crankshaft to ground.
3. Minimum height of Nose and Rocker Panels shall be no less than 4 inches.
4. Minimum height of Roof as measured 10 inches back of windshield shall be no less than 47 inches.
5. Maximum height of Rear Spoiler shall be no greater than 39 inches on body configurations not conforming to ABC body rules.
6. Fuel cell can will maintain a minimum height of 8 inches from ground.
7. ***All heights are measured with driver in car.***

#### **Suspension, Steering and Brakes:**

1. All cars will have a minimum wheelbase of 104 ½ inches measured from centre of lower ball joint to centre of rear end housing.
2. Maximum tread width will be 64 1/2 inches front and rear.
3. Any type of front steering is allowed. Steering box or rack & pinion are allowed. After market steering components are allowed.
4. Any type lower control arm assembly allowed.
5. Tubular upper control arms of any type are allowed.
6. One shock, one spring per wheel. Any type spring and shock assembly allowed. Shock brand must be KONI, and the following numbers will be permitted: KON30-7436, KON30-7325, KON30-9436, KON30-9325, KON30-7647. Spring Rubbers are allowed.
7. ***Bump Stops located within shock shafts or on any part of the suspension, will not be allowed. Chain link devices may be used on front suspension to limit travel.***
8. Any spindle made of steel allowed. Any removable steering arms must be made of steel.
9. Any racing type hubs made of steel or aluminum are allowed. 5x5 or wide 5 bolt patterns

allowed.

10. Any style front sway bar allowed. Must be mounted on main frame rails of front clip and work off of the lower control arms.
11. Rear ends must have floating type bearing and hub such as quick change or Ford floater. No cambered rear ends allowed. Rear wheels must be driven with solid flange drive plates. No elastic drive plates allowed. Gun-drilled axles are allowed. Limited slip or ratchet type differentials of any type are not allowed. NO TITANIUM PARTS ALLOWED.
12. 3 point type rear suspension mounting allowed. Rear trailing arms may use rubber bushings and/or heim joints. Upper link pivot with heims or rubber bushings only, will be allowed. No fifth coils, no Watts linkage, no torque arms and no mechanical devices to transfer weight while car is in motion. No Spring rods of any type allowed. No Dual Action upper links allowed.
13. Solid tubular pan hard bar only. One bar, 2 adjustable heim joints only.
14. Brakes (all 4) must be single piston callipers made of steel and all 4 must be in good working order. Brake rotors must be a minimum of 3/4 inch thick and made of steel. Master cylinders and pedals of any type allowed. No brake re-circulators allowed.

### **Gear Rule:**

Final drive ratio may not be greater than 5.15

### **Weight:**

1. All weights include driver (no substitutes).
2. All cars using KAWARTHA / OTTAWA /ACT / CASTROL Series CRATE MOTOR option will be allowed 56% left side maximum and will maintain a minimum weight of 2850 lbs.
3. Ballast weight must be securely attached to main frame rail or major cross member structure. No lead shot or liquid type ballast permitted. Ballast to be in blocks of no less than 5 pounds.
4. There will be NO spent fuel allowance for regular heat races and feature events.
5. INVITATIONAL EVENTS of 100 laps or greater will give a spent fuel allowance of 75 lbs.
6. Track scales will be considered final.

### **Fuel Cells:**

1. Fuel cells mandatory and must be approved by Technical Inspector. Minimum 15 gallon capacity required; maximum 22 gallon. It is mandatory that the fuel cell be enclosed in a 20 gauge, welded steel box with a bolt on cover, constructed of 20 gauge steel. Fuel cell must be protected in back by .095, 1 3/4 O.D. tubing. Check valve vent is required on all fuel cells.
2. Fender mounted fuel filler (if used) must face to the inside of the track.
3. Fuel pump must be mechanical. No electric fuel pumps.
4. Any fuel line passing through interior must be inside steel tubing. No plastic or glass fuel filters.
5. All cars must have a fully operational fuel shut off valve mounted in the main fuel line. Fuel shut off must be accessible to both driver and safety crews.

### **Tires and Wheels:**

1. All wheels must be after market racing type wheels made of steel. Wheels will be a maximum width of 8 inches, bead to bead.
2. Specified track tire mandatory on all 4 wheels. Tires will be available at track.
3. A durometer rule will be in effect regarding minimum tire hardness.

4. Tire relief valves are allowed.
5. **Teams may purchase 6 tires opening night. 1 tire per night there after. For events of 100 laps or more, teams may purchase 4 tires. New tires purchased weekly, must be on car before Semi-Feature or Consi.**

#### **Transmissions, Clutches and Drive Shafts:**

1. KAWARTHA / OTTAWA / ACT / CASTROL Series CRATE MOTOR OPTION may use the following clutch package: Any Aluminum bell housing and the following Quarter Master part # QUA298103A 7 1/4 " 2 disc clutch assembly
2. Starter's must be operational and mount in stock location. No reverse mount starter's allowed.
3. Transmission must be a stock OEM type standard 3 or 4 speed, with all gears working. Automatics will be allowed with approval from Tech Director.
4. Shifter may be any type.
5. Drive shafts must be steel and painted white.
6. Two drive shaft loops to fully enclose drive shaft are mandatory. Loops must be no less than 1 inch wide and 1/8 inch thick and must be fastened to chassis front and rear.

#### **Engines and Exhaust:**

**KAWARTHA / OTTAWA / ACT / CASTROL Series  
SPEC MOTOR # GM 24502609**

This engine must be purchased through the above mentioned tracks or series.

Engine make and body make may be interchanged.

Centerline of engine must remain within 1/2" of centerline of tread width.

Engine must be mounted with foremost spark plug even or ahead of a line projected across upper ball joints.

Engine height will be a minimum of 11 inches as measured from centre of crankshaft to ground. (with-out driver in car)

1. CARBEURATOR: 500 CFM 2BBL Holley #4412. Carb adapter and gasket combined thickness must not exceed 1.25 inches. Carb will be subject to GONO GO guage inspection, top and bottom. **The only carb spacer's approved for this motor are the Canton # 85060 and the MOROSO #64964**
2. Spec Motor may run any size header. Headers may be stepped. 180 Headers, Tri-Y, and HOWE Iron Lung Headers are not allowed. Crate motor may run 2 into 1 exhaust muffler system such as HOWE type 5 inch muffler.
3. Mufflers are mandatory.
4. Exhaust must exit behind driver outside the body or maybe turned down to exit under the car.
5. **MSD ignition is allowed. The following MSD distributors will be allowed: MSD 85551, 8570, 85561. (The 8570 is recommended) The following Spring and Stop part number is allowed: MSD 8464**
6. **The following Roller Rocker Arms will be allowed GM#12367345 or GM Set #12370838 or Scorpion #1035BL. All rocker arms are 1.5 ratio.**

Please contact speedway for information on all crate motors regarding required part number, allowable components, purchase of, sealing of, freshening of and availability. If your motor (built or spec) has been properly sealed by the party approved by Kawartha Speedway, American-Canadian Tour or the Quebec LMS Series CASTROL, and that documentation is verified, you will be legal to compete and not be subject to tear down. This does not make you exempt from any inspection that can be performed with out breaking seals. Nor will it exempt competitors from exchange programs or engine dyno programs deemed necessary by Kawartha Speedway

***ANY INCONSITENCIES FOUND WITHIN ANY CRATE MOTOR APPLICATIONS WILL RESULT IN FORFEIT OF ALL POINTS EARNED TO THAT POINT OF SEASON, FORFIET OF MONIES AND POINTS EARNED IN EVENT, AND DISQUALIFICATION FOR REMAINDER OF SEASON. CRATE MOTOR VIOLATIONS WILL NOT BE TOLERATED!!!***

**Safety Requirements:**

1. All drivers must wear approved safety helmets (minimum Snell 2005 standard).
2. Fire retardant suit is mandatory. Fire retardant gloves are mandatory and fire retardant shoes are highly recommended.
3. Aluminum racing seat mandatory.
4. Driver's seat must appear as close to stock position as possible. Seat must be securely fastened to roll cage and frame members.
5. Quick release aviation type, minimum 3 inch safety belts required. Shoulder harness must be fastened to roll cage. Belts may be no older than 3 years prior to date of competition.
6. An approved driver's window net is mandatory.
7. It is mandatory that a 21/2 pound fire extinguisher with gauge, aluminum head and steel mounting bracket and be attached to the car's interior on driver's right side. Extinguisher must be with in reach of driver and accessible to safety crews from both sides. On board fire system highly recommended.

***OPTION 2 for  
BUILT MOTORS & 400 CRATES***

***Items listed in this section are specific to these motor combinations. For any items not listed here, refer back to OPTION 1.***

**Frame, Chassis & Cages:**

REFER TO OPTION 1

**Interior:**

REFER TO OPTION 1

**Eligible Bodies:**

REFER TO OPTION 1

**Heights:**

REFER TO OPTION 1

**Suspension, Steering and Brakes:**

REFER TO OPTION 1

### Gear Rule:

Final drive ratio may not be greater than 5.67.

### Weight:

1. All weights include driver (no substitutes).
2. **All cars using a "Built Motor" with a compression ratio up to 10:1 will weigh 8.25 pounds per cubic inch with a minimum weight of 2975 lbs. These cars will be allowed 55% left side max.**
3. **Any car with a compression ratio of 10:1 to a maximum to 10.9:1 will carry an extra 50 pounds. (3025 lbs.) These cars will be allowed 55% left side maximum.**
4. **All cars using Flamboro / Delaware (88958604) 400 Fast Burn CRATE MOTOR option will maintain a minimum total weight of 2975 lbs. These cars will be allowed 55% left side maximum**
5. Ballast weight must be securely attached to main frame rail or major cross member structure. No lead shot or liquid type ballast permitted. Ballast to be in blocks of no less than 5 pounds.
6. There will be NO spent fuel allowance for regular heat races and feature events.  
**INVITATIONAL EVENTS of 100 laps or greater will give a spent fuel allowance of 75 lbs.**
7. Track scales will be considered final.

### Fuel Cells:

REFER TO OPTION 1

### Tires and Wheels:

REFER TO OPTION 1

### Transmissions, Clutches & Driveshafts:

1. All "BUILT MOTORS" may use a stock type replacement Clutch and Flywheel. (Corvette Style or SVO flywheel with minimum weight of 14 pounds). No 10, 000 RPM style. Steel shatterproof bell housing is mandatory. Clutch and pressure plate must be a minimum 10 inch diameter. "Stock Type" pressure plate and clutch disc required. "BUILT MOTOR" may also utilize a multidisc clutch option (may be no smaller than 5 ½ inches) and carry a 25 lbs. penalty. Steel bell housing must be used.
2. FLAMBORO /DELAWARE (88958604) CRATE MOTOR OPTION may use any multi-disc clutch assembly not smaller than 5 1/2" and carry a 25 lbs. penalty. Eg. Quarter Master, Tilton. Steel bell housing must be used.
3. Starter's must be operational and mount in stock location. No reverse mount starter's allowed.
4. Transmission must be a stock OEM type standard 3 or 4 speed with all gears working. Automatics will be allowed with approval from Tech Director.
5. Shifter may be any type.
6. Drive shafts must be steel and painted white.
7. Two drive shaft loops to fully enclose drive shaft are mandatory. Loops must be no less than 1 inch wide and 1/8 inch thick and must be fastened to chassis front and rear.

### Engines and Exhaust:

FLAMBORO / DELAWARE CRATE MOTOR

# GM 88958604

This engine may be purchased through any dealership or supplier available, and must retain OEM crate motor "twist off bolts" to verify engine has not been opened up with out approval of tracks or series.

Engine make and body make may be interchanged.

Engine must be mounted with foremost spark plug even or ahead of a line projected across upper ball joints. Centerline of engine must remain within 1/2" of centerline of tread width.

Engine height will be a minimum of 11 inches as measured from centre of crankshaft to ground.

**"BUILT MOTOR OPTION"**

1. Maximum cubic inch displacement allowed: GM 350, Ford 351, and Chrysler 360. Maximum overbore allowed .060.
2. Maximum compression ratio 10.5 to 10.9:1.
3. Bore and Stroke must be factory spec (example: 350 Chev-3.48 stroke x 4 inch bore). No stroked or destroked motors.
4. Crankshaft: Stock or after market crankshafts will be allowed with a minimum weight of 48 pounds. No knife-edging or bull nosing of crank.
5. No dome pistons. Only flat top or dished pistons are allowed. Pistons cannot protrude above the deck of the block.
6. No aluminum connecting rods or engine blocks.
7. Any hydraulic or mechanical flat tappet camshafts are allowed. No mushroom or roller camshafts. Must maintain stock diameter lifter and lifter bore for that make and model of engine. No gear drive or belt drive systems.
8. Roller rockers allowed. Stud girdles allowed. No shaft rockers on Ford or GM.
9. Cast Iron Cylinder Heads Only. No polishing, coating or porting of heads. No angle plug heads except Ford and Chrysler. DART heads as specified are allowed. Any machine work must be concentric to the valve stem. No relieving about or below the head of the valves. No un-shrouding of the valve pocket. No IRON EAGLE, BOW TIE or VORTEC heads with casting number 292 or W Series heads. SVO head part number 6059L302-GT40 allowed with maximum valve size: intake 1.94, exhaust 1.60. Head dimensions must be stock as produced.

MOPAR

g) # P4529269

h) # P5249574 (Casting # 4448308 unported) Will be allowed.

DART HEADS

a) Sportsman 2 (straight plug only) casting # 1-307

b) #4350 casting # 1-052

c) #4360 casting # 1-052

d) #4266B and #4267B

e) #5302B casting # 1-056 Ford Windsor

f) #5303 casting # 1-056 Ford Windsor Jr. with maximum valve size of 2.02

10. The maximum valve sizes as measured across the face of the valve are as follow:

Model	Intake	Exhaust
GM	2.02	1.65
Ford (Windsor)	1.94	1.65
Chrysler	2.02	1.65

Screw-in studs, guide plates, stud girdles, and 3 angle valve jobs are allowed. No titanium valves. Valves must be identical in appearance and construction as OEM valves. Stem diameter must have a minimum of 11/32 inch (.343). Stem may be under cut to a minimum diameter of 5/16 inch (.312) from the valve head to the bottom of the valve guide. Titanium retainers and keepers are allowed.

11. All intake manifolds must be Edelbrock Performer Series. These manifolds must remain as manufactured. No port matching or flow work permitted. Older design manifolds with same part number are not permitted. Carburetor holes in spacer must be located in centre of intake holes.

Edelbrock Part #'s:

GM # 2102

Chrysler # 2176

Ford #2750 or #2181

12. CARBEURATOR: 500 CFM 2BBL Holley #4412. Carb adapter and gasket combined thickness must not exceed 1.25 inches. Carb will be subject to GO-NO GO guage inspection, top and bottom.
13. Headers allowed.
  - a) No stepped headers
  - b) Header tubing must be a maximum of 1 5/8 inch O.D.
  - c) No 180 degree headers allowed. No Iron Lung headers.
  - d) Equalizer pipe is allowed.
14. Mufflers are mandatory. Magnaflow # 11219 is recommended.
15. 2 into 1 style exhaust system is allowed with maximum 5 inch muffler. Eg. HOWE Style.
16. Exhaust must exit behind driver outside the body or maybe turned down to exit under the car.
17. No magnetos allowed.
18. Electrical system must have a main SHUT OFF SWITCH mounted within reach of the driver and easily accessible for safety crews.
19. No external oil pumps allowed.

### ***“604 CRATE MOTOR OPTIONS”***

***\*\*\*Exceptions not outlined above\*\*\****

FLAMBORO /DELAWARE (88958604) 400 Fast Burn

1. Headers may have a primary tube no bigger than 1 3/4 diameter.
2. Headers may be stepped.
3. Maximum size of collector must not be greater than 3 inches.
4. 180 Headers, Tri-Y, and HOWE Iron Lung Headers are not allowed.
5. Crate motor may run 2 into 1 exhaust muffler system such as HOWE type 5 inch muffler.
6. Crate motor must run 500 cfm Holley two barrel carb. As approved by Kawartha Speedway Technical Officials. Carb will be subject to GO-NO Go gauges top and bottom.
7. Crate motor must run a steel bell housing.

### **Safety Requirements:**

REFER TO OPTION 1

**OPTION 3  
ALLOWANCES FOR FORMER  
LIMITED LATE MODEL**

*Items listed in this section are specific to these style cars and motor combinations. For any items not listed here, refer back to OPTION 1.*

**Frame, Chassis and Cages:**

REFER TO OPTION 1 for items in sections 1 and in sections 3-19

1. This option is eligible to cars carrying a front frame section constructed of 2 x 4 tubing with an .095 wall thickness, or a car carrying a stock factory production front frame section. If stock factory front frame section is used, stock front frame rails must extend from in front of steering box rearward and attach to main frame rails.

**Eligible Bodies:**

REFER TO OPTION 1

**Heights:**

REFER TO OPTION 1

**Suspension, Steering and Brakes:**

1. All cars will have a minimum wheelbase of 104 ½ inches measured from centre of lower ball joint to centre of rear end housing.
2. Maximum tread width will be 66 inches front and rear.
3. No Rack & Pinion steering allowed. Stock type steering box required. After market steering components allowed
4. ***Lower control arms must be steel and stock type and mounted in stock location. Lower control arms may be fabricated and may be different length's side to side to achieve desired camber.*** Measurement from grease fitting to inner mounting point of control arm must have no more than a 1" variance from stock length in either direction. Inner pivots of lower control arms may be rubber bushing, urethane bushing, or steel mono-ball. Ford lower strut arms may use heim joints.
5. Tubular upper control arms are allowed. Control arm must be steel with the exception of the cross shaft, which may be aluminum.
6. One shock, one spring per wheel. Any type spring and shock assembly allowed. Shock brand must be KONI, and the following numbers will be permitted: KON30-7436, KON30-7325, KON30-9436, KON30- 9325, **KON30-7647**
7. Spindles must be steel and may be fabricated.
8. Hubs must be stock type. Hubs may be aluminum. Hubs may be 2 piece hub and rotor assemblies. Wheel studs must be a minimum of 5/8". Hubs may be floater type. 5x5 Hubs only. Wide 5 hubs are not allowed.
9. Sway bar must be mounted on bottom side of front clip and work off of the lower control arms.
10. Rear ends may have floating type bearing and hub assemblies. ***Ford 9" or Quick change rear ends may be used.*** Axle tubes must be steel. Gun-drilled axles are allowed. Spools may be steel or aluminum. Ford 9" carrier (differential housing) may be aluminum. No cambered rear ends allowed. Rear wheels must be driven with solid flange drive plates. **NO TITANIUM PARTS ALLOWED.**
11. 3 point type rear suspension mounting allowed. Rear trailing arms may use rubber bushings and/or heim joints at mounting points. Upper link pivot with rubber bushings

allowed. Any type of spring devices located in trailing arms or upper link will not be permitted. No Dual Action upper links allowed. No fifth coils, no Watts linkage, no torque arms and no mechanical devices to transfer weight while car is in motion.

12. Solid tubular pan hard bar only. No rubber or spring devices located within bar allowed. One bar, 2 adjustable heim joints only.
13. Brakes (all 4) must be single piston callipers made of steel and all 4 must be in good working order. Brake rotors must be a minimum of 3/4 inch thick and made of steel. Master cylinders and pedals of any type allowed. No brake fluid re-circulators allowed.

### **Gear Rule:**

Final drive ratio may not be greater than 5.67.

### **Weight:**

1. All weights include driver (no substitutes).
2. **All cars with "Option 3 Built Motor" with maximum of 10-1 comp. ratio must weigh a minimum of 2850 lbs with a 56% left side maximum**
3. All cars with "**Option 3 Crate Motor**" (GM 88958602) will weigh a minimum of 2775 lbs. with a 57% left side maximum.
4. Ballast weight must be securely attached to main frame rail or major cross member structure. No lead shot or liquid type ballast permitted. Ballast to be in blocks of no less than 5 pounds.
5. There will be NO spent fuel allowance for regular heat races and feature events.
6. INVITATIONAL EVENTS of 100 laps or greater will give a spent fuel allowance of 75lbs.
7. Track scales are considered final.

### **Fuel Cells:**

REFER TO OPTION 1

### **Tires and Wheels:**

REFER TO OPTION 1

### **Transmissions, Clutches and Drive Shafts:**

1. **OPTION 3 Built Motors** may use a stock type replacement Clutch and Flywheel. (Corvette Style or SVO flywheel with minimum weight of 14 pounds). No 10, 000 RPM style. Steel shatter-proof bell housing is mandatory. Clutch and pressure plate must be a minimum 10 inch diameter. "Stock Type" pressure plate and clutch disc required
2. **OPTION 3 CRATE MOTOR** may use the following clutch package: Any Aluminum bell housing and the following Quarter Master part # QUA298103A 7 1/4 " 2 disc clutch assembly
3. Starter must be in stock position and functional.
4. Transmission must be stock OEM unaltered standard 3 or 4 speed with all gears working.
5. Shifter may be any type.
6. Drive shafts must be steel and painted white.
7. Two drive shaft loops to fully enclose drive shaft are mandatory. Loops must be no less than 2 inch wide and 1/4 inch thick and must be fastened to chassis front and rear.

### **Engines and Exhaust:**

**Sealed Crate Motor # GM 88958602 will be allowed as OPTION 3 Crate Motor.**

Engine make and body make may be interchanged.

Engine must be mounted with foremost spark plug even or ahead of a line projected across upper ball joints.

Engine height will be a minimum of 11 inches as measured from centre of crankshaft to ground.

### OPTION 3 BUILT MOTOR

1. Maximum cubic inch displacement allowed: GM 350, Ford 351, and Chrysler 360.
2. Maximum overbore allowed is .060.
3. Maximum compression ratio 10 : 1 on teardown and 10.4 : 1 on the whistler.
4. Bore and Stroke must be factory spec (example: 350 Chev-3.48 stroke x 4 inch bore). No stroked or destroked motors.
5. Crankshaft must be stock OEM type only.
6. No dome pistons. Only flat top or dished pistons are allowed. Pistons cannot protrude above the deck of the block.
7. No aluminum engine blocks.
8. Stock type connecting rods only. 6" connecting rods are allowed.
9. Harmonic balancer must be OEM steel elastomer-type balancer only. No aluminum or fluid damper balancers allowed.
10. Any hydraulic flat tappet camshafts. No mechanical. No mushroom or roller camshafts. Off-set camshaft key is allowed. Must maintain stock diameter lifter and lifter bore for that make and model of engine. No gear drive or belt-drive systems.
11. **Roller rockers are allowed. 1.5 ratio only.** Rockers and push rods to be stock for engine. Screw in studs and guide plates allowed. No stud girdles allowed. No rev kits allowed.
12. Stock OEM or World Products Cast Iron Straight Plug Cylinder Heads Only. No polishing, coating or porting of heads. GM angle plug heads are not allowed. GM heads with 292 casting number are not allowed. Vortec heads are not allowed on built motor option. World Products cylinder head part #43600-1, #43610-1, casting #1-052 or Dart SR heads are allowed for GM. Any machine work must be concentric to the valve stem. No relieving about or below the head of the valves. No un-shrouding of the valve pocket.
13. Maximum intake runner volume for both brands of head is 170 cc.
14. HEADS:
  - GM Max. Valve size In. 1.94- Ex. 1.60
  - Ford Cleveland Max. Valve size In 2.04- Ex. 1.65
  - Windsor Max. Valve size In. 1.94- Ex. 1.64
  - Chrysler Max. Valve size In. 1.88- Ex. 1.60
22. Stainless steel or stock type valves allowed. No titanium valves. No turning of valve stems. An undercut valve may be used. Ball method will be used to test valve stem to seat clearance. Ball size is .787 for intake and .531 for exhaust.
23. 1.5 rocker arm ratio allowed on Chevrolet engines. 1.6 rocker arm ratio allowed on Ford engines. Valve springs must be stock diameter.
24. INTAKE MANIFOLDS: The following Edelbrock #'s are allowed,
  - i. GM 2101
  - ii. Chrysler 2176
  - iii. Cleveland 2750
  - iv. Windsor 2181

These manifolds must remain as manufactured. No port matching or flow work permitted.  
1st design manifolds with the same part numbers are not permitted.

18. No external oil pumps allowed. FORD motors only may run single stage external oil pump.
19. Battery operated 12 volt ignitions only. Electrical system must have a MAIN SHUT OFF SWITCH mounted within reach of driver and accessible by safety crews.
20. Carburetor may be a Holley 600 cfm 4 BBL *Carb adapter and gasket combined thickness must not exceed 1.25 inches. Carb will be subject to GO-NO GO guage inspection, top and bottom.*
21. **OPTION 3 Built Motor Headers:**
  - a) No stepped headers
  - b) Header tubing must be a maximum of 1 5/8 inch OD
  - c) No 180 degree headers allowed. No Iron Lung headers.
  - d) No TRI-Y Headers
22. **OPTION 3 Crate Motor Headers:**
  - a) Headers may be stepped
  - b) Header tubing may be any size
  - c) No 180 degree headers.
  - b) No Iron Lung headers.
  - c) No TRI-Y Headers
23. 2 into 1 exhaust muffler systems such as HOWE type 5 inch muffler are allowed.
24. Mufflers are mandatory. Exhaust must exit behind driver outside the body or may be turned down to exit under car behind driver.

“CRATE MOTOR OPTIONS”

**\*\*\*Exceptions not outlined above\*\*\***

1. In order to achieve clearance to the race track the Crate Motor (GM 88958602) option may upgrade oil pan to the following : CHAMP Pan part# CP100 – 7RB Louvered Tray Pan with no Kick-Out
2. 6 3/4” Harmonic Balancer Allowed

**ANY INCONSISTENCIES FOUND WITHIN ANY CRATE MOTOR APPLICATIONS WILL RESULT IN FORFEIT OF ALL POINTS EARNED TO THAT POINT OF SEASON, FORFEIT OF MONIES AND POINTS EARNED IN EVENT, AND DISQUALIFICATION FOR REMAINDER OF SEASON. CRATE MOTOR VIOLATIONS WILL NOT BE TOLERATED!!!**

**Safety Requirements:**

REFER TO OPTION 1

**THERE WILL BE NO MIXING AND MATCHING BETWEEN OPTIONS 1, 2 OR 3 FOR THE LATE MODEL DIVISION.**

**ITEMS OUTLINED WITHIN EACH OPTION MUST COMPLY WITH ALL OTHER ITEMS AVAILABLE WITHIN EACH OPTION**

**PLEASE NOTE THAT OPTION 3 IS DESIGNED TO HELP INTEGRATE FORMER LIMITED LATE MODELS AND MAY BE ADJUSTED IN THE INTEREST OF PARITY AS WE MOVE FORWARD.**

## THUNDER CAR RULES 2010

This division is open to any North American built passenger car. No station wagons, convertibles or trucks allowed.

### Frame, Chassis & Cage:

1. All roll cage material must be a minimum of 1 ¾ tubing. Wall thickness can be no less than .095 inch thick.
2. All cars are required to have a minimum 4 point roll cage. Roll cage must be symmetrical in all directions.
3. Minimum of 4 curved, horizontal door bars required on drivers side with a minimum of two vertical bars between each horizontal bar.
4. "X" type bars will be allowed on passenger side.
5. Dash bar required, along with an "X" type member across and behind driver. A so called "Petty" bar must be present to prevent right front corner of halo from collapsing in the event of a rollover. Left leg protection bar must be installed between roll cage and left front frame rail.
6. A front engine bay hoop is allowed and may connect directly to main cage.
7. Bracing running from top of cage towards the rear, should extend beyond fuel cell area before attaching to rear frame rails.
8. Roll cage must be professional looking and electrically welded. Subject to Tech Inspector's approval.
9. Main frame must be completely stock. **Original Main Frame Rails must be maintained.** All suspension mounting points must remain in their stock locations.
10. Front cross member may have snout removed and plated for center link clearance. **Cross member may also be notched to achieve engine height rule.**
11. Structural X ing will be permitted in the following areas of the chassis. Main frame rails may have X bracing under the floor in the center section of the car. Rear clip may have X bracing above or under the fuel cell area. Downward supports from main cage hoop to rear clip may have X bracing.
12. Rear frame sections may have 2"x3" replacement tubing from top of kick-up rearward. Must retain original appearance and be approved by Kawartha Inspectors.
13. Front and Rear sub frames, or uni-body frames, must be connected with 2x3 rectangular tubing.

### Bodies:

1. All body panels must be steel with the exception of Hoods and Trunk Lids. **Door skins, lower portion of rear quarter panels and front fenders may be fabricated. Doors must be steel. Lower portion of quarter panels and fenders may be aluminum. Original dimensions must be maintained.** Aftermarket bodies such as 5-Star Monte Carlo panels may be used. Chassis must maintain original location points for all components such as suspension and drive train, regardless of body used.
2. Body must be complete with all components. All chrome mouldings, door handles, nameplates and lights must be removed.
3. Original wheel openings may be trimmed conservatively for tire clearance. Front inner fender panels may be removed.
4. All doors must be welded or bolted shut. 20 guage steel is recommended between door skin and door bars on drivers side.
5. Inner hood bracing may be removed. If original hood hinges are used, 2 front hood pins

are required. If hinges are not used, hood must have 4 pins. Hoods may be steel or Fibreglass.

6. Inner trunk bracing may be removed. If hinged, trunk must have 2 pins. If not hinged, 4 pins are required. Trunk lids may be steel or Fibreglass.
7. Stock appearing bumpers for make and model must be used. Bumpers must be in stock position. After-market bumper covers may be used subject to approval of Kawartha Tech inspectors.
8. Stock windshield is allowed. Lexan replacement is recommended. 4 safety clips mandatory—2 at top of window and 2 at bottom of window. Cars must have front windshields. Rear window and side windows are optional. Top 5 inches of front windshield must be left available for Kawartha Speedway divisional sponsors
9. A maximum 5 inch rear spoiler with no bracing is allowed. Spoiler width may be no wider than rear deck of car.
10. Rub Rails will be allowed. Must be neat in appearance.
11. Minimum height of all body components will be 6" from the ground measured without driver in car.
12. A quality paint job is mandatory on all cars with high contrast numbers for legibility, day or night. Bodies must be kept neat and painted at all times. No metallic numbers.
13. A minimum 24 inch high, 3 inch stroke number is required on the door area on both sides of the car. A minimum of 30 inch high, 3 inch stroke number is required on top of roof facing the passenger side of car. A block style number on right head light cover and right tail light cover is required. All numbers must be Kawartha Speedway registered and/or assigned. Number alterations may be required at any time by Kawartha Speedway to avoid duplication.
14. Truck body's will be allowed to compete at INVITATIONAL EVENTS only. Subject to Kawartha Inspector's approval.

### Interior:

1. All upholstery materials, trim and padding must be removed.
2. Front and rear firewalls must have all holes and openings covered with **sheet metal/aluminum**. Area between fender and firewall must be filled with **sheet metal/aluminum**. Front firewall may be fabricated but must remain in stock location. Pedals must remain in stock location.
3. Any holes or openings in the floor pan must be covered with steel .022 sheet metal. Original steel floor pan must be retained on drivers side of interior. A fabricated interior may be used on the passenger side of car. For transmission clearance passenger side floor pan may be raised 12" above original position of drivers floor pan. Passenger side floor may drop back down to original height or maintain height of 12" to passenger door. Rear firewall may be fabricated. Rear firewall may start behind seat at base of roll cage and extend rearward to base of rear window opening. Rear firewall may not exceed height of rear deck. **Front firewall, transmission tunnel to drivers right and rear firewall directly behind the driver must be a minimum of .022 steel. All other interior pieces may be built with a minimum of .040 aluminum.**
4. Original trunk floor and rear wheel arches may be removed.
5. Only one stock type factory mirror is allowed. No outside mirrors.
6. Roll bar padding is mandatory.

### Heights:

1. Minimum frame height 6 inches measured from ground to lowest point of frame. Heights

will be checked with driver out of car.

2. Engine height will be a minimum of 12 inches measured from ground to centre of crankshaft.

***Cross member may be altered to achieve crank height. Engine may not be moved left/right of original location. Engine may be moved back within 1" of original location.***

### **Suspension, Steering & Brakes:**

1. No modification of stock suspension locating points. Rear spring mounts may be fabricated but must be in factory location, and be non-adjustable.
2. Wheel base must be a minimum of 101"
3. Maximum tread width will be 64" front and rear.
4. Springs and steering components may be interchanged. ***Unless indicated otherwise, all suspension components must remain stock.***
5. All control arm rubber bushings may be replaced with urethane or heavy plastic. Steel, aluminum, brass and mono-ball type bushings will not be allowed.
6. No adjustable sway bars. Link kit lengths may vary side to side.
7. Welded or locked rear ends permitted. Mini-spool permitted. No aluminum or full spools allowed. No Posi-Track rear ends allowed.
8. Rear end housings may be interchanged year to year. (eg. 8 1/2" may be used to replace 7 1/2")
9. Tubular upper control arms may be used. Mounting points must remain stock. Lower A-Frames may be modified within 1 inch of stock length either shorter or longer. Cars utilizing strut type spring and shock assemblies may alter front strut towers to achieve allowable camber
10. Springs may be stock or after market with a minimum size of 4 inch outside diameter.
11. After-market, adjustable front spring spacers, will be allowed. Load Bolts will be allowed on Rear Springs ONLY. Multi-hole spring shackles will be permitted on leaf spring applications.
12. ***After-market racing shocks will be allowed, but must be stock type replacement. All shocks must be steel, non-adjustable and nonrebuildable. Front shocks must be stock mounting and must be located in original position.***
13. Brakes must work on all 4 wheels. Rotors, callipers and spindles may be used from different models. Single piston, steel callipers, must be used. No brake bias adjusters or equipment that would allow brake biasing to be accomplished. No proportioning valves allowed in brake system. Factory stock, rear disc brakes will be allowed if drum brakes are not available for specific make and model. Any car needing to utilize this option, in a rear wheel drive car, will carry a 50 lbs. weight penalty.

### **Gear Rule:**

Final drive ratio may not exceed 5.40 If running a Power Glide Transmission, maximum rear end gear allowed will be 2.73 All other transmissions will have a maximum rear end gear of 3.23

### **Weight:**

1. All cars must weigh a minimum of 3150 pounds for any V-8 powered cars. (Driver Included)
2. Maximum left side weight will be 53%. (Driver Included)
3. Maximum rear weight will be 45%. (Driver Included)
4. ***Any car utilizing Crate Motor Option GM 88958602 must weigh a minimum of 3050***

**pounds. (Driver Included) This is subject to change in the interest of competition.**

5. Any car running a fuel injected V-8 will carry a 100 lbs. penalty. This is subject to change in the interest of competition.
6. Any car competing with a V-6 engine will weigh a minimum of 2800 lbs. and maintain a maximum of 55% left side and a maximum of 50% rear weight. (Driver Included) This is subject to change in the interest of competition.
7. All weights will be checked with driver in car—no substitutes.
8. All ballast will be in blocks of no less than 5 pounds.
9. Any cars wanting to utilize a Rochester 2 bbl. Carb will be allowed 55% left side and 50% rear.

### **Fuel Cells:**

1. Fuel cells are mandatory.
2. Fuel cell maximum capacity—15 gallons.
3. Fuel cell must be mounted in centre of trunk area.
4. Fuel cell must be separated from driver with an all steel firewall.
5. No gas fillers allowed outside of body.
6. A fuel cell protection bar is mandatory. Minimum 1 3/4 inch O.D. .095 inches thick.
7. Fuel cell must be secured to floor of trunk with a minimum of 2 straps. Straps must be a minimum of 1" x 1/8" flat steel or equivalent.
8. Bottom of fuel cell may be no lower than 13" from ground to bottom of cell. Fuel cell must be centered between frame rails.
9. Fuel lines must be neoprene or steel. Lines must be securely fastened out of driver's compartment.
10. Steel cased fuel filters only.
11. No electric fuel pumps unless a fuel injected vehicle is being used.
12. All cars must have an operational fuel shut off valve mounted in the main fuel line that is easily accessible by driver and safety crews.
13. Pump gas or track fuel only.

### **Tires and Wheels:**

1. Racing style wheels are mandatory. Steel only.
2. Maximum width will be 8 inches measured from bead to bead.
3. 15 inch diameter wheels only.
4. Heavy duty 5/8 inch wheels studs are mandatory on right side of car.
5. All cars will be required to use track tire.

### **Transmission, Clutches & Driveshaft:**

1. Automatic transmissions only. Transmissions must be factory available for year, make and model car.
2. Standard transmission may be used if engine size is 3.5 litres or less. In this instance transmission, clutch and flywheel must be factory stock for application, and scatter shield protection must be used.
3. Solid transmission mount may be used.
4. No after market valve bodies or manual valve bodies allowed.
5. Power-glide transmissions will be allowed. All cars with power-glide transmission will carry a 50 lbs. penalty.
6. Torque converters must be stock. Must be a minimum of 11" diameter for 8 cylinder engines.

7. After market shift kits and shifters allowed.
8. Drive shafts must be stock, steel and painted white.
9. Two steel drive shaft loops to fully enclose drive shaft are mandatory. Loops must be no less than 2 inch wide and 1/4 inch thick and must be fastened to chassis front and rear.

**Engines and Exhaust:**

***The following CRATE MOTOR OPTION will exist at KAWARTHA SPEEDWAY IN 2009. Crate Motor # GM 88958602 will be allowed.***

***All internal components of this engine package will be inspected in accordance to the specs outlined from GM. This motor (other than internal specs) will be subject to all other criteria as outlined in the Engines and Exhaust section.***

***Crate Motor Option may run a 4412 Holley 2BBL carb as outlined in this section.***

***Crate Motor Option will receive a 100 pound weight break. This is subject to change in the interest of competition.***

**BUILT MOTOR OPTION**

1. Maximum cubic inch allowed: GM 350 Ford 351 Chrysler 360 (maximum overbore .040 allowed for clean up)
2. No modifications to engine block, cylinder head, crankshaft, camshaft or connecting rods unless specified.
3. Block may be zero decked. No part of the piston can protrude above block deck.
4. OEM cast or forged pistons are allowed. No high performance pistons.
5. OEM style hydraulic camshaft and lifters only.  
 Maximum Valve Lift:        GM    410    Int. or Exh.  
                                       Ford  419    Int. or Exh.  
                                       Dodge  412    Int. or Exh.
6. Double roller timing chain allowed.
7. Cylinder head must be stock for engine being used. No modifications to cylinder head allowed. Double Bump style heads are not allowed. 202 cylinder heads or Vortec V-8 heads are not permitted.
8. Cylinder head may be changed from year to year provided they are not high performance.
9. Compression limit 9.0:1 on tear down and 9.4:1 with the whistler.  
 Maximum valve size –  
 GM Int.        1.94    Exh. 1.60  
 Cleveland Int. 2.04    Exh. 1.65  
 Windsor Int.  1.84.    Exh. 1.64  
 Dodge Int.    1.88    Exh. 1.60

Stainless steel or stock type valves are allowed. Valve stem diameter must be stock. No turning of valve stems permitted. Undercut and/or light weight valves are not permitted.

10. Nitrated rocker arms are allowed. Must maintain stock ratio. Dodge may use adjustable rockers.
11. Guide plates may be used.
12. Extra capacity, wet sump, steel oil pans, are allowed.

13. No external oil pumps allowed.
14. Screw in valve studs, are permitted.
15. Factory stock carburetor only. Max. single 4 bbl. Must bolt to original factory intake. No adapters allowed. CHRYCO may use quadrajet- carb. Fuel injected motors may be used if it is available in make/model and year of vehicle being run. Choke accessories may be removed. Adapter plates are not allowed. If Rochester carb is used, max. bore diameter is 1" - 1 1/16" and max. boost venturi bore diameter is 1/8"
16. Carburetor must be old style, Holley #4412. Specifications will be as follows: Metering block #'s 5924, 5925 and 10570.
  - a) metering block power valve channel restriction ports ( 2 holes behind the power valve) max. .0635
  - b) metering block idle feed restriction ports ( 2 holes) max. .035"
  - c) metering block main passage to discharge nozzle ( 2 holes ) max. .141"
  - d) main body high speed air bleeds ( 2 holes ) max. .028"
  - e) main body idle speed air bleeds ( 2 holes ) max. .074"
  - f) butterfly ( throttle plate ) thickness .0398" - .0438"
  - g) hole in butterfly .090" - .096"
  - h) butterfly must have ID # 215 stamped in it
  - i) throttle shaft diameter .368" - .369"
  - j) throttle shaft thickness at flat of shaft .152"
  - k) venturi bore diameter 1.373" – 1.377"
  - l) boost venturi inner bore diameter .377" - .383"
  - m) boost venturi outer diameter .610" - .630"
  - n) throttle bore diameter 1.6855" – 1.6865"

No re-working of carburetor other than removal of choke plate, filling of choke rod hole, changing of jets and power valve. One piece solid carburetor adapter will be allowed. Carb adapter and gasket combined thickness must not exceed 1.25 inches. No ram air style systems allowed. Air to engine must enter through cowl area and air horn of carb
17. Solid throttle shaft ( gas pedal linkage) must be used. No cable types allowed.
18. Original cast iron intake only allowed. No aluminum intakes permitted.
19. E-Vac systems will not be permitted.
20. Original cast iron exhaust manifolds only allowed. No Ram Horn exhaust manifolds or headers are permitted.
21. Exhaust pipes may be a maximum of 2 1/4" before mufflers and be a maximum of 3" after muffler. Magnaflow mufflers #11215 (2 1/4 ), #11216 (2 1/2), or 11219 (3") are recommended. The step pipe between pipe and muffler may be no longer than 6 inches.
22. Exhaust must extend beyond driver compartment and may either exit out right side door or may be turned down towards race track and exit under car.
23. Cold air boxes are allowed. No "Ram Air" type systems permitted.
24. OEM 12 volt stock ignition. Must consist of stock or stock replacement parts only. No after market high performance ignition systems.
25. Electrical system must have a main SHUT OFF SWITCH and must be within reach of driver and accessible to safety crews.
26. Aluminum radiators, water pumps and engine pulleys are allowed
27. Electric cooling fans are permitted.
28. Solid engine mounts are allowed.

If your motor has been properly sealed by the party approved by Kawartha Speedway, Peterborough Speedway, Mosport Speedway, Sunset Speedway, Capital City Speedway,

Varney Speedway or Barrie Speedway and that documentation is verified, you will be considered legal to compete and not be subject to tear down. This does not exempt you from any inspection that can be performed with out breaking seals.

**Safety Requirements:**

1. All drivers must wear approved safety helmets (minimum Snell 2005 standard).
2. Fire retardant suit is mandatory. Fire retardant gloves are mandatory and fire retardant shoes are highly recommended.
3. Aluminum racing seat mandatory.
4. Driver's seat must appear as close to stock position as possible. Seat must be securely fastened to roll cage and frame members.
5. Quick release aviation type, minimum 3 inch safety belts required. Shoulder harness must be fastened to roll cage. Belts may be no older than 3 years prior to date of competition.
6. An approved driver's window net is mandatory.
7. It is mandatory that all cars have a 21/2 pound fire extinguisher with gauge, aluminum head and steel mounting bracket. Extinguisher must be attached to the car's interior on driver's right side. Extinguisher must be with in reach of driver and accessible to safety crews from both sides. On board fire system highly recommended.
8. Two-Way radio's are not allowed.

## **Mini-Stocks 2010**

The Mini-Stock 4 cylinder class is open to any sedan or hatchback built between **1980 and 2004**. Wheel base may be no greater than 105 inches. The following vehicles are not allowed:

1. Porches, BMWs, Audis, Saabs, trucks, Station Wagons or convertibles of any make or model will not be allowed.
2. Any turbo charged cars.
3. No 4 wheel drive vehicles.

### **Frame, Chassis & Cage:**

1. 6 point roll cage is required. Must have a full Halo and must have a minimum of 2 door bars on driver's side. Drivers side door bars should be connected to main frame rail via two vertical bars running from bottom of lowest door bar to left side rail.
2. Roll cage must constructed of a minimum 1 3/4" tubing with .095 wall thickness, be electrically welded and professional in appearance.
3. Frame must be stock for year, make and model of car. No modifications or alterations of any kind allowed. Uni-body frames may install 2x2 tubing as sub-frame connectors.
4. Suspension locating points may not be altered in any way.
5. Radiator bracing is permitted by way of single hoop and two upright supports.
6. Radiator bracing may be tied into main cage uprights by way of engine bay bracing. This tubing may connect to strut towers as it passes through the engine bay area.

### **Interior:**

1. All upholstery, trim and padding must be removed from interior of car.
2. Front and rear firewalls must have all holes covered with a minimum of 22 guage sheet metal.
3. All holes in floor must be covered with sheet metal.
4. All glass except for windshield must be removed.
5. Battery must be securely mounted behind drivers seat in a "marine type" spill proof container.
6. Interior rear view mirror is allowed.
7. Roll bar padding is required.

### **Body:**

1. Body must be in stock location on frame.
2. All chrome mouldings, ornaments, door handles, glass, lights and plastic components must be removed.
3. Body must retain original height, length, width and overall dimensions.
4. Doors must be welded or bolted shut. 16 guage steel plate is mandatory between door skin and drivers side door bars.
5. All inner hood and trunk bracing must be retained.
6. Hoods and trunks must open easily for safety purposes.
7. Front and rear bumpers must be stock and in stock locations. Bumpers may be re-enforced internally.
8. Front inner fenders may be removed.
9. Wheel openings may be trimmed conservatively for tire clearance.
10. Windshield may be stock or lexan. 4 safety clips are required. Top 5 inches of windshield must remain available for purpose of Kawartha Speedway sponsor decal placement.

11. Rear windows are not permitted.
12. A minimum 24 inch high, 3 inch stroke number is required on the door area on both sides of the car. A minimum of 30 inch high, 3 inch stroke number is required on top of roof facing the passenger side of car. A block style number on right head light cover and right tail light covered is required. All numbers must be Kawartha Speedway registered and/or assigned. Number alterations may be required at any time by Kawartha Speedway to avoid duplication.

**Suspension, Steering & Brakes:**

1. Suspension may not be adjusted.
2. All cars must maintain a minimum frame height of 5 inches.
3. Suspension components may not be interchanged for those that are not stock or OEM for particular year, make and model.
4. A 1/2 inch wheelbase tolerance will be allowed from side to side in the interest of alignment purposes.
5. No "weight-jacking" devices of any type will be allowed.
6. OEM Stock springs may be altered. Racing springs not allowed.
7. Spring rubbers are allowed.
8. Maximum front wheel camber will not exceed 2 1/2 degrees positive or negative if stock wheels are used. **Camber may be adjusted to suit handling if a steel racing wheel and oversized lug nuts are used on the right front** . Upper strut mounts may be slotted to achieve this number and grade 8 or better hardware must be used. Bracing will be allowed across engine bay area in order to connect strut towers side to side. Bracing will be allowed to connect rear strut towers side to side and tie into chassis. Rear-ends or rear wheels may not be cambered.
9. Posi-trac, lock-up and limited slip rear ends are allowed. If using rear wheel drive car, drive shaft must be painted white and have a drive shaft safety loop installed.
10. Brakes on all four wheels must be in good working order. No brake biasing of any type permitted. No brake lines allowed in drivers compartment.
11. Rear disc brakes are allowed if factory available for year make and model.

**Weight:**

1. Minimum weight will be calculated based on engine displacement size as follows:
- 2.

Engine Type	Min. Weight	Max. Size	Min. Weight / c.c.
8 or 12 valve SOHC	2200 lbs	2760 c.c.	1.00 lb / c.c.
16 valve SOHC	2400 lbs	2300 c.c.	1.15 lb / c.c.
16 valve DOHC	2500 lbs	2300 c.c.	1.25 lb / c.c.

2. Maximum left side weight will be 55%
3. All weight measured with driver in car.
4. Ballast must be securely fastened in centre of car. Ballast to be in blocks of no less than 5 pounds.
5. No topping up with fuel after the feature event.
6. ***In the interest of competition, weight penalties, (25-50 lbs.) will be added to cars after a drivers 2nd Feature Win, plus an additional 25-50 lbs. for every feature win after that. First 100 lbs. will be placed in passenger seat area, additional weight may be placed where competitor desires.***
7. ***Drivers finishing 2nd and 3rd in Feature events may also be subject to penalty***

**weight. Any penalty weight will remain in car for duration of season. Penalty weight may be removed for 50 lap events.**

8. Kawartha Speedway will reserve the right to add or subtract any amount of lead at any time as they see necessary in order to keep the class competitive.

### **Fuel Cells & Fuel System:**

1. Fuel cells are highly recommended.
2. Fuel tank must be mounted in centre of trunk area and be a minimum of 13 inches above race track.
3. Fuel tank must be protected from driver area by a full metal firewall.
4. Fuel tank must be firmly fastened with two metal straps to the floor of the trunk.
5. Fuel cells must have a minimum 1 3/4 tubing, .095 wall thickness, protection hoop behind cell.
6. No fuel lines permitted inside driver compartment.
7. No external fuel filler permitted outside of body.
8. All cars must have an operational fuel shut off valve that is mounted in the main fuel line and easily accessible by driver and safety crews.
9. Stock fuel pumps only. Electric fuel pumps allowed provided car was manufactured with it.
10. When using an electric fuel pump an oil sender safety shut-off must be used.
11. Pump fuel or track fuel only.

### **Tires & Wheels:**

1. Maximum width of wheel will be 7 inches measured from bead to bead.
2. No mixing of wheel size allowed.
3. Stock production wheels may not be altered in any way.
4. Any approved STEEL Racing Wheel will be allowed for use. Right side wheels must be steel only. **Right side wheels may have any off-set as long as tire and wheel assembly is within the body lines of car. Left side wheels must maintain stock off-set. Wheels and tires exposed excessively will not be tolerated.** Factory production aluminum wheels for year, make and model may be used on the left side.
5. DOT approved tires only. No directional tires. Tires must be 200 tread wear. Maximum tire size of 205/60. Tires must have a minimum of 1/8 tread depth at any time.
6. H rated tires will be allowed. No tires above H rating will be permitted.
7. One tire size difference allowed side to side, front to rear.
8. No racing tires allowed. Falcon – Azena tire is allowed & recommended.
9. All tires subject to approval of Tech Inspector.

### **Transmission:**

1. Transmission that was factory available for year, make and model of car may be used.
2. Automatics and standards are allowed.
3. All cars must have a working reverse gear.
4. Clutch and Flywheel must be OEM or stock replacement. No aluminum or lightweight clutch assemblies permitted. No lightening or drilling of clutch assembly or flywheel.

### **Engines and Exhaust:**

1. Engine must be 4 cylinder. No Rotary Engines. No V-Tec engines. No Turbo or Super Chargers.
2. Must be the engine made for year, make and model of car.

3. Engine must remain completely stock in all aspects
4. Cylinder Heads must be stock for engine run with no modifications.
5. OEM style cams and lifters only. Camshafts that are "Factory Re-Grinds" are not permitted.
6. Stock OEM rocker arms and ratios only.
7. Stock OEM Intake manifolds only.
8. Battery must be removed from under hood area and mounted securely behind drivers seat.
9. Carburetor to be stock as from factory. Stock fuel injection allowed. **Carb spacers between carb and intake, or between plenum and head, will not be allowed.**
10. After-market air filter will be allowed. Ram Air systems of any type will not be allowed.
11. Stock exhaust manifold only. **Factory, or aftermarket headers, are not allowed. OEM Factory type muffler is required.** Maximum exhaust pipe size will be 2 1/2". Exhaust must exit outside of car and to the rear of the driver.
12. There will be NO TOLERANCE for any engine or engine part that is not absolutely stock.

### **Safety Requirements:**

1. All drivers must wear approved safety helmets (minimum Snell 2005 standard).
2. Fire retardant suit is mandatory. Fire retardant gloves are mandatory and fire retardant shoes are highly recommended.
3. Aluminum racing seat mandatory.
4. Driver's seat must appear as close to stock position as possible. Seat must be securely fastened to roll cage and frame members.
5. Quick release aviation type, minimum 3 inch safety belts required. Shoulder harness must be fastened to roll cage. Belts may be no older than 3 years prior to date of competition.
6. An approved driver's window net is mandatory. It is mandatory that a 21/2 pound fire extinguisher with gauge, aluminum head and steel mounting bracket be attached to the car's interior on driver's right side. Extinguisher must be within reach of driver and accessible to safety crews from both sides. On board fire system highly recommended
7. Two way radios are not allowed.