



# Time Attack Regulations





# TIME ATTACK REGULATIONS

Effective January 1, 2019

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These regulations are intended to assist in the conduct of national competitions.

ASN territories and regions may adopt these regulations for use within their jurisdictions if they choose to do so including the sole responsibility for the administration thereof.

These regulations are a guide to further general safety and in no way a guarantee against injury or death to participants, spectators or others.

No express or implied warranties of safety or fitness for a particular purpose shall be intended or result from publication of or compliance with these Regulations.

ASN does not represent or intend that a car prepared for competition according to these regulations will meet Federal and Provincial motor vehicle regulations or local highway traffic laws. At all times, it is entirely the entrant and driver's responsibility to not represent or intend that a car prepared for competition according to these regulations will meet Federal and Provincial motor vehicle regulations or local highway traffic laws.

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Go-karts are not allowed in SoloSport competitions.

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# ASN Canada FIA NATIONAL TIME ATTACK REGULATIONS

1. ASN Canada FIA (ASN) reserves the right at any time and from time to time to alter these rules. Such alterations or additions will be published in the form of revised regulations or bulletins. Changes to these rules will become effective on the date issued unless amended or revoked by ASN. Questions concerning rule clarification should be directed to the ASN National SoloSport Committee through the chairman or Regional representative.
2. These rules and regulations were established by the ASN and are intended to assist in the orderly conduct of SoloSport events and to further participant and spectator safety.
3. The text of these regulations was originally drafted in English and may be translated into other languages. In case of a dispute between the English text and that of any other translation, the English text shall prevail.
4. By participation in these events, all participants are deemed to have agreed to be bound by this rulebook. The interpretation and determinations of these rules by ASN officials shall be final and binding. In order to maintain a sporting nature, to achieve prompt competition results, and in consideration of the benefits to them, all members, clubs, officials of ASN hereby agree that:
  - a) Determinations by ASN officials are non-litigable;
  - b) No litigation shall be initiated against ASN, ASN regions or their members and officials to: reverse or modify results of such determinations or to seek to recover damages or other relief allegedly incurred or required as a result of such determination. Where a person initiates or maintains litigation in violation of this provision, that person agrees to reimburse ASN for all costs associated with the legal action.
5. Items differing from previous editions are indicated in **Bold** text, with a Side Bar, as at Left.

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# 1. SAFETY AND COMPETITION

## 1.0. HELMETS

- 1.0.1. Drivers and passengers must wear helmets during all track sessions. Helmets may be either open faced or closed face.
- 1.0.2. Acceptable helmets:
  - FIA 8860-2004
  - FIA 9960-2010
  - FIA 8859-2015
  - Snell 2010SA, 2010 SAH, or 2010 M
  - Snell 2015SA, or 2015 M
  - SFI Foundation 31.1/2010
  - SFI Foundation 31.1/2015
  - **ECE R22.05 (expiry: ten years after date of mfg. as noted on unaltered, helmet label)**
- 1.0.3. Helmets homologated to Snell M and **ECE R22.05 standards** are not acceptable for use in vehicles equipped with roll cages.
- 1.0.4. Helmets must be in good condition both inside and outside.
- 1.0.5. It is strongly recommended that helmets be discarded due to deterioration, after a serious accident or an impact to the helmet.
- 1.0.6. No helmet may be modified from its specification as manufactured, except in compliance with instructions approved by the manufacturer. Hardware may be mounted on a helmet for FIA/SFI approved HANS.FHR devices, provided the hardware is installed in accordance with recommendations provided by the manufacturer of the helmet and/or the devices.
- 1.0.7. Paint can react with helmet shell material and affect its protective capacity, therefore, where a manufacturer provides guidelines or restrictions on the painting or decoration of helmets, these must be followed.
- 1.0.8. **When competing in vehicles with roll-over protection, it** is highly recommended that competitors use a head and neck restraint system.
- 1.0.9. Any vehicle equipped with racing slicks shall meet all safety regulations requirements for MOD1.

## 1.1. RESTRAINT SYSTEMS/SEAT BELTS and SEATS

- 1.1.1. All participants must wear seatbelts/safety harnesses during all track sessions.
- 1.1.2. OEM Seats and Seat Belts:
  - I. If Original equipment seats are used, they shall be installed according to the manufacturers' specifications.
  - II. Should the original equipment (OEM) seat belts be replaced with seat belts of the same configuration, the replacement seat belts shall:
    - Use the original mounting points;
    - Be the same configuration as the original OEM Belts;
    - Be made from Dacron or nylon;
    - Have a minimum width of 51 mm (2 inches).
- 1.1.3. An original equipment three point seat belt system is acceptable for vehicles equipped with/without roll bars except 'Modified' vehicles.
- 1.1.4. The addition of lap belt portion of a racing safety harness is permitted when used in addition to the original equipment seatbelt (or its replacement as per 1.1.2.II).
- 1.1.5. "CG Lock" or similar devices that lock the lap belt portion of the original equipment seat belt in place are also permitted.
- 1.1.6. A five or six point racing safety harness is required for any Modified category vehicle equipped with a roll cage.
- 1.1.7. Competition Seats and Safety Harnesses
  - I. When an OEM seat is replaced by a competition seat, it is highly recommended that the replacement seat shall meet the FIA standard 8855-1999 or 8862-2009.
  - II. When a safety harness (2 lap straps, 2 shoulder straps and 1 or 2 crotch strap/straps) is used, it must meet one of the following standards:
    - (a) FIA Standard 8853-98;
    - (b) SFI 16.1;

(c)SFI 16.5.

1.1.8. Validity of Safety Harnesses

- I. FIA 8853-98 **or FIA 8853-2016**—The expiry date is identified on the FIA label which is affixed to each part of the harness.
- II. SFI 16.1 or 16.5 – The expiry date is two years from the date of manufacture which is on the SFI label which is affixed to each part of the harness.
- III. Note: It is not permitted to mix parts of different safety harnesses. Only complete sets may be used. (Also see section 1.1.9.)

1.1.9. Use

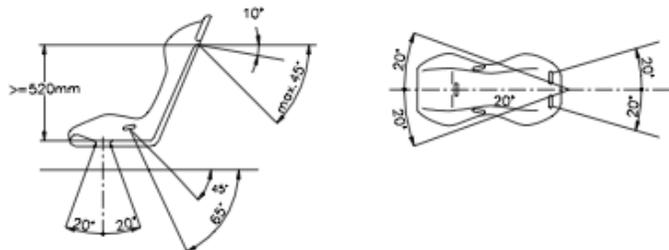
- I. A safety harness must be used in its homologation configuration without any modification or removal of parts and in conformity with the manufacturer's instructions.
- II. The effectiveness and longevity of safety belts are directly related to the manner in which they are installed, used and maintained.
- III. The safety harness, in its entirety, must be replaced after every severe collision, and whenever the webbing is cut, frayed or weakened due to the actions of chemicals or sunlight.
- IV. The safety harness must also be replaced if metal parts or buckles are bent, deformed or rusted.
- V. Any safety harness which does not function properly must be replaced.

1.1.10. Fit of Safety Harness

- I. The lap and crotch straps must not pass over the sides of the seat, but through the seat in order to wrap and hold the pelvic region over the greatest possible surface.
- II. The lap straps must fit tightly in the bend between the pelvic crest and the upper thigh. Under no conditions must they be worn over the region of the abdomen
- III. Care must be taken that the straps cannot be damaged through chafing against sharp edges

1.1.11. Installation Points

- I. It is prohibited for the safety harness lap straps to be anchored to the seat or its supports.
- II. A safety harness may be installed on the anchorage points of the vehicle as long as those anchorage points are not part of the seat or its supports.
- III. The recommended geometrical locations of the anchorage points are shown below: In the downwards direction, the shoulder straps must be directed towards the rear and must be installed in such a way that they do not make an angle of more than 45° to the horizontal from the upper rim of the backrest, although it is recommended that this angle should not exceed 10°. The maximum angles in relation to the centre-line of the seat are 20° divergent or convergent. Anchorage points creating a higher angle to the horizontal must not be used.



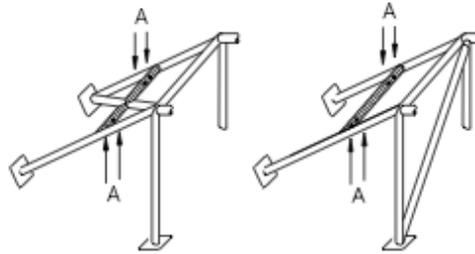
1.1.12. Locking Bales

If the manufacturer provides for safety wiring the locking bale to prevent accidental unfastening of the safety harness straps from their anchorage points, then it shall be necessary for the all such components to be safety wired.

1.1.13. Alternative Anchorage Options

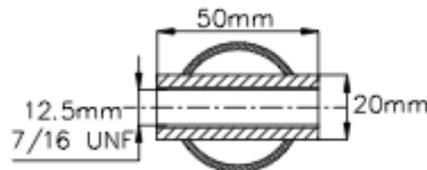
- I. If installation using the OEM anchorage points is impossible for the shoulder and/or crotch straps, new anchorage points must be installed on the shell or the chassis (as

near as possible to the centre-line of the rear wheels for the shoulder straps). The shoulder straps may also be fixed to the safety roll cage or to a reinforcement bar by means of a loop, and may also be fixed to the top anchorage points of the rear OEM belts, or be fixed or leaning on a transversal reinforcement welded to the backstays of the roll bar. (See drawing below.)



Ⓐ trous de montage pour harnais  
mounting holes for harness

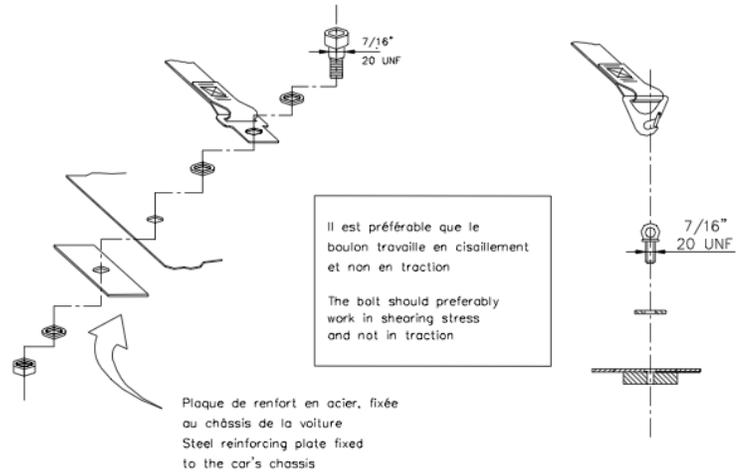
- II. In this case, the use of a transversal reinforcement is subject to the following conditions:
- (a) The transversal reinforcement shall be a tube measuring at least 38 (1.5") mm x 2.5 mm or 40 (1.6") mm x 2 mm, made from cold drawn seamless carbon steel, with a minimum tensile strength of 350 N/mm<sup>2</sup>;
  - (b) The height of this reinforcement must be such that the shoulder straps, towards the rear, are directed downwards with an angle of between 10° and 45° to the horizontal from the rim of the backrest, an angle of 10° being recommended;
  - (c) The straps may be attached by looping or by bolts, but in the latter case an insert must be welded for each mounting point (see drawing below for the dimensions);
  - (d) These inserts will be positioned in the reinforcement tube and the straps will be attached to them using bolts as per 14.4.9 M12 8.8 or 7/16 UNF specification.



- III. Each anchorage point must be able to withstand a load of 1470 daN, or 720 daN for the crotch straps.
- IV. In the case of one anchorage point for two straps, the load considered will be equal to the sum of the required loads.
- V. For each new anchorage point created, a steel reinforcement plate with a surface area of at least 40 cm<sup>2</sup> and a thickness of at least 3 mm must be used.

### 1.1.14. Principles of Mounting to the Chassis/Monocoque

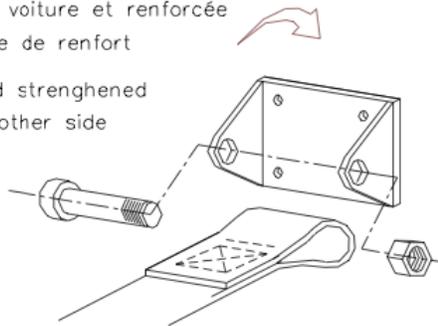
#### I. General mounting system: see drawing below.



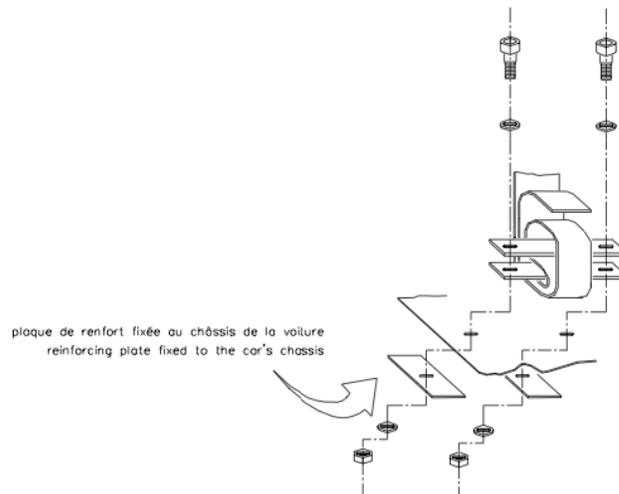
#### II. Shoulder Strap Mounting: see drawing below:

plaque fixée au châssis de la voiture et renforcée  
de l'autre côté par une plaque de renfort

plate fixed to the chassis and strengthened  
by a reinforced plate on the other side



#### III. Crotch Strap Mounting: see drawing below:



## 1.2. FIRE SAFETY

- 1.2.1. It is recommended that all competitors while competing or marshalling wear long sleeved shirts, long pants, fully enclosed shoes and socks (no sandals, crocs, etc). It is recommended that these be made from natural fabrics (i.e. wool, linen, silk and cotton) that are more resistant to flame than a blend or synthetic. These are listed from the most to the least flame retardant provided they are close knit and uncoated.
- 1.2.2. All competitors driving 'Modified 1' class vehicles, except those whose vehicles are licensed for street use and are competing on DOT approved tires, shall wear single layer Nomex (or better) gloves and driving suit in good condition
- 1.2.3. All competitors driving 'Open Modified' formula vehicles (i.e. F-1600, F-4, etc.) shall comply with ASN Canada FIA Regional Racing safety requirements. This includes, but is not limited to, roll over protection, full faced helmet & visor and the following items made of fire resistant material approved by ASN Canada, FIA, SCCA or SFI: gloves, underwear, shoes, two layer one-piece driving suit, balaclava and socks.
- 1.2.4. Fire suppression or personal use extinguishers may be used. They must be securely fastened and not be able to become a projectile. Fire suppression is recommended for cars with roll cages.

## 1.3. ROLL OVER PROTECTION – ROLL BARS AND CAGES

- 1.3.1. Roll bars and cages are designed to help protect a driver if the vehicle rolls over.
- 1.3.2. A roll bar is required for:
  - I. Vehicles with fold down or completely removable tops (e.g. convertibles);
  - II. Vehicles that have accumulated 25 PIPs or more from their starting PI, excluding aero and tire PIPs;
  - III. Vehicles using non-DOT racing slicks (see 5.1.2.IV);
  - IV. Modified category vehicles, with a Performance Index (PI) of 105% or greater;
  - V. "Open Modified" class vehicles.
- 1.3.3. All roll bar installations are subject to the approval of the Chief Scrutineer. The Chief Scrutineer may approve roll bar installations that meet other recognized standards.
- 1.3.4. DESIGN- ROLL OVER BARS SPECIFICATIONS

### 1.3.4.1 GENERAL

Where permitted or specified by the regulations of a series or event, a roll bar meeting these specifications outlined below shall be fitted to all vehicles. (It is highly recommended that roll cages meeting the specifications outlined below be fitted to all cars competing in events where rollover protection is required.)

The top of the roll bar shall be at least 5.08 cm (2") above the top of the competitor helmet or as close to the roof as possible and no more than 25.4 cm (10") behind the competitor's helmet when the competitor is seated in the normal driving position.

It is highly recommended that any part of the roll bar or of the car's structure which may be struck by the competitor's helmet in an impact be covered with a flame-retardant energy absorbing material. Padding meeting SFI spec 45.1 is highly recommended.

### 1.3.4.2 CONSTRUCTION MATERIALS

The main hoop and primary bracing should be constructed from round, mild steel, CDS, ERW or DOM type tubing. Chrome-moly tubing such as 4130, may be used, but is not recommended. (Chrome moly welding most often requires pre-heating, compatible filler wire to avoid brittleness in the welds, post-weld cooling and stress-relieving.) CDS tubing: unalloyed carbon steel with minimum tensile strength of 350N/mm<sup>2</sup> and a maximum of 0.3% of carbon, 1.7% of manganese and 0.6% of other element additives

Aluminum and composite materials are prohibited construction materials for roll bar structures. All bars must have a 0.476 cm (.1875") diameter inspection hole drilled in each main hoop. Minimum tubing sizes are as follows with vehicle weights including competitor:

- Up to 2,000 lbs. 3.81 cm X 0.30 cm (1.50" X .120");
- Over 2,000 lbs. 4.44 cm X 0.30 cm (1.75" X .120").

#### 1.3.4.3 FABRICATION

One continuous piece of tubing must be used for the main hoop. All bends must be smooth with no evidence of crimping or wall fracturing.

All bars should start as close as possible to the floor of the vehicle and come as close as possible to the sides of the vehicle for maximum competitor protection.

In the case of tube frame vehicles, the roll cage structure must be attached to the chassis with suitable webbing or gusseting to distribute loads over as wide an area as possible.

In the case of unit body vehicles, it is recommended procedure to attach the ends of the main hoop tubes into L shaped plates at the junction of the floor and rocker panels rather than just to a plate on the floor. Additionally, it is highly recommended that all bars be tabbed into the basic body structure at least every 60.96 cm (24") or wherever possible.

Gussets or tie-in tubes must be used at main tube junctions of the roll bar members. Gusset thickness should be a minimum of the tubing wall thickness to which they are attached.

#### 1.3.4.4 BRACING

Rear stays must attach to the hoop no lower than 20.32 cm (8") from the top of the hoop and at an angle no steeper than 35 degrees from vertical.

These rear stays must be made from a straight piece of tubing and be attached to a suitably stiff or reinforced area. In cases where rearward braces are impractical, forward braces are permitted.

In order to minimize the distortion of the roll bar in the event of impact on one corner, a diagonal brace is required. This brace must be a straight as possible.

Where a "six point roll bar" is used, front stays must attach to the hoop no lower than 20.32 cm (8") from the top of the hoop and at an angle no steeper than 35 degrees from vertical.

These front stays must be made from a straight piece of tubing and be attached to a suitably stiff or reinforced area.

Where a "five point roll bar" is used, a single front stay must attach to the hoop on the driver's side of the vehicle centerline at an angle no steeper than 35 degrees from the vertical.

This brace must be made from a straight piece of tubing, extend forward to the diagonally opposite side of the car and be attached to a suitably stiff or reinforced area.

#### 1.3.4.5 REMOVABLE BRACING

Removable bracing may be fitted to vehicles only if their construction and design allow them to meet the strength requirements of the designs above.

Where tubes join, a double shear type mating tab may be used.

Where such a tab is used, the tube joining this tab shall have a small piece of tubing welded perpendicular to its length for the bolt to pass through to prevent crushing of the main tube.

Tabs shall be at least 3.49 cm (1.375") wide and 0.476 cm (.1875") thick and must be welded to one of the main tubes.

When single bolts are used to fasten tubes, they must be of at least 1.11 cm (.4375") diameter and grade 8 materials.

Sliding tube type junctions may also be used if they meet the following criteria:

Wall thickness of the joining tube shall be a minimum of 0.30 cm (.120");

Length of this tube shall be a minimum of 7.62 cm (3") on either side of the splice.

Attachment shall be made using two bolts on each side of the splice 90 degrees to each other passing straight through the tubing.

Grade 5 or better bolts of at least 9.52 cm (.375") diameter shall be used here. Splicing tubes may be slid either inside the main tubing or over the outside.

Basic design and fabrication of removable braces must conform to the specifications for non-removable designs.

#### 1.3.4.6 MOUNTING PLATES

The lower hoop tubes must be connected to plates welded or bolted to the frame or floor of the vehicle. On unit body vehicles, all plates shall be at least 129 square cm (20 square") in area. The minimum thickness of these plates shall be 0.20 cm (.080") in the case of weld on plates and .1875 for bolt-on types.

Bolt-on types shall have a minimum of three 0.952 cm (.375") grade 5 bolts or better fastening each plate and must have a backup plate of equal size and thickness on the other side of the floor with the bolts passing through both plates and the floor.

Vehicles with frame type construction must use plates of at least 51.6 square cm (8" square) areas and .1875 thicknesses regardless of whether they are bolted or welded.

#### 1.3.4.7 WELDING

It is essential that all welding be of the highest possible quality. Slag welds; poor arc and gas welds are NOT acceptable. It is highly recommended that only certified welders carry out welding on roll bars. TIG or MIG are the preferred welding processes. Structures with unacceptable welding will not be approved.

#### 1.3.4.8 ALTERNATE DESIGNS

Alternate cage designs may be allowed by the Chief Scrutineer provided the competitor can produce stress analysis data from a certified engineer stating that the roll over structure is capable of withstanding the following loads applied simultaneously to that structure:

- 1.5 G lateral;
- 5.5 G fore/aft;
- 7.5 G vertical.

Calculations shall assume race-ready weight of the vehicle with competitor on board.

### 1.3.5 ROLL CAGE SPECIFICATIONS

#### 1.3.5.1 GENERAL

Where this section applies to vehicles, a roll cage conforming to: a) the following specifications or b) the FIA regulations of Appendix J, article 253, article 8 is required:

The top of the roll bar shall be at least 5.08 cm (2") above the top of the competitor helmet or as close to the roof as possible and no more than 25.4 cm (10") behind the competitor's helmet when the competitor is in the normal driving position.

It is highly recommended that any part of the roll cage structure, which may be struck by the competitor's helmet in a serious impact, be covered with a flame-retardant energy absorbing material.

Vintage racing vehicles built and raced before January 1, 1980 with a rollover bar may be raced as is provided the mounting structure is acceptable.

Any vintage racing vehicle prepared after this time must be fitted with a roll cage complying with the Improved Production requirements as a minimum.

#### 1.3.5.2 CONSTRUCTION MATERIALS

The main hoops and primary bracing should be constructed from round, mild steel, CDS, ERW or DOM type tubing.

Chrome-moly tubing such as 4130 may be used, but is not recommended. (Chrome-moly welding most often requires pre-heating, compatible filler wire to avoid brittleness in the welds, post-weld cooling and stress-relieving.)

CDS tubing: unalloyed carbon steel with minimum tensile strength of 350N/mm<sup>2</sup> and a maximum of 0.3% of carbon, 1.7% of manganese and 0.6% of other element additives

Aluminum and composite materials are prohibited construction materials for roll cage structures.

All cages must have a 0.476 cm (.1875") diameter inspection hole drilled in each main hoop. Minimum tube size and wall thickness are as follows for vehicle weights including competitor:

Under 1500 lbs 3.49 cm X 0.24 cm (1.375" X .095");  
 Under 2500 lbs 3.81 cm X 0.24 cm (1.500" X .095") or 3.49 cm X 0.30 cm (1.375" X .120");  
 Over 2500 lbs 3.81 cm X 0.30 cm (1.500" X .120") or 4.44 cm X 0.24 cm (1.750" X .095").

1.3.5.3 FABRICATION

One continuous piece of tubing must be used for the main hoop. A similar piece shall be used for the other main hoop or hoops. The allowable cage configurations are:

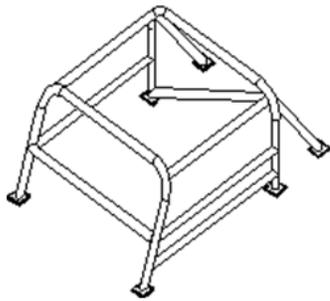


Figure 1 Main Hoop Parallel Front Hoop

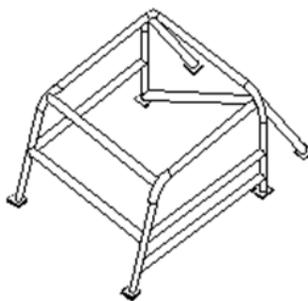


Figure 2 Main Hoop Two Side Hoops

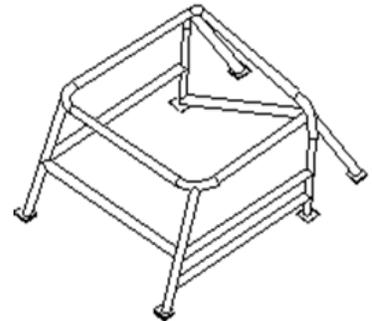


Figure 3 Main Hoop Top Hoop

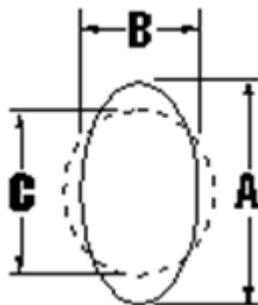
All bends must be smooth with no excessive evidence of crimping or any evidence of wall fracturing. All bars should start as close as possible to the floor of the vehicle and come as close as possible to the sides of the vehicle for maximum competitor protection.

Construction guidelines for acceptable Ovality and

Crimping: Ovality:

Maximum allowable ovality is 8% of the nominal pipe diameter. Ovality is measured as the variation between the maximum and the minimum dimension of the pipe in one location per Figure 1.

Figure 1: Ovality



Formula for Ovality:

$$(A-B) / C = 0.08$$

Maximum Note:

A = Maximum

Measurement B =

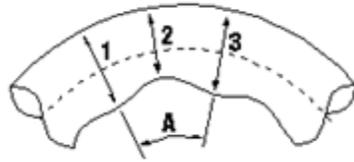
Minimum

Measurement C =

Normal Diameter

Crimping: Crimping is measured per Figure 2. The maximum allowable crimping is 3% of the nominal pipe diameter.

Figure 2: Crimping



Formula for Crimping:

$$((OD1 + OD3) / 2) - OD2 = 0.03 \text{ Maximum}$$

In the case of tube frame vehicles, the roll cage structure must be attached to the chassis with suitable webbing or gusseting to distribute loads over as wide an area as possible.

In the case of unit body vehicles, it is recommended procedure to attach the four ends of the main hoop tubes into L shaped plates at the junction of the floor and rocker panels rather than just to a plate on the floor. Additionally, it is highly recommended that all cages be tabbed into the basic body structure at least every 60.96 cm (24") or wherever possible.

#### 1.3.5.4 BRACING

In the case of the twin lateral hoop design, the front and rear hoops shall be joined by a piece of equal dimensioned tubing on each side.

Rear stays must attach to the rear hoop no lower than 20.32 cm (8") from the top of the hoop and at an angle no steeper than 35 degrees from vertical. These rear stays must be made from a straight piece of tubing and be attached to a suitably stiff or reinforced area. A diagonal brace must be fitted from near the top of the hoop to a position near the opposite corner of the hoop. This brace must be as straight as possible.

Side protection bars must be attached between the front and rear hoops on both sides of the vehicle. These bars should be attached to the front hoop no higher than 30.48 cm (12") off the floor and on the rear hoop and no higher than 60.96 cm (24") off the floor. The competitor's side must be fitted with at least two side protection bars which follow as closely as possible the outline of the door. NASCAR style multiple anti-intrusion bars is highly recommended.

A bar joining the two outer members of the front hoop near steering column level is required.

#### 1.3.5.5 MOUNTING PLATES

The four lower hoop tubes must be connected to plates welded or bolted to the frame or floor of the vehicle. On uni-body vehicles, all plates shall be at least 129 square cm (20 square") in area. The minimum thickness of these plates shall be 0.20 cm (.080") in the case of weld on plates and 1875 for bolt-on types.

Bolt-on types shall have a minimum of three 0.952 cm (.375") grade 5 bolts fastening each plate and must have a backup plate of equal size and thickness on the other side of the floor with the bolts passing through both plates and the floor.

Vehicles with frame type construction must use plates of at least 51.6 cm square (8-in square) area and 0.1875 thicknesses regardless of whether they are bolted or welded.

#### 1.3.5.6 WELDING

It is essential that all welding be of the highest possible quality. Slag welds; poor arc and gas welds are NOT acceptable. It is highly recommended that only certified people carry out arc welding on roll cages. TIG or MIG are the preferred welding processes. Cages with unacceptable welding will not be passed.

#### 1.3.5.7 GUSSETING

It is important that loads be distributed over as wide an area as possible especially in the case of cages on space frame type vehicles. Gussets or tie-in tubes must be used at main tube junctions of the roll cage members. Gussets should also be used when it is not possible to weld all around a tube because of body interference. Gusset thickness should be at least the same as the tubing wall thickness they are attached to. Each gusset shall extend in length for a minimum of one pipe diameter in both directions from the centre-point of the gusset.

#### 1.3.5.8 REMOVABLE TYPE CAGES

Removable roll cages may be fitted to vehicles only if their construction and design allow them to meet the strength requirements of the designs above.

Where tubes join, a double shear type mating tab may be used. Where such a tab is used, the tube joining this tab shall have a small piece of tubing welded perpendicular to its length for the bolt to pass through to prevent crushing of the main tube.

Tabs shall be at least 3.49 cm (1.375") wide and 0.476 cm (.1875") thick and must be welded to one of the main tubes. When single bolts are used to fasten tubes, they must be of at least 1.11 cm (.4375") diameter and grade 8 materials.

Sliding tube type junctions may also be used if they meet the following criteria:

Wall thickness of the joining tube shall be a minimum of 0.30 cm (.120");

Length of this tube shall be a minimum of 7.62 cm (3") on either side of the splice.

Attachment shall be made using two bolts on each side of the splice 90 degrees to each other passing straight through the tubing. Grade 5 bolts of at least 9.52 cm (.375") diameter shall be used here. Splicing tubes may be slid either inside the main tubing or over the outside.

Alternate joint designs may be approved at the discretion of the Scrutineer.

Basic design and fabrication of removable type cages must conform to the specifications for non-removable type cages.

#### 1.3.5.9 ALTERNATE DESIGNS

Alternate cage designs may be approved by the Scrutineer provided the competitor can produce stress analysis data from a certified engineer stating that the roll over structure is capable of withstanding the following loads applied simultaneously to that structure:

1.5 G lateral;

5.5 G fore/aft;

7.5 G vertical.

Calculations shall assume the all up race weight of the vehicle with competitor.

## 1.4. ROOF AND WINDOW SAFETY – GENERAL

**1.4.1. Windows of the driver and passenger door shall be completely up, UNLESS EQUIPPED WITH WINDOW NETS. If down, the use of window nets or SFI approved arm restraints by the driver (and passenger, if applicable) are required.**

1.4.2. Sunroofs, moon-roofs and T-tops shall be in the closed and locked position.

1.4.3. Vehicles with fold down or completely removable tops (e.g., convertibles) shall have those tops in the up and locked position.

1.4.4. In vehicles without tops, the use of window nets or SFI approved arm restraints by the driver (and passenger, if applicable) **are required.**

1.4.5. If window glass is removed, it shall be replaced with acrylic (e.g., Plexiglas) or polycarbonate (e.g., Lexan) material.

1.4.6. If the OE windshield is removed, it shall be replaced with polycarbonate (e.g., Lexan) of 6 mm minimum thickness of identical size and curvature as the original. The windshield shall be supported by three inner supports to prevent the windshield from collapsing inward. These supports shall be 0.75" x 0.125" min aluminum straps with a minimum spacing of 8" between straps.

1.4.7. Any car that has a modified windshield will require approved roll over protection and any car that has a windscreen only will also require approved roll over protection.

## 1.5. VEHICLE REQUIREMENTS

All vehicles and equipment shall be acceptable to Scrutineering at all times. Organisers may refuse a non-classified vehicle if the Organiser believes the vehicle is unsafe. Organisers may exclude any vehicle based on technical inspection or Scrutineering. The vehicle shall meet the following basic requirements:

- 1.5.1. **Have a wheelbase of 183 cm (72") or longer and have front and rear tracks of 107 cm (42") or wider.** The maximum permissible height of competing vehicles is 160 cm (63 inches). Please note that this prohibits most SUVs and pickup trucks from participation in Time Attack events;
- 1.5.2. Be at least as wide as they are tall. Height is defined as the tallest point of the vehicle as measured from the ground with the tires at recommended pressures and width is defined as the measurement taken from the outside of the left front tire contact patch to the outside of the right front tire contact patch;
- 1.5.3. Have four road wheels of 10" diameter or larger, and four pneumatic tires in good condition, having no blemishes or under tread material showing and a proper working tandem (or dual) hydraulic braking system for all four wheels that can only be operated by a single purpose control;
- 1.5.4. Have an enclosed driver protection structure, complete with exterior panels, up to at least waist level when seated in the appropriate driving position. Exterior panels made of metal, glass reinforced plastic or fire restraint material, except when the panels are 'OE';
- 1.5.5. Use only hydrocarbon based gasoline or diesel fuel, including biodiesel, fuel containing ethanol, or any additives (e.g. propylene or other octane boosters) added directly to the 'OE' fuel tank. Any external (to the 'OE' fuel system) source of fuel or fuel additive is prohibited, including nitrous oxide systems and propane;
- 1.5.6. Have an operational, on board self-starter and shall be able to idle on the grid (e.g. without overheating) for reasonable periods of time without affecting the conduct of the event;
- 1.5.7. The battery location is free within the bodywork provided Rule 5.1.6.XVII is met. Flooded lead acid type batteries located in the driver/passenger compartment shall be in a nonconductive marine-type container or equivalent. The hot terminal shall be insulated. All batteries shall be attached securely to the frame or chassis;
- 1.5.8. Hubcaps, centre caps, wheel disks and trim rings, not bolted to the wheels, are removed;
- 1.5.9. Be equipped with coolant catch tanks. Crankcase breather tubes shall not vent onto the track, but into an adequate size, catch can;
- 1.5.10. Passes all safety inspections;
- 1.5.11. To maintain a professional appearance, licence plates shall be either completely removed or completely visible during competition. Ad hoc covering with masking tape or equivalent is not permitted;
- 1.5.12. Be equipped with at least one functional rear-view mirror.

## 1.6. ELIGIBILITY TO COMPETE

- 1.6.1. To be eligible to compete as a driver, a driver must:
  - I. Hold a competition licence issued by ASN Canada FIA or an ASN Region that grants eligibility for Time Attack events;
  - II. Have signed the ASN Canada FIA General Waiver.
- 1.6.2. All competitors, officials, workers, volunteers and passengers shall read and sign the insurance waiver before being allowed into a restricted area (e.g., timing vehicle, marshal post or other non-public area) or to compete in the event.
- 1.6.3. A competitor may only enter an event once. However, any single vehicle may be entered by a maximum of two drivers.
- 1.6.4. Each entrant/driver shall be responsible for the conduct of their crew (see SoloSport GCR 5.14).
- 1.6.5. Competitor help is essential for the success of events. Organizers may require competitors to marshal and may exclude one or more results or deny runs of those who do not fulfil requested duties.
- 1.6.6. Consumption of alcoholic beverages at an event by any driver, entrant, crew member or official before the absolute and total end of all the day's on-track activities is expressly forbidden.
- 1.6.7. Each competitor shall present upon demand, by any race official or fellow competitor, a copy of their car's classification declaration on paper for inspection (including, if applicable, race weight and dyno declarations). Any competitor who is unable to provide such documentation shall be scored in Unlimited class at the event in question.
- 1.6.8. All competitors must attend the driver's meeting, unless prior arrangement has been made with the Organizer, to be allowed to compete. This is for the safety of both the competitor and the other entrants.

## 1.7. PASSENGERS

- 1.7.1. Passengers may be carried in the front, passenger seat only during the lapping sessions and provided they have read and signed the appropriate waivers. No passengers will be allowed during competition runs.
- 1.7.2. Minors (those under the age of majority for the province where the event takes place) can ride as a passenger provided they have the consent of the organizer and they and their Parents/Guardians have signed the Underage Waiver.
  - Minors are subject to the following requirements:
    - I. May not ride in competition, only in lapping or fun runs;
    - II. May ride with Parent or Guardian only;
    - III. Helmet and seat belt shall fit the minor correctly;
    - IV. Seat belt shall comply with Section 1.1.;
    - V. Shall be at least 14 years old.
- 1.7.3. Passengers shall wear safety equipment as required for the driver and shall keep their hands and arms inside the vehicle at all times. Passengers shall not carry items such as food, drink, cameras, video recorders, purses, etc.

## 1.8. DRIVING AND SCORING

- 1.8.1. Only each competitor's fastest run, including penalties, shall be scored. Where the event, such as the ASN Canada FIA Canadian National Time Attack Championship, is conducted over two or more days, then the fastest run, including penalties from each day's competition, shall be scored.
- 1.8.2. If identical times are recorded for two or more competitors in the same class or candidates for the same award, the second best times **for those tied competitors** will be used as a tiebreaker.
- 1.8.3. A competitor's score for a run shall be recorded in seconds and fractions of seconds.
- 1.8.4. Elapsed times and penalties for each run by each competitor shall be posted continually throughout the event.
- 1.8.5. A DNS (Did Not Start) is given if the competitor fails to leave the start position when directed to do so by the Clerk of the Course. All of the laps of that run shall be recorded as a DNS.
- 1.8.6. A 2WO (Two Wheels Off) is given for two or more full wheels simultaneously leaving the track surface during a run, including warm-up and cool-down laps. A 200 second penalty shall be applied against all laps in a run where a 2WO is given. The track surface includes the curbing but not past the curbing where it exists.
- 1.8.7. A non-competing vehicle is defined as a vehicle that:
  - I. has gone 2WO (see 1.8.6);
  - II. has gone 4WO and has stopped off course in a safe place and remains there until the session ends;
  - III. is on a cool-down lap;
  - IV. has voluntarily stopped competing by slowing down and signalling following cars to pass and/or signalling that they are returning to the pits.
- 1.8.8. A DNF (Did Not Finish) is given if, during a competitor's run, the vehicle leaves the course through the official exit. The remaining laps of the run will be recorded as a DNF. Completed laps will count provided no other competitor was impeded by the DNF vehicle exiting the course.
- 1.8.9. Should a vehicle break during a run, no rerun shall be allowed. However, the driver may complete his/her remaining run(s) in another vehicle providing the vehicle is in the same class.
- 1.8.10. A two (2) driver, single vehicle entry must have a minimum of five (5) cars run between their numerical order runs or the equivalent amount of time shall be allowed to pass.
- 1.8.11. The class of a vehicle may not be changed after the start of the competition (first car on the track) unless approved by the Steward(s) of the event.
- 1.8.12. If there are additional runs to be added to the original published program, it must be announced before any competitor starts their originally scheduled final run.
- 1.8.13. If all competitors do not have the opportunity to complete all of their scheduled runs, then the times for the incomplete run may be cancelled at the Steward's(s') discretion.

## 1.9. RERUNS

- 1.9.1. A rerun is only granted when authorized by the Clerk of the Course.
- 1.9.2. When a rerun is granted, it shall be taken a minimum of five (5) cars after the competitor's original run or after the equivalent amount of time has been allowed to pass.
- 1.9.3. A rerun shall only be for the number of timed laps affected.

- 1.9.4. If a competitor is red-flagged or white-flagged while on their run, a rerun may be granted provided the competitor did not cause the flag.
- 1.9.5. If a vehicle is red-flagged as a result of a timing failure, a rerun may be granted by the Clerk of the Course

## 1.10. VEHICLE NOISE

- 1.10.1. The organizers of an event may establish a maximum vehicle noise level either by class or for all vehicles. Measurement can be at different locations around the facility being used. Competitors are warned that track licenses increasingly specify noise limits and it is the competitor's responsibility to ensure their vehicle complies with the maximum vehicle noise level established for each event in which they compete. There are no protests or appeals allowed on organizer decisions regarding maximum vehicle noise levels, measurement or action taken by the organizers.

Sample specified maximum vehicle noise levels:

98db for 'Modified' cars and 95db all other cars at Shannonville Park; Toronto Motorsport Park

92db for all cars at Canadian Tire Motorsport Park's Drivers' Development Track and Calabogie Motorsport Park.

- 1.10.2. The Clerk of the Course at a National Championship Event will prohibit any vehicle from running which twice exceeds the noise level on the course or in a test session as measured by a sound meter. At any non-championship event, the Organizer or Clerk may prohibit any vehicle from running which the organizer deems to violate the maximum vehicle noise level.

## 2. EVENT ORGANIZATION

Time Attack events now encompass both events that allow passing during timed sessions and events where passing is not allowed during timed sessions. See the rules in this section that govern the organization of both of these types of events. Supplementary Regulations and Drivers' meetings will cover protocols for each event.

### 2.0. DRIVERS' MEETING

- 2.0.1. Instructions to Competitors: The organizer shall call all competitors to a Drivers' Meeting prior to the start of the event. All competitors are required to attend this meeting. The Organizer shall cover the following topics:

- Introduce the event officials;
- Review the course diagram/track layout (passing zones), and procedures;
- Make sure all entrants have signed the waiver;
- Describe any penalties to be assessed (down & out rule, off course, and DNF);
- Review supplementary regulations on run groups, gridding, flagging and work requirements (marshaling).

- 2.0.2. Organizers should have a system in place to verify attendance at the Drivers' Meeting, to avoid uninformed participants on the course/track. This may be in the form of a roll call, sign off, issuance of stickers or wristbands etc. At the discretion of the Organizers, drivers missing the Drivers' Meeting may be excluded or they must receive all of the information covered before they will be allowed to participate.

### 2.1. COURSE SAFETY

- 2.1.1. It is important that the spectator viewing areas and the spectator parking areas be kept a safe distance from the course, especially the start/finish area. Course security is a priority. Spectators are to be expected and adequate crowd control provisions should be in place. Unless protected by substantial barriers, spectator areas should be roped/taped off or clearly defined.

- ~~2.1.2.~~ Full consideration should be given to safety in the pits, around the start/finish areas and near the flag stations. Particular attention should be given to **placement of officials, time keepers and marshals.**
- 2.1.3. There should be adequate course Marshals to oversee all competition runs and to ensure safety as well as equality to all competitors.
- 2.1.4. Where the course is not visible in its entirety from a central point where the Clerk of the Course is located, a reliable communication system linking the flagging stations with the Clerk of the Course is to be established.
- 2.1.5. The Clerk of the Course may, at his/her discretion, declare a vehicle 2WO under the following circumstances:
- I. A driver dirties the track surface by cutting corners, knocks a pylon onto the track, or drags any other objects onto the track surface that may force other vehicles to slow or change their line.
  - II. A driver spins on-track, and holds up the event (i.e. forces a full course red flag to be thrown);
  - III. A driver ignores or misses flags.
  - IV. A driver's on-track conduct, in the opinion of the Clerk of the Course, endangers the driver, other competitors or slows the progress of the event (i.e. going too slowly on a warm-up or cool down lap).
- 2.1.6. The Organizer is to provide each marshal station and the start/finish area with red, yellow, green, blue and black flags plus a 10BC or better fire extinguisher. The Marshals are to be instructed in their proper use.
- 2.1.7. The minimum number of 10BC or better fire extinguishers provided at each event is equivalent to the number of marshal stations plus four (4) spares.
- 2.1.8. The Organizer is to have a prearranged plan to cope with major emergencies. This, as a minimum, means having quick access to an unlocked cellular phone with a list of local emergency phone numbers. Note: 911 dialling is not available in all areas. Organizers are responsible to post all area emergency numbers for quick access by organizing staff and safety officials.
- 2.1.9. The Organizer may choose to restrict the eligibility of a vehicle or competitor to participate in an event.
- 2.1.10. The Clerk of the Course is responsible for monitoring the safety of the course when vehicles are on the track. Should the course become obstructed, the Clerk is to direct that a red flag be displayed at all marshal stations (see 2.2.3 below). Once the obstruction has been sufficiently cleared, the Clerk may direct the marshal stations to restart vehicles with a green flag (see 2.2.6 below).

## 2.2. Flags

- 2.2.1. **Starting Flag:** used to send new vehicles onto the track or to re-start a vehicle that has been red flagged and stopped at a marshal station – can either be a waving or pointed green flag or a very clear hand signal motioning the **Driver** into action.
- 2.2.2. **Black and White Checkered Flag:** indicates the end of a competition session when waved at the finish line or other location specified in the Supplementary Regulations.
- 2.2.3. **Red Flag:** waved at all marshal stations and by the Starter – only when instructed to do so by the Clerk of the Course – it informs all Drivers to safely come to a **first gear speed** and then slowly proceed to **pit lane** for further instruction. Drivers shall be prepared to stop at any time.  
A red flag is most commonly used in Time Attack if a vehicle has gone off-track and is positioned where it endangers the safety of participants or if track conditions are no longer safe to drive on.
- 2.2.4. **Black Flag:** displayed at the start/finish line or any other marshal station – only when instructed to do so by the Clerk of the Course – it informs the Driver to return to the pits immediately and await instructions from the Officials. A Black Flag is often used when a vehicle has been missed with the Checkered Flag or if the vehicle is leaking fluid, blowing excessive amounts of smoke, **loose parts** or appears to be in some other kind of mechanic trouble.
- 2.2.5. **Yellow Flag:** Displayed to indicate a dangerous condition on or near the track surface. Competitors are expected to lower their speed sufficiently to allow avoidance of any obstacles or dangerous situations. Once a driver passes the location of the incident and sees a subsequent Green Flag, then they may resume speed.
- 2.2.6. **Green Flag:** Resume speed after a yellow flag or displayed to replace the white flag at any marshal station as soon as there is enough space created between vehicles – in the opinion of the

- Clerk of the Course – indicating that the Driver shall can immediately return to full speed, with the next timed lap beginning when the vehicle crosses the Start/Finish line.
- 2.2.7. **Blue Flag:** Displayed at any Marshal station to alert the Driver that a faster following vehicle must be allowed to pass as soon as is safely possible. Failure to obey this flag may result in a black flag being displayed for that vehicle or the loss of competition lap times for holding up competitors and/or the event.
- 2.2.8. **White Flag:** (for CASC-OR only, other regions may adopt) In timed sessions with no passing, displayed at any marshal station including the Start/Finish post only when instructed to do so by the Clerk of the Course. It informs the Driver to slow down and make space from the vehicle ahead. The lap on which this flag is displayed will not be scored. Drivers are to proceed at a pace that creates safe space from the vehicle ahead, but does not slow the vehicle behind. Drivers are to look as far ahead on the course as possible for a waving Green Flag.

## 2.3. PERMITS

- 2.3.1. A permit is required for all ASN Canada FIA sanctioned National Championship Events. The permit fee is one hundred dollars (\$100) per each Time Attack event, payable at least six (6) weeks before the event. A permit shall not be required for all lapping days, test & tune events.
- 2.3.2. Any club organizing a National Championship Event must submit to the ASN office, the following items at least 6 weeks in advance of the event: a) Event Supplementary Regulations for approval before publication to the sport; b) Copies of advertising material to be used to publicize the event to the general public and competitors; c) Copies of the material sent to the media; d) Event flyers.

## 2.4. EVENT FLYERS AND SUPPLEMENTARY REGULATIONS

- 2.4.1. The Supplementary Regulations and the Event Flyer may be combined in one document or issued in two parts.
- 2.4.2. An Event Flyer shall contain:
- I. The words "sanctioned by ASN Canada FIA";
  - II. The statement: "Held under the ASN SoloSport GCRs, ASN National SoloSport Regulations and/or (if applicable name of ASN Region) SoloSport Regulations";
  - III. The names of the event, series sponsors, event sponsors and organizing club;
  - IV. Date and location of the event;
  - V. The time of registration, scrutineering, driver's meeting, first run and close of registration;
  - VI. The entry fee schedule;
  - VII. The name, address, telephone number and email address of the Organizer or alternate club contact;
  - VIII. Any maximum vehicle noise level restrictions, if different from what is in these regulations.
- 2.4.3. Event Supplementary Regulations shall contain (see SoloSport GCR 4.5):
- I. The words "sanctioned by ASN Canada FIA";
  - II. The statement: "Held under the ASN SoloSport GCRs, ASN National SoloSport Regulations and/or (if applicable name of ASN Region) SoloSport Regulations";
  - III. The names of the event and organizing club;
  - IV. The name, address telephone number and email address of the Organizer or alternate club contact;
  - V. The names and contact information for the Steward(s) of the meeting and the Clerk(s) of the course;
  - VI. Date and location of the event;
  - VII. The time of registration, scrutineering, drivers' meeting, first run and close of registration;
  - VIII. The entry fee schedule;
  - IX. Any maximum vehicle noise level restrictions, if different from what is in these regulations;
  - X. Passing rules and procedures, plus a description of the passing zones (if used);
  - XI. A detailed list of prizes and trophies to be awarded;
  - XII. Identification of the Judges of Fact (if used) and the facts to be judged (see.SoloSport GCR 7.17)
- 2.4.4. Any Supplementary Regulations are to be posted at the event and competitors are to be made aware of them at the Drivers' Meeting.

## 2.5. ORGANIZERS' DOCUMENTATION

- 2.5.1. At a race track, the Organizer shall display the following items at a central and easily accessible location, e.g. registration area or the same location where run groups, marshalling assignments, and lap times are posted (also see SoloSport GCR 4.7):
- I. Permit;
  - II. Insurance certificate;
  - III. Copy of Supplementary Regulations;
  - IV. List of officials, this list shall also be read at a drivers' meeting.

## 2.6. COURSE

- 2.6.1. Any changes made to the course/track configuration, made with the approval of the steward(s), must be brought to the attention of the competitors, at a driver's meeting.
- 2.6.2. The course, including the start and finish, must be clearly defined. When course pylons are used, their location must be clearly marked to assure accurate replacement after being displaced.
- 2.6.3. Course pylons shall have a minimum height of ten (10) inches and shall be of a distinctive colour. Pylons shall be heavy enough to prevent movement other than that caused by contact with a competing vehicle.
- 2.6.4. The course must meet the approval of the Chief Steward prior to the start of the competition.

## 2.7. RUNS

- 2.7.1. A run is a set of timed laps, or sessions, as defined in a driver's meeting. The definition of a run may be modified during or after competition by event officials due to force majeure. It is recommended that run groups are alternated when possible to avoid preference to changing weather conditions.
- 2.7.2. In a non-timed lapping session or a driving school, passing is permitted in designated areas if the leading vehicle has signalled to be passed AND has slowed down. Passing zones and procedures are to be clearly explained both in the Supplementary Regulations and at the Drivers' Meeting.

## 2.8. TIME ATTACK SESSIONS WITH NO PASSING

- 2.8.1. The running of more than one vehicle at a time is permitted, providing the vehicles are separated on the course by a safe distance. Passing a moving vehicle on the track is not permitted during timed competition runs except as per 2.8.2 below.
- 2.8.2. If NO PASSING is specified during competition runs, passing may only occur when the vehicle being passed is non-competing (see 1.8.7) AND:
- I. Is 4WO, stopped, shows no indication of moving AND is stopped sufficiently far off course as to not be a hazard OR,
  - II. Has voluntarily stopped competing, slowed down and is signalling following cars to pass and/or signalling that they are returning to the pits.

## 2.9. TIME ATTACK SESSIONS WITH PASSING

- 2.9.1. Passing Zone Protocol: First Cone: Start of the passing zone. Car being passed remains on the racing line and must point or signal that the pass is recognized. Passing car should move off the racing line to indicate they are ready to pass and must wait for the signal to pass. Because cars of similar speed will be grouped for the timed sessions, the car being passed must get out of the throttle once the passing car has pulled out to pass and allow them to get alongside before the second set of cones. Failing to do this may result in the leading car being black flagged.

Second set of Cones (2 cones): These cones will be placed approximately 3/4 of the way through the passing zone. The passing vehicle must be alongside of the vehicle being passed. If not, the pass must be abandoned. No initiation of passes past these two cones. Cars initiating passes beyond these cones will be black flagged.

Third set of Cones (3 cones): Passing must be complete before these three cones. Passing vehicle should be back on the normal racing line. Vehicle being passed must get out of the throttle to allow the passing vehicle to complete the pass, **or will be black flagged.**

- 2.9.2. Cars being passed must remain on the racing line.

- 2.9.3. Timed run sessions will typically be 15 to 30 minutes in length.
- 2.9.4. Each Run Session shall consist of:
- A warm-up lap or portion of a lap until the vehicle crosses the official timing line and timing for the Run Session begins (determined by the event organizers);
  - As many timed laps that can be completed by a competitor before the expiry of the time allotted by the organizers for the run session;
  - A cool-down lap or portion of a lap until the vehicle reaches the track exit.
- 2.9.5. Event organizers may set different time limits for each Run Session during the course of the event, but all competitors entered in the event must be scheduled for the same total amount of track time during the event. (e.g. the organizer may set a 15 minute time limit for the first Run Session -for all competitors- and a 22 minute time limit for the second and subsequent Run Sessions). One principle of timed Run Sessions is that competitors are not guaranteed an equal number of Timed Laps since the number of yellow or red flags or other circumstances including weather, equipment failure, etc. can prevent the completion of even a single Timed Lap in a Run Session for one or more competitors.
- 2.9.6. The time limit shall commence with the start of the first car onto the track in each Session and will conclude when the chequered flag is displayed at the timing line to the first competitor to arrive at the timing line and be shown the flag. All other competitors still on the track in that Session will be shown the chequered flag as they arrive at the timing line. The Timed Lap finished by the chequered flag is to be scored and the competitor to start the cool-down Lap.
- 2.9.7. The maximum number of vehicles permitted on a track at one time is determined as follows: the length of the track in meters divided by 125. Initial vehicle spacing is controlled by the Start/Finish marshal.
- 2.9.8. Potential speed differential among participating vehicles should be considered and addressed by organizing Lapping Groups to take into account vehicle speed potential as well as other factors including driver experience.
- 2.9.9. As often as possible, competition Run Session groups should be re-gridded based on previous lap times to help increase the number of "open track" laps for all competitors.
- 2.9.10. Aggressive driving of any kind will be penalized by black-flagging the offending party.
- 2.9.11. Open wheeled vehicles shall have their own Run Sessions.
- 2.9.12. Competitors are expected to drive in a safe and controlled manner. Any competitor that puts two wheels off during a session will lose any timed result for that session.
- 2.9.13. Drivers are to be held to a high standard of cooperation, in regards to track etiquette,
- 2.9.14. and sportsmanship. Any driver deemed to be blocking by the Clerk of the Course, to slow another competitor's lap time, may have his Session times disqualified or may be excluded from further competition.
- 2.9.15. Drivers are cautioned to not deliberately draft with another vehicle except immediately prior to making a pass. Prolonged drafting or "team" drafting may result in penalties for both drivers.
- 2.9.16. Any driver displaying unsportsmanlike conduct either on or off the track, black flagged, driving in an overly aggressive manner, or failing to cooperate with other drivers on the track, may be subject to penalties or exclusion.
- 2.9.17. Download Run Session Meetings: After a Run Session has been completed for all drivers in the event, all drivers may be required to attend a download session meeting with the Clerk of the Course to discuss any issues or problems that arose during that previous Run Session. Re-gridding or passing issues should be discussed during these meetings. Similarly, the Clerk of the Course or an event official acting on behalf of the Clerk may conduct such a meeting for all the drivers of a particular Run Session grouping. Notice of such download sessions may be scheduled in the event schedule, verbally delivered to each driver affected as they exit the track or by a notice on the official notice board.

## 2.10. TIMING

- 2.10.1. An electronic timer is to be used as the primary timing system at all championship events. It is operated under the direction of the Chief Timer throughout the event.
- 2.10.2. If, in the opinion of the Chief Timer, a failure has occurred with the timing system, a rerun may be given by the Clerk of the Course.
- 2.10.3. In the event of a total failure of the primary timing system, another timing device or system may be used. The device must be capable of timing to a hundredth of a second. A manual analog or digital stopwatch may be used, provided that the Organizer, Steward(s) and the Chief Timer accept it.

- 2.10.4. In the case of .3 above, if a competitor's official time was on a timing system only capable of timing to a hundredth of a second while another competitor's official time was on a timing system capable of timing to a thousandth of a second, then the following shall apply: if the competitors are tied to a hundredth of a second, then the thousandth of a second timing portion shall not be considered for scoring points.

Example: A time of 61.495 shall be considered tied with a time of 61.49.

## 2.11.PADDOCK

- 2.11.1. A paddock area is to be provided for the use of competing vehicles and their service vehicles and a speed limit of 15km/h enforced.

## 2.12.STEWARDS

- 2.12.1. For the ASN Canada FIA Canadian National Time Attack Championship, the ASN Canada SoloSport Committee will appoint a Senior Steward and two additional Stewards who operate as a committee to carry out the duties of the stewards. (SoloSport GCR 7.7) Stewards, if possible, should be experienced competitors and be members of other than the organizing club. Names of the Steward(s) should be announced at the Drivers' Meeting and published in the Supplementary Regulations.
- 2.12.2. For ASN Regional championship or club events, ASN Region SoloSport regulations may require the appointment of a steward(s) (SoloSport GCR 7.3). Name(s) of the steward(s), if appointed, should be announced at the Driver's Meeting and published in the Supplementary Regulations.
- 2.12.3. For events without a steward(s) the Clerk of the Course have the authority for the enforcement of the GCRs, the national, the regional rule sets and the event supplementary regulations. (SoloSport GCR 7.3-7.11)

## 2.13.INSURANCE and WAIVERS

- 2.13.1. Time Attack Event insurance is provided under the under the ASN Canada FIA insurance plan. All Time Attack events organized by an ASN Canada affiliated club must apply for event coverage. Rates are available for "passing" and "non-passing" Time Attack Events. Organizers must ensure they obtain the correct insurance level for the type of Time Attack event they are holding.
- 2.13.2. All competitors, officials, timers, workers, team personnel and all other persons who are permitted to enter areas normally closed to the general public are to read, understand & sign the ASN Canada FIA supplied General Waiver before being allowed to go into the course area, timing vehicle/area or to marshal, volunteer or participate in the event.
- 2.13.3. Competitors or other participants, under the age of majority, are to provide an "Annual Parental Consent Waiver" signed by parents/guardians.
- 2.13.4. All ASN Canada FIA supplied waivers may be downloaded from their website at [www.asncanada.com](http://www.asncanada.com) and printed by the Organizer(s) for use during the event. Care should be taken to ensure all words on the printed copies are clearly legible.
- 2.13.5. All waivers are to be completed in full including the date(s) and name of the event at the top of the waiver.
- 2.13.6. In the registration process, individuals responsible for the waiver are to maintain the waiver under their control at all times and sign the witness section as each participant signs the waiver.

## 2.14.INCIDENT REPORTS

- 2.14.1. All accidents, injuries, incidents and impacts or damages occurring during the event are to be reported by faxing a completed ASN Canada FIA Incident Report Form to the ASN Canada FIA office within forty-eight hours of the conclusion of the Event. An Incident Report is to be completed for each and every accident(s) whether or not a claim is anticipated. Organizers may download and print the Incident Report form from the ASN Canada FIA website.
- 2.14.2. The Incident Report should be completed in full following the instructions in the form, with as many details as possible, including names and addresses of any witnesses or injured parties as well as medical treatment provided, details of any video tapes and photographs that may have been taken, etc.

## 2.15.OFFICIAL RESULTS

- 2.15.1. Official results should include:

- I. Name and date of the event;
  - II. The name of the organizing club;
  - III. Name of the Chief Organizer, Clerk of the Course, Chief Timer, and Steward(s);
  - IV. The words: "sanctioned by ASN Canada FIA";
  - V. An acknowledgement of sponsors;
  - VI. Name of each competitor including first name, not initial;
  - VII. The home town and province of each competitor;
  - VIII. Vehicle sponsors if recorded on the entry form;
  - IX. Make and model of car driven by each competitor;
  - X. Time for the best run/lap including penalties, for final position;
  - XI. Results published in classes, in the finishing order;
  - XII. Overall results of at least 50% of the field by points;
  - XIII. A complete list of all trophy and prize winners.
- 2.15.2. Official results for the National Championship are to be mailed or emailed to the ASN Canada FIA office and all members of the National SoloSport Committee within eight (8) days of the event, as well as be made available to all competitors.
- 2.15.3. Copies of the official results of any event requiring a permit (schools exempt) are to be mailed or e-mailed to the ASN Region and the SoloSport representative for the Region within eight (8) days of the event as well as be made available to all competitors.
- 2.15.4. Event Provisional Results become Official Results as follows:
- I. 20 minutes after being posted and no inquiries on the results have been filed and there are no other unresolved grievance procedures;
  - II. If an inquiry has been received and the time for the receiving of a protest resulting from the inquiry process as per SoloSport GCR 10.2 has expired;
  - III. If a protest has been received and the time for the receiving of an appeal from the protest process as per SoloSport GCR. 11.4 has expired;
  - IV. If notice of an appeal has been given and the appeal process has been concluded.  
In the case of III and IV above, portion of the results which would not otherwise be affected by the protest/appeal procedures may be declared final by the steward(s)

## 2.16.REQUEST FOR ACTION

- 2.16.1. The Clerk of the Course may submit to the Steward(s) a "Request for Action" describing a suspected breach of the Regulations or of misbehaviour by any participant. The Steward(s) of the Event shall act on this request in the same manner as they would act on a protest and shall have the same authority to levy penalties as in a protest.

## 2.17.PROTEST AND APPEALS

- 2.17.1. Any protest or appeal shall follow the procedures as defined in the ASN Canada FIA SoloSport GCRs (10 & 11).

# 3. NATIONAL CHAMPIONSHIP SCORING

## 3.0. CLASS CHAMPION

- 3.0.1. The competitor with the greatest points in a class from the two (2) combined days of the competition shall be declared the class champion. Points will be calculated from the fastest run from each day as follows: (Fastest Time in Class / Your Fastest Time) X 100
- 3.0.2. If a tie exists, the tie shall be broken using the competitors second fastest times.

## 3.1. NATIONAL CHAMPIONSHIP AND OVERALL SCORING

- 3.1.1. Competitors will be scored based on the total of their fastest lap time from each day of the event.
- 3.1.2. Points are awarded based on the following formula:  
**(Fastest Event PAX Time ÷ Your Fastest PAX Time) X 100**

- 3.1.3. For the slower tracks, a "Competitor's Fastest PAX Time" formula is: (Competitors Performance Index (Pi) X .0024 + .76024) X Competitors Fastest time. E.G. a GT3 competitor with a Performance Index of 79.4 X .0024 +.76024 and a time of 97.886 seconds has a PAX score of 93.070.
- 3.1.4. The calculation for faster tracks (e.g.: CTMP GP, Calabogie) a "Competitor's Fastest B PAX Time uses this formula: (Competitors Performance Index (Pi) X .0036 +.64036) X Competitor's Fastest time. Since the Performance Index is unlimited for Open Mod and Mod1 classes, all cars will use a PAX factor of 1.062 or 1.052, respectively, for all tracks.  
Canadian Tire Motorsport Park Grand Prix Track  
Calabogie Motorsports Park

## 3.2. IDENTIFICATION AND ADVERTISING

- 3.2.1. Vehicle numbers and class designation shall be displayed prominently on both sides of the vehicle and at least on one horizontal surface (i.e. roof or hood). Numbers shall be at least 8 inches high and 1-inch stroke width. Class designations must be a minimum of 4 inches high and be positioned after the number.
- 3.2.2. Only one entry number shall be displayed while on the course even if there are 2 drivers.
- 3.2.3. Numbers should be removed or completely covered when the car is driven on the street, even for a short distance.
- 3.2.4. Placement of sponsor decals is mandatory and cars not prominently displaying them will not be allowed to compete. All decals must be in place prior to event scrutinizing. Certain exemptions and dispensations may be allowed at the discretion of the organizer.

# 4. VEHICLE CATEGORIES, ELIGIBILITY, AND MODIFICATIONS

## 4.0. VEHICLE CATEGORIES

- 4.0.1. There are 14 vehicle categories: Open Modified, Modified 1 (MOD1), Modified 2 (MOD2), Modified 3 (MOD3), Super Grand Touring 1 (SGT1), Super Grand Touring 2 (SGT2), Super Grand Touring 3 (SGT3), Grand Touring 1 (GT1), Grand Touring 2 (GT2), Grand Touring 3 (GT3), Grand Touring 4 (GT4), Touring 1 (T1), Touring 2 (T2) and Touring 3 (T3).
- 4.0.2. Sections 4, 5 and 6 will determine which vehicle category(ies) a vehicle may compete in.

## 4.1. SERIES RACE, KIT CARS, & NON-PRODUCTIONS VEHICLES

- 4.1.1. The following vehicles, sometimes called kit cars, may compete with the same safety equipment as a 'Starting Class' vehicle provided they are equipped with proper roll over protection (see Sections 1.3 and 1.4), are road registered and compete on DOT approved tires:  
 Aurora (Cobra style), Dutton, Caterham and Lotus 7 style home finished cars.
- Kit cars will be classified as Modified 1 unless the Region Car Classification Committee issues a special classification for that vehicle, based on a Dyno Chart (see 5.0.8 Dyno Option), proof of curb weight and other information as deemed necessary.
- 4.1.2. Vehicles sold by the manufacturer for one of the following race series: Player's/GM Motorsport, Rothmans/Porsche turbo cup, Honda/Michelin, or Ontario Street Stock Challenge (Nissan Sentra Series) are eligible to compete based on the starting vehicle type adjusted by PIPs incurred for all modifications.
- 4.1.3. Non-production vehicles, which include: formula, sports racing, open-wheel, tube frame, non-production drive configuration, more than one engine, shall compete in "Open Modified" class.
- 4.1.4. Low horsepower, non-production vehicles can be integrated into lower classes to be more competitive. They will require all Open Modification Safety Rules. To be considered for Integration

to a lower class, competitors will submit to the Classification Committee: vehicle make, model, race class it normally road races in, dyno plot, race weight. These vehicles will have a handling index of 100 and will require a declaration of tire PIPs (Rule 5.1.2). If the vehicle's horsepower, weight, aero, or tire type is changed during the season, a classification re-submission is required.

## 4.2. PRODUCTION VEHICLES

Production vehicle is defined as a single, specific, make, model and year, entered in any class (excluding Open Modified) and must meet all of the following "production vehicle" requirements:

- 4.2.1. Have been series produced;
- 4.2.2. Have been federalized for legal public road use in Canada;
- 4.2.3. Have been available for purchase and delivery to the general public through the vehicle manufacturer's retail sales outlet in Canada, unless specifically waived by these Regulations or an ASN Bulletin;
- 4.2.4. Conform to all the original equipment specifications, as defined in Section 4.4, except for the mandatory requirements of these Regulations and the authorized modifications for the appropriate vehicle category;
- 4.2.5. Has been exempted by .1 or .2 above; and
- 4.2.6. Compliance with the second and third points above may be waived by either a CASC-OR Bulletin or by inclusion of the model in the "OTA Vehicle Classification List".

## 4.3. ORIGINAL EQUIPMENT SPECIFICATIONS

- 4.3.1. Original equipment specification 'OE' is defined as: all the original equipment parts or the exact equivalent to original equipment replacement parts that could have been purchased on that "production vehicle" in conjunction with all original equipment specifications and installed by the vehicle manufacturer. For example, pistons could be replaced with aftermarket items if they were the same weight and compression ratio, but replacing cast pistons with forged pistons would be a modification. If a competitor is unsure if a part is 'OE' equivalent, the competitor must ask the ASN SoloSport Committee (ASC) for a written ruling.
- 4.3.2. Dealer-installed parts or specifications, unless required by a directive from the vehicle manufacturer, are not defined as 'OE'. Parts or specifications that the vehicle manufacturer listed as "competition" or similar purposes are not defined as 'OE'.

## 4.4. AUTHORIZED MODIFICATIONS

Modifications permitted for competition in this rulebook may not be legal for vehicles operated on public roads and highways. It is the responsibility of the competitor to ensure that his vehicle complies with all applicable laws and safety standards when it is driven on the street.

- 4.4.1. Authorized modifications for the appropriate vehicle category (i.e. Touring, GT, SGT, Modified) are the only permitted modifications. If these Regulations, or a current year ASN Bulletin, do not specifically permit a modification to the original equipment specifications, then the modification is not authorized (i.e. if in doubt -don't.).
- 4.4.2. Where it is permitted to replace an item, it is authorized to remove the 'OE' item to facilitate the specified replacement. Where it is permitted to modify an item, only the specified item may be modified.
- 4.4.3. Rules on modifications are written to convey the function, extent or intention of a modification. Any method used to circumvent the function, extent or intention of any modification is not considered an authorized modification. If there is any uncertainty about the function, extent and/or intention of a rule on vehicle modification, it is the competitor's responsibility to seek clarification from an ASN SoloSport Committee (ASC) member before undertaking the modification in question.

## 4.5. MODIFICATION – DEFINITION

Modification is defined as:

- 4.5.1. The removal of a part except when it has been replaced by an exact equivalent to 'OE' replacement part;
- 4.5.2. The addition of a part except when the added part is an exact 'OE' part or an exact equivalent to 'OE' replacement part and is, in fact, replacing the 'OE' part;
- 4.5.3. A non-original equipment method of adjustment or service procedure;
- 4.5.4. A change to an original equipment specification or a substitution.

## 4.6. TECHNICAL INSPECTION

- 4.6.1. The vehicle shall be made available to the technical inspector or Chief Scrutineer upon request. The vehicle shall pass all the mandatory inspections.
- 4.6.2. At the event, the competitor shall present to the technical inspector or the Chief Scrutineer a completed copy of the Vehicle Technical Self-Declaration form. This form is to be completed in advance of the event by either the competitor or his licensed mechanic.

## 4.7. BURDEN OF PROOF

- 4.7.1. A competitor have the sole burden of proving that their vehicle conforms to all applicable regulations and, except for Open Mod and Mod 1, conforms to all the production vehicle requirements. Each competitor must be prepared to produce the owner's manual, manufacturer's shop manual(s), manufacturer's catalog(s) and other official documentation as evidence of conformity and eligibility of their vehicle.

Competitors shall consent to carrying a GPS-based data acquisition system on board and/or to having their cars weighed as raced at any time requested by the Car Classification Committee.

## 4.8. AUTHORIZED MODIFICATIONS – ZERO PIP VALUE

- 4.8.1. The modifications defined in Subsection 4.9.1 through 4.9.3 are assessed a zero Performance Index Point (PIP) value and are, therefore, the only permitted modifications for 'Starting Class' category vehicles without the declaration of PIPs.

## 4.9. GENERAL MODIFICATION

- 4.9.1. Stereo systems, alarm systems, gauges, switches, wipers, lights, mirrors, and other similar parts that provide no performance or handling gains, may be added or replaced with similar parts.
- 4.9.2. The sun visors, steering wheel (including any air bag contained therein), floor pedals, shifter knob and lever may be modified.
- 4.9.3. Spare tire(s), tools, jack, loose floor mats and clip-in rear storage security shelf/net/blind shall be removed.
- 4.9.4. Hubcaps, wheel discs and trim rings shall be removed if they are not fully secured.
- 4.9.5. The seat belt(s) may be replaced with any seat belt(s) and attachment hardware that complies with the requirements of Competitor Safety, Section 1.1 - Restraint System.
- 4.9.6. Rollover protection that complies with the requirements of Competitor Safety may be added. See Sections 1.3 and 1.4. The interior trim and seats may be modified only to the extent necessary to facilitate the addition.
- 4.9.7. Tow-bar brackets, tie-down hooks and trailer hitches may be added or removed. The bumper, frame, exterior trim and exterior panels may be modified only to the extent necessary to facilitate the addition or removal.
- 4.9.8. Driver and passenger seats may be replaced with reclining sports seats. Any other unauthorized modification to the seating, including 5.1.6.X and 5.1.6.XI, shall be declared under Section 5.1.6, Body & Trim.

## 4.10. ENGINE & TRANSMISSION MODIFICATION

- 4.10.1. The spark plugs, points, rotor(s), distributor cap(s), ignition coil(s), high tension leads, mechanical ignition timing system components, multiple spark discharge and/or capacitive spark discharge components and rev limiting devices may be modified. Competitors are reminded that the computerised components (and their programming) of the ignition system and the engine management systems must remain 'OE'.
- 4.10.2. The battery may be replaced with any similar full-size automobile battery, provided the location is 'OE' and the quantity of batteries is not decreased.
- 4.10.3. The air cleaner assembly may be modified, but no further than, on a normally aspirated engine, the intake side (i.e. air cleaner side) of any 'OE' airflow sensor or throttle body and, on a turbo or supercharged engine, up to the turbo or supercharger. In addition, on normally aspirated engines only, the piping connecting the air cleaner assembly to the engine may be modified or replaced. For clarity, the 'OE' airflow sensor or throttle body may not be replaced or modified.

- 4.10.4. Catch tanks, oil filters, fuel filters and oil coolers on the engine, transmission and final drive housing may be modified. **Catch tanks may be either recirculating or vented to the atmosphere.**
- 4.10.5. Cylinders may be over-bored up to 1.016 mm (.040 in.) and the pistons replaced with 'OE' oversize pistons.
- 4.10.6. The 'OE' 'limited-slip' type differential carrier may be replaced with an equivalent size 'OE' 'open' type differential carrier provided the ring and pinion gears remain 'OE'.
- 4.10.7. The traction control or similar system may be disabled or removed. Altering or disabling the traction control by reprogramming the ECU is NOT permitted.
- 4.10.8. The engine and transmission locating mount(s) may be modified provided the location of the engine and transmission remain 'OE'.
- 4.10.9. The engine cooling system may be modified. The thermostat(s) may be substituted or removed.
- 4.10.10. Nut, bolts, screws, studs, washers and other similar fasteners may be replaced, provided that they serve no other function than to fasten items, as per 'OE'.
- 4.10.11. **The OE catalytic converter(s) may be replaced with an aftermarket catalytic converter, and multiple OE catalytic converters may be replaced by one aftermarket catalytic converter provided they meet current provincial emissions regulations. All exhaust gases must pass through the catalytic converter except those vented by pre-turbo external waste gate(s).**
- 4.10.12. Fuel line rerouting, except into the interior, is permitted. Insulation may be added.
- 4.10.13. An alternate driveshaft and/or half-shafts may be used.
- 4.10.14. The clutch system may be modified. The clutch system is defined as: linkage/operating system, bell housing, throw-out bearing, disc, pressure plate, and pilot bearing. The transmission shift linkage may be modified.
- 4.10.15. The exhaust system may be modified under the following limitations:
  - I. The cat-back exhaust system, excluding any other part of the exhaust manifold(s), may be modified provided the exhaust system meets (not exempt) current Ontario emission regulations;
  - II. Exhaust system components may be insulation wrapped or treated with high temperature coatings; and
  - III. Waste gates may be ported.
- 4.10.16. The automatic transmission shift program and torque converter may be modified.
- 4.10.17. Underdrive or alternate accessory drive pulleys are permitted.
- 4.10.18. An OE Limited Slip Differential, excluding the gear ratio, may be modified.

## 4.11. SUSPENSION & RUNNING GEAR MODIFICATION

- 4.11.1. Wheel alignment may be adjusted. The alignment settings shall be within the manufacturer's original specifications for non-competition purposes. Installation of alignment adjustable devices, as described in Section 5.1.5.III, is permitted for the sole purpose of setting alignment to within OE specifications.
- 4.11.2. The braking system may be modified including calipers, rotors, hydraulics, pads and the ABS system. A brake cooling system may be added.
- 4.11.3. The road wheel(s) may be replaced with any 10-inch or larger diameter road wheel(s) provided no modification is done to facilitate wheel clearance other than modification to the inner-fender panel(s), provided these modifications serve no other function. The fender must remain 'OE'. However, inner fender lips may be rolled/flattened to facilitate tire clearance.
- 4.11.4. **Tires must be street legal with a UTQG rating of at least 180 provided that:**
  - I. Except for "OE" tires, the specific brand and model of tire is available in at least two wheel diameters;
  - II. No modification is done to facilitate tire clearance other than modification to the inner-fender panel(s), provided these modifications serve no other function. The fender must remain 'OE'. However, inner fender lips may be rolled/flattened to facilitate tire clearance.
  - III. The widest point of the tire, above the axle, does not protrude from the widest point of the OE wheel well opening by more than 13mm (1/2") when measured in a vertical plane coincident with the axle line.
- 4.11.5. The suspension mounting points on the chassis/frame may be reinforced. Strut and other suspension mounting point braces may be added to the chassis/frame and firewall. Suspension

- braces, (e.g. strut tower braces, tunnel braces, and tie-bars) sub-frame connectors and firewall braces may be added. The chassis/frame and floor pan may be modified only to the extent necessary to facilitate this.
- 4.11.6. Updating or backdating of suspension components is permitted provided all of the following conditions are met:
- I. The components installed come from the same model (but a different year);
  - II. The components are directly interchangeable without modification; and
  - III. The two model years have the same SUSP rating.
- 4.11.7. Anti-roll bar end links may be replaced with alternate end links.

## 4.12. BODY AND TRIM MODIFICATION

- 4.12.1. The front fender(s) may be replaced with any front fender(s) of equivalent size and shape to OE, and equivalent or greater weight than 'OE'.
- 4.12.2. Spoilers, air dams and skirts (i.e., body kits) and splitters may be added or replaced provided the replacement does not fall under Section 5.1.3 and is of equivalent or greater weight than OE. The exterior panels, exterior trim and bumpers may be modified only to the extent necessary to facilitate the addition or replacement.
- 4.12.3. Grills, ducts and scoops in exterior panels may be enlarged or added to facilitate engine cooling/induction or brake cooling, provided these modifications serve no other function.
- 4.12.4. Exterior mouldings, badges and mirrors may be modified.
- 4.12.5. Rear bumper skins can be modified to allow for exhaust piping.
- 4.12.6. **The rear seal between the body and the hood may be removed, and the rear of the hood raised to vent the engine compartment.**
- 4.12.7. **OE style side skirts within the factory body lines, for cosmetic purposes/stone guards.**

# 5. PERFORMANCE INDEX POINT SCHEDULE

## 5.0. ENGINE & DRIVETRAIN

### 5.0.1. INTAKE SYSTEMS

- |      |   |       |
|------|---|-------|
| I.   | Modification of the intake manifold(s), throttle body, plenum, or intake air sensor system, any or all  | 1 PIP |
| II.  | Modification to the 'carburetor system', including fuel pump(s) and fuel pressure regulator(s), excluding the number of venturi and excluding the intake manifold   | 1 PIP |
| III. | Interchange of the OE carburetor with another carburetor(s) that have a greater number of venturi than OE   | 3 PIP |
| IV.  | Interchange of the OE 'carburetor system' with a 'throttle body fuel injection system' with the same number of air throttles as the number of OE venturi; includes all required sensors and control units and all items under Sections 5.0.1.II., III. and 5.0.3.I          | 3 PIP |
| V.   | Interchange of the OE 'carburetor system' with a 'throttle body fuel injection system' that has a greater number of air throttles than the number of OE venturi; includes all required sensors and control units and all items under Sections 5.0.1.II, 1.III., and 5.0.3.I | 5 PIP |
| VI.  | Interchange of the OE 'carburetor system' with a 'multi point fuel injection system'; includes all required sensors and control units and all items under Sections 5.0.1.II, 1.III and 5.0.3.I  | 6 PIP |

### 5.0.2. EXHAUST SYSTEMS

- |     |   |       |
|-----|---|-------|
| I.  | Non-turbocharged vehicles: Modification to the exhaust manifold(s), heat exchanger(s) or exhaust header(s) and including any other intermediate pipe between the cylinder head and the catalytic converter. (e.g., X- or H-pipes) | 2 PIP |
| II. | Factory original turbocharged vehicles: Modification to exhaust manifold system, defined as exhaust manifold(s); heat   | 2 PIP |

III.	exchanger(s); and exhaust header(s); includes exhaust up-pipes Modification to the pipes between the exhaust manifold(s) and the catalytic converter(s) (e.g. turbo up-pipe(s), X-pipes, H-pipes). Do not claim if 5.0.2.I or 5.0.2.II is claimed	1 PIP
IV.	Removal or gutting of the catalytic converter(s) and/or other modifications such as modification or removal of emissions control systems including: emission control air pump nozzle(s); thermal reactor(s) and integrated plumbing; PCV and fuel evaporator systems that render the vehicle noncompliant with the applicable emissions standards for a street-driven vehicle of the type	1 PIP
V.	Factory original turbocharged vehicles: Modification to downpipe	1 PIP

### 5.0.3. ENGINE ELECTRONIC AND FUEL SYSTEM

I.	Naturally aspirated vehicles: Modification to the computerised component(s) of the ignition or engine management system (e.g. chipping the ECU or reprogramming it from OE by other means for any reason). <b><u>Or use of 95 or higher octane fuel or octane boosters.</u></b> Also includes modifications under 5.0.3.III	2 PIP
II.	Factory original turbocharged and supercharged vehicles: Modification to the computerised component(s) of the ignition or engine management system (e.g. chipping the ECU or reprogramming it by other means for any reason) <b><u>or use of 95 or higher octane fuel or octane boosters.</u></b> Also includes modifications under 5.0.3.III	3 PIP
III.	Modifications to any of: the fuel pump(s), fuel pressure regulator(s), fuel injector(s), engine sensors and any other non-engine management computer component that effects the fuel pressure or fuel mapping	1 PIP

### 5.0.4. FORCED INDUCTION SYSTEMS

I.	Modification to, excluding addition of, intercooler or water injection system; any or all	1 PIP
II.	Addition of an intercooling system or water injection system	3 PIP
III.	Addition of an intercooler spray system (spraying water or any non-oxidizer or accelerant)	1 PIP
IV.	Modification that affects the boost pressure control system, any or all Note: This also applies to vehicles where the boost is controlled by the ECU even if PIPs have been taken for reprogramming or chipping the ECU.	3 PIP
V.	Factory supercharged vehicles: Modification to the pulley system	3 PIP
VI.	Port and polish and/or thermal coating of a turbocharger or supercharger	1 PIP
VII.	Factory supercharged vehicles: Modification to the rotating elements of an OE supercharger, excluding the pulley system	2PIP
VIII.	The addition of a turbocharger system to a vehicle that did not come factory equipped with one; includes all modifications permitted under Sections 5.0.1; 5.0.2.II; 5.0.2.III; 5.0.3.II; 5.0.4.IV Note: Additional PIPs are assessed for modifications under Sections 5.0.1.II; 5.0.4.I; 5.0.4.II.	13 PIP
IX.	The addition of a supercharger system to a vehicle that did not come factory equipped with one and includes all modifications permitted under Sections 5.0.1.I, (Roots type superchargers only), 5.0.3.II, 5.0.4.V Note: Additional PIPs are assessed for modifications under Sections 5.0.1.II; 5.0.2.I; 5.0.4.I, 5.0.4.II.	9 PIP
X.	Trimming of OE turbo wheels or replacing wheels in stock turbo	2 PIP

	housing	
XI.	Change of OE turbochargers such that the compressor inducer diameter and/or turbine inducer diameter is not larger than 105% of OE, but excludes exhaust manifold under 5.0.2.II	2 PIP
XII.	Change of OE turbochargers such that the compressor inducer diameter and/or turbine inducer diameter is not larger than 122% of OE, but excludes exhaust manifold under 5.0.2.II	5 PIP
XIII.	Change of OE turbochargers such that the compressor inducer diameter and/or turbine inducer diameter is not larger than 132% of OE, but excludes exhaust manifold under 5.0.2.II	7 PIP
XIV.	Change of OE turbochargers such that the compressor inducer diameter and/or turbine inducer diameter is equal to or greater than 132% of OE, but excludes exhaust manifold under 5.0.2.II	9 PIP

**5.0.5. CYLINDER HEAD(S) AND VALVETRAIN SYSTEMS**

I.	Modification of the camshaft(s), including valve springs, valve retainers and the valve-timing controller (e.g. cam gear(s) or VTEC controller)	3 PIP
II.	Modification to the rocker arms, including addition of rocker arms or to the valve timing controller (e.g. cam gears or VTEC controller), but excludes camshaft(s) and any or all other valve train components	1 PIP
III.	Modification to the 'OE' cylinder head(s), including porting and polishing and any modification to the valves, but excludes any changes that affect compression (i.e. milling the head, reshaping the combustion chamber, non-OE head gasket thickness, any or all).	2 PIP
IV.	Substitution of the factory original OE cylinder head(s) for a different OE cylinder head(s) from the same manufacturer, including Section 5.0.5.I, valve train and camshaft(s), but excluding Section 5.0.1.I, intake manifold and throttle body and also excludes any or all performance or race head(s) available from the OE manufacturer or the aftermarket Note: OE, for the purposes of this rule, means that the cylinder head must have been produced for use on a production vehicle and excludes any cylinder head available in the manufacturer's performance catalog.	4 PIP
V.	Substitution of the factory original OE cylinder head(s) for a non OE cylinder head(s), including high performance or race head(s) from OE and aftermarket manufacturers (including Section 5.0.6.I, valve train and camshaft/s, but excluding Section 5.0.1.I, intake manifold and throttle body Note: 'Non OE' for the purposes of this rule means that the cylinder head: has been purpose-built for high performance or race applications, was never equipped from the factory on any production vehicle and comes with significantly improved design characteristics equivalent to Section 5.0.5.III.	7 PIP

**5.0.6. RECIPROCATING ENGINE SYSTEMS**

I.	Any change from factory original OE compression resulting from:: modification to the pistons, modification to the cylinder head(s), combustion chamber; milling the cylinder head(s), modification to cylinder head gasket(s) thickness, decking the block; any or all	2 PIP
II.	Cylinder overbore greater than 1.016 mm (.040 in.)	2 PIP
III.	Any change to the stroke of the engine, including modification of the connecting rods and/or crankshaft	3 PIP
IV.	Rotary engine modification, including porting and apex seal modification, but excludes any change to the number of rotor chambers and vehicle drive configuration	7 PIP

**5.0.7. ENGINE SWAPS**

- I. Substitution of a complete, unmodified drivetrain, including the engine, transmission/transaxle and the related unmodified engine management components are subject to the following restrictions below:
  - (i) If, as part of the drivetrain swap, the transmission/transaxle includes a limited slip differential when the OE transmission/transaxles did not, 1.5 PIPs must be declared under Section 5.1.1.II.
  - (ii) If, as part of the drivetrain swap, the transmission/transaxle used has gearing and/or a final drive different from that originally equipped (OE) with the engine being installed, PIPs must be declared under Section 5.1.1.I
- II. Swapped engines may be modified and assessed PIPs under Sections 5.0.1 through 6
- III. Swapped engines will result in the vehicle being assigned a new Starting PI based on the horsepower rating of the installed engine
- IV. Any vehicle with an engine swap may be required, at the discretion of the region's **classification committee or the ASN National SoloSport Committee (NSC)**, to provide a dyno plot **from a reputable dynamometer facility documenting the SAE corrected horsepower level for the engine** for the purposes of classification. Changes to the transmission, final drive etc. to be assessed PIPs under section 5.1.1.I

**5.0.8. DYNO PLOT REQUIREMENT**

- I. Any competitor with a turbocharged or supercharged vehicle that has accumulated 12 PIPs or more, as assessed in Section 5.0.1 through 5.0.7, Engine, is required to provide the region's **classification committee/ASN National SoloSport Committee (NSC)** with a dyno plot from a reputable dynamometer facility documenting the SAE corrected horsepower level for the engine.  
 Any competitor, regardless of engine type or level of modification, may request to submit a dyno plot for the purposes of classifying their vehicle if they have good reason to believe the factory reported horsepower rating for their vehicle is inaccurate. The region's classification committee/NSC may deny any dyno plot request if the request is deemed baseless and/or if the competitor fails to substantiate their request.

The horsepower level from the dyno plot will be converted to crank horsepower using the conversion table below and then substituted for the base horsepower rating in the classification spreadsheet in order to determine an accurate classification category for the vehicle in question. This rule replaces PIPs assessed for Sections 5.0.1 through 5.0.7;

**Wheel-To-Crank Horsepower Conversion Table:**

Instructions: To convert wheel horsepower to crank horsepower (which is then substituted into the classification formula (OTA classification) in order to determine your vehicle's new Starting PI), divide your peak or maximum wheel horsepower value as measured on the dyno by the value below that matches the dyno type used and the drivetrain configuration of your vehicle.

Dyno type \ Drivetrain	FWD	RWD	AWD
DynoJet (inertia dyno)	0.865	0.855	0.845
Mustang (eddy current dyno)	0.840	0.830	0.820
DynaPack (hub dyno)	0.870	0.865	0.860
Dyno Dynamics	0.769	0.769	0.769

- II. In order for the **classification committee/ASN National SoloSport Committee (NSC)** to accept the validity of the dyno plot provided by a competitor, the test must be conducted as follows:
  - i. Using the gear closest to 1:1 ratio (unless another gear gives a higher dyno reading power result, in which case, that gear shall be used) for all dyno runs,
  - ii. Using the same wheels and tires that will be used during Time Attack competition if an inertia-style (i.e. Dynojet) or eddy current (i.e. Mustang) dyno is used;
  - iii. Using the same fuel (i.e. octane level) as used during Time Attack competition,
  - iv. Using the same boost controller set at a declared level (i.e. you cannot increase the boost level at the track beyond the boost level used during the dyno test); and any/all other ‘tuning’ settings must be the same as those used during Time Attack competition,
  - v. Providing three plots showing that the process provides consistent results by using the average value for calculation purposes, providing adequate cooling and not testing a heat soaked motor.

Note: If ANY change is made to the engine or associated systems that affect power production, including tuning changes effecting ignition and fuel timing, cam timing, or other; this shall be reported and a new and accurate dyno graph may be required to be submitted for classification purposes.

- III. The dyno plot must be submitted in the format provided using the dyno plot form designated for the purpose and must be generated by using best practices and must not use any method that would result in an understatement of power.
- IV. Any abuse of this rule by a competitor will result in an immediate and retroactive (for the current season) classification that places the vehicle in question in ‘Mod 1 or Open Mod’ class.
- V. Failure to submit a dyno plot when one is required will result in a minimum penalty of 5 PIPs assessed on top of the vehicle’s final PIP total, with a maximum PIP penalty to be determined by and at the discretion of the **classification committee/ASN National SoloSport Committee (NSC)**
- VI. For any vehicle with questionable factory horsepower data (i.e. no known accurate and verifiable source), a dyno plot may be required by the **classification committee/ASN National SoloSport Committee (NSC)** for the purposes of classifying the vehicle in question
- VII. Classification based on a declared power level is not permitted. Acceptable dyno plots shall be provided by the competitor at least one week in advance of the event at which they are needed. Dyno plots shall be accepted by Classification Committee/NSC before a Vehicle may be classified using this option.
- VIII. A dyno plot does not relieve the competitor of the obligation to declare all engine modifications.
- IX. When a dyno plot is used, the HP used for classification purposes shall not be less than the greater of:
  - The power calculated from the engine PIP schedule based on the first 5 Engine PIPs being fully claimed and all additional Engine PIPs being claimed at a minimum value 0.25 PIP or
  - The value calculated on the dyno plot form.
- X. A lower dyno plot value, but not less than the equivalent of 2.5 Engine PIPs, may be accepted if the vehicle performance is validated by a data logging method acceptable to the **Classification Committee/NSC** and that data supports the use of a lower power level.

## 5.1. OTHER MODIFICATIONS

### 5.1.1. DRIVE TRAIN

- |      |  |                       |
|------|--|-----------------------|
| I.   | Modification to the transmission gears or final drive gear ratio                         | 1 PIP                 |
| II.  | Installation of a Limited Slip Differential on a car not originally equipped with an LSD | 1.5 PIP               |
| III. | <b><u>Addition of aftermarket sequential transmission</u></b>                            | <b><u>1.5 PIP</u></b> |

### 5.1.2. TIRES

- |      |  |        |
|------|--|--------|
| I.   | Installation of Street legal tires with a tread wear rating (UTQG) of <b>180</b> or higher, <b>as well as GG compound Toyo brand tires, R888, R888R and RA-1 and Nitto NT-01</b> (see rule 4.11.4)   | 0 PIP  |
| II.  | Installation of “non-premium” R-Compound tires, defined as DOT legal competition tires that have a moulded tread pattern with non-circumferential sipping. Includes <b>Yokohama A052 (200UTQG)</b>   | 5 PIP  |
| III. | Installation of “Premium” race compound tires, defined as tires that only have circumferential moulded grooves but also includes Continental Canadian Touring Car Championship (CCTC), Hoosier Grand Am Cup, foreign market Yokohama A048R and all full wet weather race tires | 10 PIP |
| IV.  | Installation of Non-DOT Race Slicks  | 15 PIP |

### 5.1.3. AERODYNAMIC MODIFICATIONS

Aerodynamic modifications shall not extend more than **4"/10.2cm** past the forward most, rearward most, sides (excluding side mirrors), or highest point of the OE vehicle body.

- |      |   |         |
|------|---|---------|
| I.   | An air dam is defined as a non OE surface that extends across the front fascia and below the contour of the front fascia so as to reduce air flow under the car. A front splitter is defined as a non OE horizontal surface that extends forward of the contour of the front fascia and not further aft than the front axle and that is mounted at or below the bottom of the OE fascia. Installation of an air dam that is deeper than <b>0.75"/1.9cm</b> below the OE front fascia and/or installation of a front splitter not extending more than <b>4"/10.2cm</b> past the forward most, sides (excluding side mirrors), of the OE vehicle body | 1 PIP   |
| II.  | Installation of a front splitter extending more than <b>4"/10.2cm</b> past for forward most sides (excluding side mirrors) of the OE vehicle body.  | 2 PIP   |
| III. | A rear spoiler is defined as a non-OE contoured lip mounted on the trunk lid or roof. Installation of a rear spoiler with a height above the basic body contour of <b>1"/25.5mm</b> or more.  | 1 PIP   |
| IV.  | A rear wing is defined as a non-OE surface with an airfoil shaped cross section mounted above the body contour. Installation of a rear wing up to <b>4"/10.2cm</b> above the highest point of the OE vehicle body and car sides (excluding mirrors).  | 2 PIP   |
| V.   | Installation of a rear wing greater than <b>4"/10.2cm</b> above the highest point of the OE vehicle body and car sides (excluding side mirrors).  | 3 PIP   |
| VI.  | <b><u>Any aerodynamic change to the underbody between the front and rear wheels including both vertical and horizontal skirts</u></b>   | .5 PIP  |
|      | <b><u>Rear diffusers behind the rear axle and/or removal of the rear bumper skin.</u></b>   | 1.0 PIP |
|      | <b><u>Addition of front diffusers and/or fender venting for diffuser either at the top of the fender or rear of the fender.</u></b>   | .5 PIP  |
|      | <b><u>Hood venting if included with the use of an air dam or splitter</u></b>   | .5 PIP  |
|      | <b><u>Addition of dive planes or canards</u></b>  | .5 PIP  |

### 5.1.4. WEIGHT REDUCTION PIPs

- I. Any car that has submitted a Curb weight that is lower than the OEM curb weight in the Car Classification database (without driver) will be assessed PIPs on the following basis:
- If the race curb weight is more than 10% less than the OEM curb weight as defined in the Car Classification Database then 0.5 PIPs per percentage point or partial percentage point weight loss beyond 10% weight loss will be assessed. Per example, a 12.6% weight loss from OEM curb weight will be assessed 1.5 PIPs and a 15.2% weight loss will be assessed 3 PIPs.

### 5.1.5. SUSPENSION AND RUNNING GEAR

Suspension and running gear modifications that accumulate sPIPs are noted in this section. The total number of sPIPs accumulated must be converted to PIPs in accordance with the table at the end of this section for the purpose of calculating the running class

- |       |  |        |
|-------|--|--------|
| I.    | Modification to the front suspension anti-roll bar   | 1 sPIP |
| II.   | Modification to the rear suspension anti-roll bar  | 1 sPIP |
| III.  | 'Non-stock alignment' settings, as defined. Non-stock alignment is defined as: adjustment of caster, camber and/or toe outside the limits specified by the manufacturer for non-competition purposes<br>Note: Minor hardware (e.g. fastener and shim) changes are permitted. Modified camber/caster plates and/or control arms are permitted with any bushing material type under this paragraph provided installation is for the sole purpose of alignment adjustment. On lowered cars modification to an existing pan hard rod is permitted to compensate for the change in ride height. Bushings using spherical bearings, heim joints or Delrin fall under Rule 5.1.5.X. | 1 sPIP |
| IV.   | Modification to the OE shock absorbers/struts, including all operational and attachment parts. Factory specified ride height must be maintained  | 2 sPIP |
| V.    | Modification to the OE suspension springs, or ride height<br>Note 1: Non-OE ride height adjustable spring perches are permitted, but any change to the damping elements of the shocks/struts shall be claimed under 5.1.5.IV.<br>Note 2: Coil-overs consist of non-OE Springs and Shocks requiring checking of both Rule 5.1.5.IV and 5.1.5.V for a total of 6 PIPs.   | 4 sPIP |
| VI.   | Modification to the sub-frame or k-member; excludes a-arms or any other suspension arms or links   | 2 sPIP |
| VII.  | Use of wheels/tires that protrude beyond the OE wheel well opening (see Section 4.11.4.III) of the vehicle including flaring <b>and/or widening</b> the fenders  | 2 sPIP |
| VIII. | Installation of a pan-hard rod to a car that does not have a pan-hard rod OE, or the installation of a Watts linkage   | 1 sPIP |
| IX.   | Installation of a torque link on a live rear axle  | 1 sPIP |
| X.    | Non-authorized modification of any/all other suspension components, including: a-arms; control arms; trailing arms, bushing limiters, bushings not covered elsewhere in this section   | 1 sPIP |

### CONVERSION TABLE sPIP to PIP

SUSP	≤0 sPIP	1 sPIP	2 sPIP	3 sPIP	4 sPIP	5 sPIP	6 sPIP	7 sPIP	8 sPIP	9 sPIP	10 sPIP	11 sPIP	≥12 sPIP
15%	0.0	1.5	3.1	4.5	6.0	7.3	8.6	9.8	11.0	12.1	13.1	14.1	15.0
20%	0.0	1.5	3.0	4.4	5.7	7.0	8.2	9.4	10.5	11.5	12.5	13.4	14.3
25%	0.0	1.4	2.8	4.2	5.5	6.7	7.9	9.0	10.0	11.0	11.9	12.8	13.6
30%	0.0	1.4	2.7	4.0	5.2	6.4	7.5	8.5	9.5	10.4	11.3	12.1	12.8

35%	<b>0.0</b>	<b>1.3</b>	<b>2.6</b>	<b>3.8</b>	<b>5.0</b>	<b>6.1</b>	<b>7.1</b>	<b>8.1</b>	<b>9.0</b>	<b>9.8</b>	<b>10.6</b>	<b>11.3</b>	<b>12.0</b>
40%	<b>0.0</b>	<b>1.2</b>	<b>2.4</b>	<b>3.6</b>	<b>4.7</b>	<b>5.7</b>	<b>6.7</b>	<b>7.6</b>	<b>8.4</b>	<b>9.2</b>	<b>9.9</b>	<b>10.6</b>	<b>11.2</b>
45%	<b>0.0</b>	<b>1.1</b>	<b>2.3</b>	<b>3.3</b>	<b>4.4</b>	<b>5.3</b>	<b>6.2</b>	<b>7.1</b>	<b>7.8</b>	<b>8.5</b>	<b>9.2</b>	<b>9.8</b>	<b>10.3</b>
50%	<b>0.0</b>	<b>1.1</b>	<b>2.1</b>	<b>3.1</b>	<b>4.1</b>	<b>5.0</b>	<b>5.8</b>	<b>6.5</b>	<b>7.2</b>	<b>7.9</b>	<b>8.4</b>	<b>8.9</b>	<b>9.4</b>
55%	<b>0.0</b>	<b>1.0</b>	<b>2.0</b>	<b>2.9</b>	<b>3.7</b>	<b>4.5</b>	<b>5.3</b>	<b>5.9</b>	<b>6.6</b>	<b>7.1</b>	<b>7.6</b>	<b>8.0</b>	<b>8.4</b>
≥60%	<b>0.0</b>	<b>0.8</b>	<b>1.7</b>	<b>2.5</b>	<b>3.3</b>	<b>4.0</b>	<b>4.7</b>	<b>5.3</b>	<b>5.8</b>	<b>6.2</b>	<b>6.6</b>	<b>7.0</b>	<b>7.3</b>

Note: Find row with your car's SUSP rating, **BOLD** number in the column containing the number of sPIPs accumulated represents the PIP value of this suspension modification. For example, a 50% SUSP car with 6 sPIPs must add 7.5 PIPs to its starting PI due to its suspension modifications.

#### 5.1.6. BODY AND TRIM

Body & Trim modifications that accumulate bPIPs are noted in this section. The total number of bPIPs accumulated must be converted to PIPs in accordance with the table at the end of this section for the purpose of calculating the running class.

The negative bPIP(s) claimed for roll over protection and fire suppression systems can only be used to offset bPIP(s) claimed under Body & Trim, Section 5.1.6.

Where a replacement exterior panel is claimed, the exterior surface of the replacement panel must completely replace the 'OE' panel and must be without holes and any other interruptions in surface continuity, unless authorised. The replacement panel must be metal, glass-reinforced plastic or fire-resistant material.

Any modification to the "A", "B", or "C" pillars, crumple zones or interior bracing must be approved by the Competition Committee and/or scrutineer prior to approval for competition. Usually, this will require the addition of roll over protection that is stronger than the OEM parts removed.

Note: Any vehicle with more than 5 un-factored bPIPs in the Section 5.1.6 'Body & Trim' MUST submit a 'race trim' curb weight, as prescribed in Section 5.1.7 'Curb Weight Option'.

- |      |   |            |
|------|---|------------|
| I.   | Installation of roll over protection that complies with the design requirements of Section 1.3 Roll Over Protection commonly referred to as a roll cage AND a fire suppression system meeting the requirements defined in Section 1.2.4 | -2<br>bPIP |
| II.  | Installation of roll over protection that complies with the design requirements of Section 1.3 Roll Over Protection commonly referred to as a roll bar  | -1<br>bPIP |
| III. | Modification or substitution of any/all 'exterior panels' including opening/closing hardware, defined as: roof, trunk lid, hatch back or similar lid (excluding all windows, valance, hood, and sunroof)                                | 2 bPIP     |
| IV.  | Modification or substitution of the hood (e.g. fibreglass or carbon fibre), including all attachment hardware   | 1 bPIP     |
| V.   | Removal or modification of the 'OE' sunroof, including all attachment and operational hardware. Panels or covers removed must be replaced with a solid material (e.g., sheet metal)   | 1 bPIP     |

VI.	Removal of the heater core and any associated heating system hardware	0.5 bPIP
VII.	Removal of the lighting systems, including the headlights, taillights, and all associated hardware and wiring	1 bPIP
VIII.	Non-authorized seat modification, of any or all front seats Note: Removal of hardware as described in Section 5.1.6.X and 5.1.6.XI shall be assessed separately.	1 bPIP
IX.	Non-authorized rear seat modification, substitution or removal	0.5 bPIP
X.	Removal of passenger seat internal hardware defined as: airbags, motors; heaters; any other safety devices; any or all	0.5 bPIP
XI.	Removal of driver seat internal hardware defined as: airbags; motors; heaters; any other safety devices; any or all	0.5 bPIP
XII.	Removal of the air conditioning compressor and any associated air conditioning system hardware	0.5 bPIP
XIII.	Modification to any/all windows, excluding the windshield, defined as: glass; attachment hardware; and mouldings	1 bPIP
XIV.	Modification to the windshield. All cars with windshield modifications require the use of accepted roll over protection	1 bPIP
XV.	Modification to 'interior trim', not otherwise specified as an authorised mod, defined as: dash, console, headliner, interior mirrors, air bags, carpet and any other interior body panels forward of the driver's seat back	1 bPIP
XVI.	Modification to 'interior trim', not otherwise specified as an authorised mod, defined as: headliner, air bags, carpet and any other interior body panels aft of the driver's seat back	1 bPIP
XVII.	Non-authorized battery(ies) or change in location(s), any or all	1 bPIP
XVIII.	Modification to the front and/or rear 'bumper systems', defined as: bumper, attachment hardware, brackets, energy absorbing devices and any other bumper system part	1 bPIP
XIX.	Replacing the fuel tank(s) with a safety fuel cell(s) (see definition below) provided a bulkhead separates the fuel cell from the vehicle interior. The interior trim and floor pan may be modified only to the extent necessary to facilitate the replacement DEFINITION:	1 bPIP
	<ul style="list-style-type: none"> <li>• A Fuel Cell is defined as consisting of an FIA approved inner bladder/tank, approved fuel cell foam and a metal container as specified herein.</li> <li>• A Fuel Tank is defined as consisting of a cross-linked polymer tank intended for use as a fuel tank in a race car, approved fuel cell foam and a metal container as specified herein.</li> </ul>	
XX.	Modification to flywheel (reduction in rotating mass)	1 bPIP

Body and Trim PIPs (bPIPs) shall be converted to regular PIPs in accordance with the following table for the purpose of calculating the final PI. The HP value used to convert bPIPs to PIPs shall be the rated power of the vehicle unless the Dyno Plot option has been taken; in which case, the HP value shall be the crank HP calculated using the Dyno Plot option.

## Conversion Table: bPIPs to PIPs

0 bPIPs	less than 135 HP	136 to 175 HP	176 to 220 HP	221 to 270 HP	271 to 350 HP	Over 350 HP
≤0	0	0	0	0	0	0
0.5	0.5	0.4	0.3	0.3	0.2	0.2
1	1	0.8	0.6	0.5	0.4	0.3
1.5	1.5	1.2	0.9	0.8	0.6	0.5
2	2	1.6	1.2	1	0.8	0.6
2.5	2.5	2	1.5	1.3	1	0.8
3	3	2.4	1.8	1.5	1.2	0.9
3.5	3.5	2.8	2.1	1.8	1.4	1.1
4	4	3.2	2.4	2	1.6	1.2

### 5.1.7. CURB WEIGHT OPTION

- I. To use the Curb Weight Option, the vehicle **MUST** be weighed by the competitor in full 'race trim' defined as: full fluids (i.e., brake, transmission, coolant, and fuel), competition wheels and tires, no spare tire/jack/floor mats and any other items normally removed prior to competition, and any/all other body & trim modifications as the car will sit in pit lane during competition. The competitor shall weigh the car on properly calibrated and operated, corner weight scales or a Commercial weight scale capable of accurately measuring passenger vehicle weight. The competitor will provide a photo of the scale weight reading, **and must still indicate all "Body & Trim" modifications in their CCDB classification.**

Any competitor whose vehicle is equipped with: a roll bar meeting Time Attack regulations, (as defined in Sections 1.3 and 1.4) may opt to provide with 'race trim' curb weight data, ~~with~~ photos for classification purposes.

Any car with an engine or transmission swap (as defined in Section 5.0.7) requires a "race trim" curb weight.

If an OE fuel tank has been replaced with a fuel tank of greater than OE capacity, the Curb Weighting shall be performed with not more than maximum OE fuel capacity in the non-OE tank.

Note 1: Ballast or the addition of any fixed dead weight for the purposes of increasing 'race trim' weight and thus lower a vehicle's classification is prohibited. Exceptions may be made, at the discretion **of the organizer/chief scrutineer to allow** regional race cars (i.e. Touring GT Championship) equipped with ballast to compete without being required to remove the ballast.

## 6. VEHICLE CLASSIFICATION

### 6.0. VEHICLE CLASSIFICATION

- 6.0.1. Any vehicle not specifically listed will be provisionally classified at the event they enter. They will be classified by the first official who is both present and willing to make the classification from the following list:

- I. The Chief Steward,
- II. The other event Stewards,

- III. The Chair of the ASN National SoloSport Committee (NSC),
  - IV. Any member of the NSC,
  - V. Failing which, the Event Organizer **or the chief scrutineer**.
- 6.0.2. Any competitor requiring vehicle classification should request that from the region's Classification Committee/ASN SoloSport Committee (NSC). A Series competitor is advised to request this prior to competition to ensure points are accumulated in the same class all year (see 6.0.3, below). Please include your proposed classing, explanation and suitable back up material.
- 6.0.3. Vehicle classification will become official when it is verified by the regions Classification Committee/NSC. Classifications are provisional until that time and may be changed. Points and events will not be retroactively re-scored if a provisional classification is changed.
- 6.0.4. A vehicle that is wrongly classified or is not officially classified may be protested as specified in the SoloSport GCR's.
- 6.0.5. **After the start of competition**, a car that is deemed to be incorrectly classified in a lower class than it should be, shall be scored in MOD1 or Open MOD class for the event in which the infraction occurs.
- 6.0.6. Organizers may refuse a non-classified vehicle if the Organizer believes the vehicle is unsafe. Classified vehicles may be excluded based on technical inspection. Please note that rule 1.5.1, (VEHICLE, BASIC REQUIREMENTS) effectively prohibits all SUVs and pickup trucks from participation in Time Attack.

## 6.1. CLASSIFICATION SYSTEM

A linear classification framework has been developed to systematically classify vehicles. The key elements of the system are detailed below:

- 6.1.1. The first step in classifying a vehicle is to determine its 'Performance Index' (PI). PI is calculated using a 'Weight to Horsepower Index' (W-HP) and a 'Handling Index' (SUSP) for the factory original version of the vehicle to be classified. This information provides a means to measure each vehicle's on-track performance potential.
- 6.1.2. A 'Weight to Horsepower Index' (W-HP) is derived at for each representative vehicle by comparing that vehicle's curb weight plus driver's weight divided by its HP to a scale with a maximum value of 33.0 and a minimum value of 4.0. For example, a vehicle plus driver's weight, that weighs 3,400 lbs. and has 300 HP from the factory will have a W-HP of  $3,400/300 = 11.3$ . Its W-HP Index would be  $(\text{Max WHP} - \text{WHP}) \div (\text{Max WHP} - \text{Min WHP}) = (33.0 - 11.3) \div (33.0 - 4.0) = 21.7 \div 29.0 = 74.8\%$ . Driver's weight is part of the PI calculation.
- 6.1.3. The 'Handling Index' (SUSP) is a value from 5 to 100, in increments of 5, that is assigned to each representative vehicle to judge its handling and braking capability (and other non-engine output or weight related criteria) relative to other vehicles. More details and a list of examples for each value in the handling index scale are outlined in Section 6.2, Handling Index. The examples provided are to be used as reference points to establish handling indexes for non-classified vehicles.
- 6.1.4. A 'Performance Index' (PI) is established for each vehicle to rank the vehicles relative to each other, and is based on a weighted average of the two sub-indices described in Subsections 6.1.2 and 6.1.3. The relative weighting of the indices is: 70% W-HP and 30% SUSP, as listed in Section 6.3, Relative Weighting of Indices. The result is truncated at one decimal place. Add a 1.9 Adjustment Factor to all PI calculations to align with existing classes.
- 6.1.5. The root or 'Starting Class' for each vehicle is based on where that vehicle's Performance Index (PI) falls relative to the 'Starting Class' break points, as detailed in Section 6.4, 'Starting Class' Categories and Break Points.
- 6.1.6. Non-stock vehicles, i.e. vehicles that are assessed PIPs and/or authorised modifications, fall into any of the classes above its 'Starting Class', based on category break points described in Section 6.4, Starting Class Categories and Break Points; Section 4, 'Vehicle Categories, Eligibility, and Modifications'; and Section 5, 'Performance Index Point (PIP) Schedule'.
- 6.1.7. The Ontario Time Attack (OTA) Car Classification Committee has developed a web database to simplify the task of calculating performance indices and classifying vehicles.
- 6.1.8. Vehicles with a 'Weight to Horsepower Index' (W-HP) value of less than 6 lbs per HP shall be classified on a case-by-case basis by the Car Classification Committee.

## 6.2. HANDLING INDEX

6.2.1. There are a number of factors that influence handling -suspension design, steering geometry, frame/chassis rigidity, wheelbase, track, weight distribution, center of gravity, roll stiffness, size of tire that will physically fit on the vehicle, etc. ~~The ASTC has quantified~~ These various handling attributes (and other non-engine output or weight attributes) have been quantified into a 'Handling Index' number. This table consists of a list of 'Handling Index' numbers with examples of common vehicles that were used as a reference in evaluating other vehicles. Note: The top of the index was purposely left open to allow for better handling vehicles in the future.

### Index Vehicle Examples

75 Corvette Z06 (2004)  
 70 Porsche 911 GT2 (2003), Ferrari F430  
 65 Mitsubishi Evo X(2011), Porsche Cayman R (2012), Dodge Viper (2006)  
 60 Subaru Impreza STI (2009), Porsche Boxster S (2005), Corvette Coupe (2003)  
 55 Honda S2000 (2006), Nissan 350 (2003), Lotus Evora (2010)  
 50 Scion FRS/Subaru BRZ (2013), Mazda RX-8 (2006), Honda Civic Si  
 45 BMW 325 (2006), Chevrolet Camaro (2002), Mazda Miata (open diff) 2006  
 40 Subaru Impreza (2008), Honda Prelude (2001), Ford Mustang (2005)  
 35 Nissan Altima SE-R (2005), Mazda6 (2004), Honda Civic EX (2006)  
 30 Toyota Matrix (2006), Pontiac Fiero (1988), Hyundai Tiburon (2007)  
 25 Nissan Sentra (2007), Honda Accord LX (2003), Ford Mustang (1991)  
 20 Hyundai Accent (2006), Chevrolet Aveo (2006)

## 6.3. RELATIVE WEIGHTING OF INDICES

Weight-to-Horsepower Index 70%  
 Handling Index 30%

## 6.4. 'STARTING CLASS' CATEGORIES AND BREAK POINTS

6.4.1. Classification System

Class	Performance Index (PI) Break Points
Open Modified	110 and above (Open wheel based race cars)
Modified 1	105 and above (sedan based race cars)
Modified 2	100-104.9%
Modified 3	95-99.9%
Super Grand Touring 1	90-94.9%
Super Grand Touring 2	85-89.9%
Super Grand Touring 3	80-84.9%
Grand Touring 1	75-79.9%
Grand Touring 2	70-74.9%
Grand Touring 3	65-69.9%
Grand Touring 4	60-64.9%
Touring 1	55-59.9%
Touring 2	50-54.9%
Touring 3	less than 50% (Performance Index of less than 40 will use PAX OF 40)

6.4.2. Open Modified and **MOD1 Classes** for non-production vehicles, and highly modified **sedan based** vehicles which challenge the basic assumptions of the classification system (e.g. section 6.1.8 applies). **These classes are** open ended and operate outside the linear classifications system as defined in 6.4.1. Therefore, the PAX factor is based on the best performance of cars expected to run in the Ontario Time Attack (OTA) series, but cannot take into account the maximum potential of all vehicles eligible for these classes.

The "OTA Vehicle Classification List" forms part of these regulations by reference. It contains the official Starting Class information for all production-based vehicles recognized and classified by the Car Classification Committee. Changes and additions to this list will be made official by means of a rule Bulletin. Except to correct typographical errors cars will not be reclassified after the start of the first competition event of the year; however, new cars can be added at any time. To determine your vehicle's root or 'Starting Class', refer to the online Vehicle Classification database <http://ccdb.casc.on.ca/BaseCarList.aspx>. Create an account and log in to the site (it is free) and use the "My Saved Car" feature to create a car from the Base Car List. Then create a PIP schedule to find out which class in which your modifications have placed the car.

To determine your vehicle's root or 'Starting Class', refer to Online Index and note your vehicle's Performance Index (PI) and then add all applicable Performance Index Points (PIPs) from Section 5 to its PI value. After referring to Section 4 to determine any zero PIP or 'authorized modifications' for your vehicle, cross-reference your vehicle's modified PI value with the break points shown above in Section 6.4.1 to determine the category (or class) in which your vehicle will compete.