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## Appendix I - Roll Cage Specifications

### 1 - *General Requirements*

- A - Unless specified otherwise in series, event or class regulations, all vehicles, regardless of date of manufacture, must be fitted with a roll cage conforming to the following specifications:
- B - The top of the roll bar shall be at least 5.08 cm (2") above the top of the competitors helmet or as close to the roof as possible. The top of the roll bar shall be no more than 25.4 cm (10") behind the competitor's helmet when the competitor is in the normal driving position. In the case of open cockpit cars without a windshield frame, the top of the front hoop may be under, but as close to the height of the front cowling as possible and be above the top of the steering wheel. It should be possible to draw a line connecting the front and rear hoops and have it pass above the driver's head when seated in the normal driving position.
- C - 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. Padding meeting SFI spec 45.1 is highly recommended.
- D - 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.

### 2 - *Construction Materials*

- A. Seamless or DOM mild steel tubing (SAE 1020 or 1025 recommended) or alloy steel tubing (SAE 4130) must be used for all roll cage structures. Alloy and mild steel tubing may not be mixed. ERW tubing is not allowed.
- B. Aluminium and composite materials are prohibited construction materials for roll cage structures.
- C. All cages must have a 0.476 cm (.1875") diameter inspection hole drilled in each main hoop.
- D. The following table shows the minimum allowed tubing outer diameter and wall thickness by vehicle weight:

Vehicle Weight as Raced With Driver	Tubing Size (inches) (outer diameter x wall thickness)
Up to 1700 lbs	1.375" X .080"
1701 – 2699 lbs	1.500" X .095"
2700 lbs and up	1.750" X .095"

### 3 - *Fabrication*

- A - A similar piece shall be used for the front hoop or alternately, two side hoops joined by a bar across the top of the windshield may be used.
- B - 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.
- C - 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.

*D* - 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 60cm. (24") or wherever possible.

*E* - In the case of vehicles where the rear window or bulkhead restricts the installation of rearward braces, (e.g. Fiat X1/9, Toyota MR2, Honda Del Sol) the main hoop may be braced by either of the following methods:

- i To permit the installation of standard rearward braces, the rear window may be substituted with a dimensionally identical replacement of clear acrylic or polycarbonate with slots or holes to permit the passage of the brace. Body panels may similarly be slotted or cut only as much as required to facilitate installation of the roll cage braces.
- ii Short rearward braces, welded to the vertical section of the main hoop, may be attached to the standard production shoulder harness hard points. In this case, an additional diagonal brace, of the same dimensions as the main hoop must be also installed, from approximately point "D" to point "G" per fig.1 below.

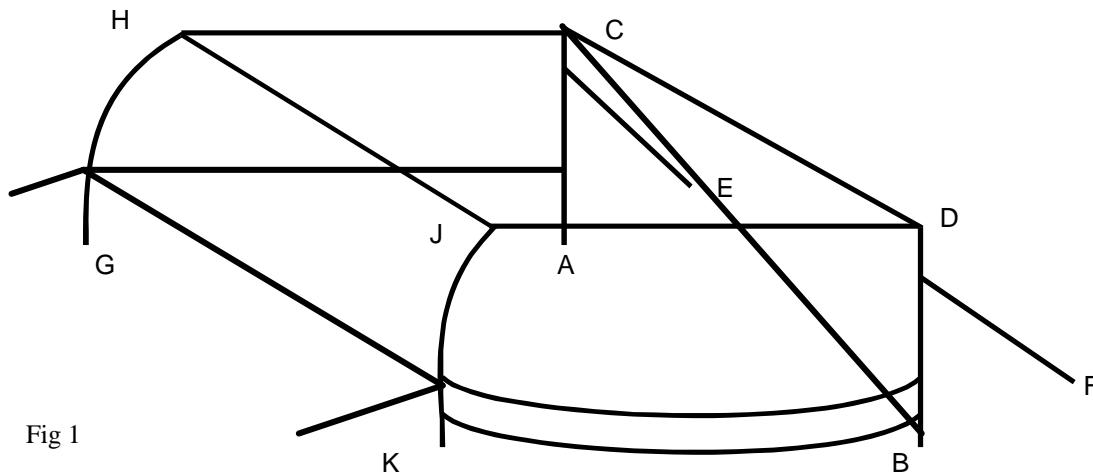


Fig 1

#### 4 - Bracing

- A* - 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.
- B* - 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.
- C* - 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. It is permitted to connect the diagonal from points A-D, B-C, C-F, or D-E of the above diagram. It is recommended that the uppermost point of the diagonal brace be placed behind the driver's seat.
- D* - 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

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style multiple anti-intrusion bars are highly recommended. Effective January 1 1997, this requirement also applies to Improved Production cars

- E* - In Improved Production cars the removal of inner door reinforcements is authorised in order to facilitate the fitment of the required anti-intrusion bars.
- F* - A bar joining the two outer members of the front hoop near steering column level is required. Effective January 1 1997, this requirement also applies to Improved Production cars.
- G* - It is required that there be two braces (one on either side of the car) extending forward from the front hoop to protect the driver's legs. This bracing should extend to the bulkhead in front of the driver's feet; but, in any case, it shall be integrated into the frame or chassis to provide substantial support for the front hoop.

### ***5 - Mounting Plates***

- A* - The four lower hoop tubes must be connected to plates welded or bolted to the frame or floor of the vehicle.
- B* - 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 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.
- C* - Vehicles with frame type construction must use plates of at least 51.6 square cm (8 square") area and .1875 thickness regardless of whether they are bolted or welded.

### ***6 - Welding***

- A* - 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 approved.

### ***7 - Gusseting***

- A* - 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.

### ***8 - Removable Type Cages***

- A* - 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.
- B* - 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

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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 material.

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

- i Wall thickness of the joining tube shall be a minimum of 0.30 cm (.120").
- ii Length of this tube shall be a minimum of 7.62 cm (3") on either side of the splice.

D - 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.

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

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

### **9 - Alternate Designs**

A - Rollover structures fully complying with FIA Appendix J Article 253.8 or SCCA GCR Section 18 will be accepted as complying with these regulations.

B - Alternate cage designs may be approved 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

C - Calculations shall assume the all up race weight of the vehicle with competitor on board and a full fuel load.

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## **Appendix II Roll Bar Specifications**

### ***1 - General***

- A - Where permitted or specified by the regulations of a series or event, roll bars meeting the following specifications shall be fitted to all cars
- B - It is highly recommended that roll cages meeting the specifications outlined in Appendix I be fitted to all cars competing in events where roll over protection is required.
- C - The top of the roll bar shall be at least 5.08 cm (2") above the top of the competitors helmet or as close to the roof as possible. The top of the roll bar shall be no more than 25.4 cm (10") behind the competitor's helmet when the competitor is in the normal driving position.
- D - 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 a serious impact, be covered with a flame-retardant energy absorbing material. Padding meeting SFI spec 45.1 is highly recommended.

### ***2 - Construction Materials***

- A - The main hoop and primary bracing should be constructed from round, mild steel, ERW or DOM type tubing. Chrome-moly tubing such as 4130 may be used but is not recommended. It is recommended, and may become a requirement, that only DOM tubing be used in the construction of roll cages.
- B - Aluminium and composite materials are prohibited construction materials for roll bar structures.
- C - All bars must have a 0.476 cm (.1875") diameter inspection hole drilled in each main hoop.
- D - Recommended tubing sizes are as follows with vehicle weights including competitor:
  - Under 1500 lbs    3.81 cm X 0.30 cm (1.50" X .120")
  - Under 2500 lbs    4.45 cm X 0.30 cm (1.75" X .120")
  - Over 2500 lbs    5.72 cm X 0.30 cm (2.250" X .120")

### ***3 - Fabrication***

- A - One continuous piece of tubing must be used for the main hoop.
- B - 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.
- C - 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.

- 
- D* - 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.
- E* - Gussets or tie-in tubes must be used at main tube junctions of the roll bar 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.

#### ***4 - Bracing***

- A* - 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.
- B* - In order to minimize the distortion of the roll bar in the event of impact on one corner, a diagonal brace is required. Permissible means of fitting this brace are as outlined in Appendix I. 4.C This brace must be a straight as possible
- C* - Where a "six point roll bar" is specified by the regulations for a series of event, 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.
- D* - Where a "five point roll bar" is specified by the regulations for a series of event, a single front stay must attach to the hoop on the driver's side of the vehicle centreline 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.

#### ***5 - Removable Bracing***

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

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

- i Wall thickness of the joining tube shall be a minimum of 0.30 cm (.120").
- ii Length of this tube shall be a minimum of 7.62 cm (3") on either side of the splice.

*D* - 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.

*E* - Alternate joint designs may be approved at the discretion of the Chief Scrutineer.

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

### ***6 - Mounting Plates***

*A* - The lower hoop tubes must be connected to plates welded or bolted to the frame or floor of the vehicle.

*B* - 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 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.

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

### ***7 - Welding***

*A* - 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 bars. TIG or MIG are the preferred welding processes. Structures with unacceptable welding will not be approved

### ***8 - Alternate Designs***

*A* - Alternate cage designs may be approved 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

*B* - Calculations shall assume the all up race weight of the vehicle with competitor on board and a full fuel load.

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## Appendix III Competitor Safety Equipment

### *1 - Minimum Standards*

A - Unless specified otherwise in series, event or class regulations, these standards constitute the minimum acceptable standard of safety precaution. Individual class preparation rules may increase applicable safety requirements.

### *2 - General*

A - Drivers must wear the following equipment during all on-track sessions:

B - A safety helmet which meets one of the following FIA approved standards:

- i BS 6658-85 TYPE A/FR with all amendments (Great Britain)
- ii Snell Foundation SA2000, (USA) as well as certain 95SA where the helmet bears a manufacturer's label indicating the helmet was manufactured in 2001, this approval will expire December 31 2006.
- iii SFI, Spec 31.1A and 31.2A (USA) ( Note: suffix must include "A")
- iv FIA standard 8860-2004

C - Drivers must wear a single-piece driving-suit consisting of two layers of an approved fire resistant material. Suits bearing a label certifying compliance with SFI standard 3.2.A/3 or better, or the FIA 1986 standard are deemed to comply with this requirement, regardless of material or number of layers. Approved materials are: Nomex, Kynol, FPT, IWS (wool), Fibreglass, Firewear™, Durette, Fypro, PBI, and Kevlar. Proban is approved for use as underwear only. The following manufacturers' material combinations are also recognised: Simpson Heat Shield, Leston Super Protex, FPT Lineasport, Durette X400.

D - Fire resistant underwear of an approved material must be worn except with suits meeting SFI standard 3.2.A/5 or better, or the FIA standard 8856/1986 or 8856/2000.

E - Socks made of fire-resistant material are mandatory. Shoes and gloves made of leather or any approved fire-resistant material containing no holes are mandatory. Shoes may have synthetic rubber soles. Gloves and shoes must have a layer of fire-resistant material next to the skin.

F - A balaclava made of fire resistant material must be worn and must cover the neck and head except where required for proper vision and respiration.

G - In the absence of a separate standard, the above driving suit accessories must comply with the SFI standard 3.3, FIA standard 8856/1986 or 8856/2000.

*H* - Drivers shall wear safety glasses, goggles or a helmet visor at all times when the car is on course.

*I* - Cars shall be equipped with, and the drivers shall utilise, seat belts and shoulder harness meeting the specifications of these regulations.

### ***3 - Helmets***

*A* - Helmets must be in good condition. Helmets that have deep scratches, gouges, or cracks will not be permitted for use in on-track sessions. It is highly recommended that helmets be kept out of direct sunlight to prevent UV radiation damage.

*B* - Full face helmets and shields must be worn by drivers of open cockpit cars and are strongly recommended for drivers of closed cars. Drivers of closed cars are cautioned: When choosing a helmet they should consider the ability of emergency medical personnel to access the driver's mouth and nose in potentially confined spaces without removing the driver from the car.

*C* - The back of each helmet must be labelled indicating name, date of birth and allergies and other pertinent medical history such as tetanus immunisation, diabetes, etc.

*D* - The modification of helmets for the fitment of head and neck restraint systems is authorised. It is highly recommended that such modifications be performed only by a qualified installer.

### ***4 - Head restraints***

*A* - The use of a supplemental head restraint complying with FIA standard 8858-2002 is strongly encouraged. The use of a head restraint not homologated with the FIA and listed in Technical List No 36 is prohibited.

*B* - Where an approved head and neck restraint device is used, it is highly recommended that they be used with tether anchorages fitted by the helmet manufacturer as original equipment, and that homologated tethers identified by the FIA 8858-2002 label sewn on them be used.

## **Appendix IV - Driver Restraint System**

### ***1 - Minimum Standard***

- A - Unless specified otherwise in series, event or class regulations, all drivers in CACC events must utilise either a five (5) or six (6) point restraint harness meeting FIA/ISO standard No. 8853/98, 8854/98 or SFI standard 16.1 (either Type 1 or Type 1A) at all times during practice, qualifying and the race. The restraint system installation is subject to approval of the Chief Scrutineer.
- B - A five (5) point or six (6) point system is required for use in cars where the driver is seated in an upright position and consists of a lap belt, two (2) shoulder straps and one (1) or two (2) antisubmarine straps
- C - A six (6) point system is required for use in cars where the driver is seated in a semi-reclining position and consists of a lap belt, two (2) shoulder straps and two (2) anti-submarine straps, and is recommended for all cars.

### ***2 - Construction***

- A - The buckles must be of metal-to-metal quick release type except in the case of leg straps of the six (6) point system, where they may be attached to the seat belt or shoulder harness straps.
- B - The shoulder harness shall be the over-the-shoulder type. There must be a single release common to the seat belt and shoulder harness.

### ***3 - Shoulder Harness***

- A - The shoulder harness shall be mounted behind the driver and above a line drawn downward from the shoulder point to an angle of forty (40) degrees with the horizontal.
- B - In cases where the driver is in a semi-reclining position, the shoulder harness shall be attached so that the angle between a line drawn through the driver's spine and the shoulder harness is forty-five (45) degrees or greater.
- C - Only separate shoulder straps are permitted. "H" type configuration is allowed. "Y" type shoulder straps are not allowed.
- D - It is required that the shoulder harness, be 7.5 cm (3") wide. Padding may be added for additional driver comfort.

### ***4 - Anti-submarine Straps***

- A - The single anti-submarine strap of the five (5) point system shall be attached to the floor structure of the car similar to the shoulder harness mounting and have a metal-to-metal connection with the single release common to the seat belt and shoulder harness. The anti-submarine strap must be a minimum of 50 mm (2") in width.
- B - The double leg straps of the six (6) point system may be attached to the floor as above for the five (5) point system, or be attached to the seat belt so that the driver sits on them, passing them up between the legs and attached either to the single release common to the seat belt and shoulder harness or attaching to the seat belt or shoulder harness straps.

C - It is also permissible for the leg straps to be secured at a point common to the seat belt attachment to the structure passing under the driver and up between the legs to the seat belt release or shoulder harness straps.

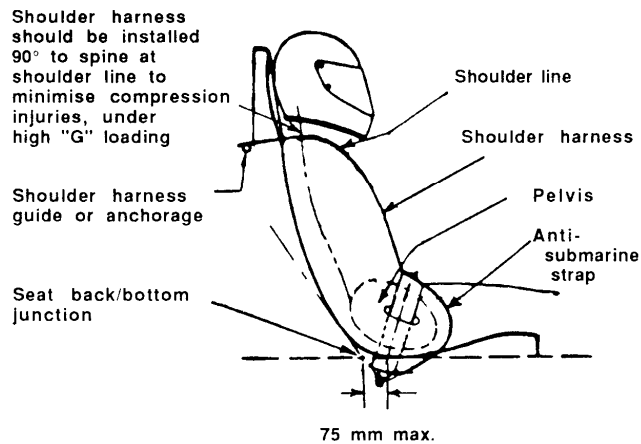
D - All straps must be free to run through intermediate loops or clamps/buckles.

### 5 - Arm Restraints

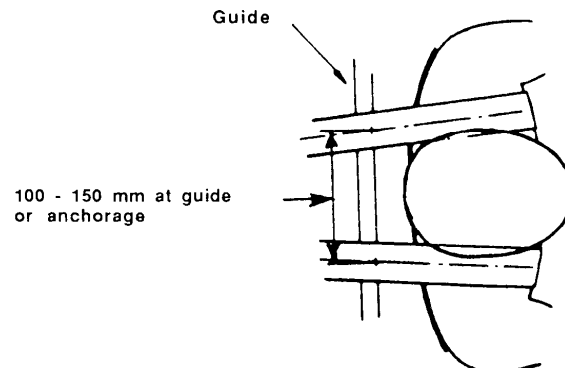
A - Drivers of open cockpit cars must use SFI or FIA approved arm restraints.

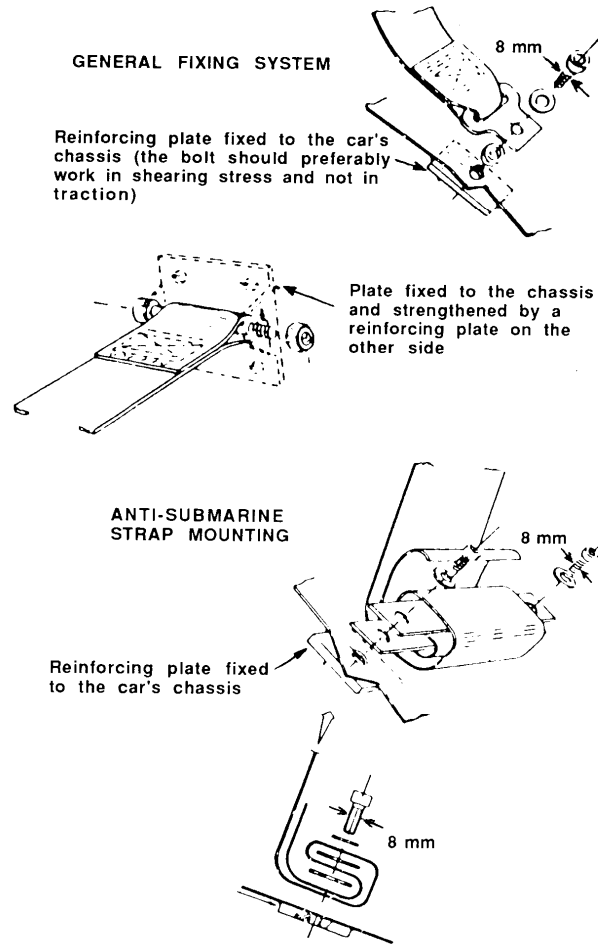
### 6 - Mounting

A - The minimum acceptable bolts used in the mounting of all belts and harnesses are SAE grade 5. Where possible, seat belts, shoulder harness and anti-submarine straps should be mounted to the roll structure or frame of the car. All harness mounting bolts must be of 10 mm (0.375") shank diameter, minimum.



75 mm max. to centreline of lap belt at seat back/seat bottom junction. Lap belt should continue in straight line to anchorage.





*B* - Where it is not possible to mount belts and straps directly to the roll structure or frame of the car and they must be attached to a structural panel, for example, the panel must be suitably reinforced in a workmanlike manner to prevent distortion under load. Steel reinforcing plates of adequately large area and thickness must be installed to prevent the belt attachment from pulling through the panel under load.

*C* - Bolting directly to the floor panels, etc. without adequate reinforcement is not acceptable.

*D* - It is required that clip-in buckles on the driver restraint system must be secured with a cotter pin or locking wire to prevent accidental release.

## **7 - Life Span**

*A* - Belts must bear a legible date stamp from the manufacturer.

*B* - Driver restraint systems meeting SFI specifications expire after two years from date of manufacture. These belts shall not be used after the expiration date of the SFI certification. (ie. a belt manufactured in May 2009 shall not be used after May 31, 2011). Driver restraint systems meeting FIA specifications must have all belts labelled with their date of expiration, and these belts will expire on the last day of the year indicated on their labels..



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## Appendix V - Vehicle Safety Requirements

### *1 - General*

A - Unless specified otherwise in series, event or class regulations, these standards constitute the minimum acceptable standard. Individual class preparation rules may increase applicable requirements.

### *2 - Brakes*

A - All racing vehicles must use a dual-circuit hydraulic braking system.

### *3 - Engine Catch Tanks*

A - In order to prevent fluid spillage, all fluid reservoir and sump vent tubes must be routed to a suitable container of one (1) litre minimum capacity for one (1) litre vehicles and two (2) litres minimum capacity for over two (2) litre vehicles. Any catch tanks shall be translucent or be fitted with sight tubes to facilitate easy checking of their contents.

### *4 - Electrical*

A - Any electric starter may be used. The main starter cable terminal must be securely insulated.

B - An external boosting system to assist the vehicle's electrical system may be installed, provided that it cannot be accidentally shorted.

C - Alternators may be removed or substituted

D - All cars, except Vintage shall be equipped with a master switch easily accessible from outside the car. The master switch shall be installed directly in either battery cable and shall cut all electrical circuits but not an on-board fire system. All terminals of the master switch shall be insulated to prevent shorting out. It shall be clearly marked by the international marking of a spark in a blue triangle and mounted in a standard location. Off position shall be clearly indicated at the master switch location. The standard locations shall be as follows:

- i. Formula and Sports Racing Cars - In proximity to the right-hand member of the roll bar, but in a location so that it cannot be operated accidentally. It can be mounted on a bracket welded to the inside of the upright member or mounted so that the operating lever or knob is outside of the body panel immediately in-board of the upright member.
- ii. Closed Sports Racing Cars, Improved Production Cars, GT and GTS cars - In front of the windshield on either the cowl or on top of the fender, but close enough to the windshield to be accessible if the car is overturned. Alternatively, it may be mounted below the center of the rear window or on a bracket welded, clamped or bolted to the roll cage or dash, easily accessible through the open window. (Drilling of holes in roll cage to attach the bracket is prohibited.)
- iii. Open Production, GT, and Improved Touring Cars - May exercise a choice among the above locations.

### **5 - Window Glass/Nets**

- A - All windows must be of laminated windshield safety glass, tempered safety glass, or three (3) mm minimum thickness polycarbonate materials, as permitted in the individual class preparation regulations. Acrylic plastic glass is prohibited. For GT class cars, windshields conforming to current SCCA GT regulations are permitted
- B - Sedans must have the driver's door window fully open or removed during all on-track sessions. A strap-type window net must be fitted such that the driver's arm(s) cannot extend outside the vehicle unintentionally. Mesh type window nets complying with SFI standard 27.1 are permitted. Window nets must be fitted to the main structure of the car, or if fitted to the door, the door must be pinned to prevent accidental opening in the event of a collision or rollover. All window nets must be fitted to the vehicle using a quick release mechanism acceptable to the Chief Scrutineer.
- C - Where not otherwise specified by applicable class regulations, the passenger door window may remain in place; however, the window (or door/window combination) must be openable from outside the vehicle without the use of tools in order to permit access to the driver/passenger compartment.

### **6 - Onboard Fire Suppression Systems**

This rule pertains to on board fire suppression systems where they are required by class regulations or are installed by choice.

On-board fire systems shall use Halon 1301 or 1211, with a five pound minimum capacity (by weight). Alternatively, on-board fire systems may use AFFF or equivalent surfactant foam material, 2.25 liter minimum capacity (by volume). All AFFF fire system bottles shall incorporate a functional pressure gauge and shall be marked with the manufacturer's recommended "filled weight." CO2 cartridge propellant fire extinguishing systems are permitted provided that the seal of the manufacturer specified CO2 cartridge is not punctured and the fire bottle is equal to the weight specified by the system manufacturer.

Cars shall meet the following regardless of registration date:

1. The fire system cylinder shall be securely mounted in such a manner that it can be checked during a technical inspection and may be removed for weighing periodically for compliance to full weight shown on the cylinder. (Weight is without valve assembly.) Manual or automatic release is allowed. The release mechanism shall be within reach of the driver when belted in the car.
3. All on-board fire systems shall be identified with a circle "E" decal.
  - a. In GT, GTS and Improved Production cars, two circle "E" decals may be required – one at the release location and the second on the outside bodywork in line with or as near to the release location as possible.
  - b. In Formula and Sports Racing cars, a circle "E" decal shall be located on the outside bodywork as near to the release location as possible.
4. There shall be a minimum of two nozzle locations – one in the driver's compartment and one in either the engine area or the fuel cell area. The nozzles shall be suitable for the type of extinguishing agent used.
5. All AFFF fire system bottles shall incorporate a functional pressure gauge. This does not apply to non-pressurized AFFF systems with CO2 propellant.
6. The firing safety pin(s) shall be removed from all on-board fire systems prior to going on track. It is recommended that a warning tag be attached to the safety pin to remind the driver to remove the safety pin before entering the racing surface.
7. All fire systems shall be serviced according to manufacturer's specifications.



## **7 - Seats**

- A - A one-piece racing seat must be fitted in place of the standard driver's seat. The passenger seat may be removed or replaced with a racing seat. Improved Production classes may use original equipment seats, provided that an adequate headrest (as defined below) is fitted to the rollover structure.
- B - All seats must provide a headrest; alternately, a padded head rest may be affixed to the roll cage. The head restraint must have a minimum area of 235 square cm (36 square") and be capable of absorbing two hundred (200) pounds force in a horizontal direction. The headrest must be within five (5) centimetres (2 inches) of the driver's helmet in a normal seated position.

## **8 - Seat mounting**

- A - It is required for GT category cars and recommended for IP category cars that the driver's seat be firmly mounted to the structure of the car. This is also mandatory for IP car that have had the original equipment driver's seat replaced with another. In cars where the seat is upright (most common in GT and IP/IT cars) the back of the seat shall be firmly attached to the main roll hoop, or its cross bracing, so as to provide aft and lateral support. Bulkheads, firewalls, rear decks, or similar structures of suitable strength may be used as a substitute for the main roll hoop or cross bracing to provide the required seat back support.
- B - Where a car is fitted with a seat complying with FIA/ISO standard 8855/1992 or 8855/1999 the seat must be mounted according to the manufacturer's instructions. If these instructions omit the seatback mountings, the entrant should present a copy of those instructions at scrutineering.

## **9 - Fuel System**

- A - Where their use is required or permitted by class regulations, fuel cells must be constructed and certified in accordance with either FIA Specifications FT3 1999, FT3.5 or FT5, or SFI standard 28.1 and must be mounted to a substantial structure in accordance with the manufacturer's instructions. Attaching the fuel cell to sheet metal only is not considered to be adequate.
- B - Where their use is required or permitted by class regulations, it is highly recommended that fuel cells be serviced according to the manufacturer's recommendations or on the following basis:
- i External bladders (not the metal container) should be replaced five (5) years after their date of manufacture. Alternatively, the bladder may be returned to its manufacturer for re-inspection, and with their approval, it may be returned to service for a maximum of two (2) more years.
  - ii Where used, the internal baffling foam should be replaced every two (2) years.
- C - Fuel tanks must be isolated from the driver passenger compartment by a metal bulkhead sufficient to prevent the passage of flame and liquid.

## **10 - Lines and Hoses**

Lines or hoses carrying, or potentially carrying, oil, fuel or other flammable liquid, and passing through or into the driver/passenger compartment shall be constructed of steel tubing or be covered by a supplemental metal covering.

**11- Tow Hooks**

All cars without an exposed roll bar shall have a towing eye or strap, front and rear that does not dangerously protrude from the bodywork when the car is racing, to be used for flat-towing or hauling the vehicle. A removable towing eye carried inside the car is not acceptable, except in formula cars and sports racers. These towing eyes or straps shall be easily accessible without removal or manipulation of bodywork or other panels. Towing eye minimum ID two (2) inches.

The required tow eyes must be strong enough to tow the car from a hazard such as a gravel trap. Front tow eye may be mounted in the driver / passenger side window openings, or any location forward of the windshield. If mounted in the driver/passenger side window openings, it must be attached to the forward roll cage down tube as close to the base of the windshield as possible. If the front tow eye is located in the side window openings there shall be one on each side of the car. Rear tow eyes must be accessible rearward of the rear axle centerline.

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## **Appendix VI - Racing Numbers and Class Designation**

### ***1 - Racing Numbers***

A - Racing numbers shall be applied only as follows

- i The numbers must be at least ten (10) inches high on production-based cars and eight (8) inches high on open wheel cars. The minimum width of stroke of all numbers is two (2) inches.
- ii The numbers must be in a solid colour, on a solid background of a significantly contrasting colour. Black on white is preferred and recommended.
- iii One (1) number must be on the front hood of production based cars and on the nose of open wheel cars.
- iv One (1) number must be on each side of the car positioned on the body above an imaginary line running through the centre line of the wheels. Open wheel cars may vary this location, however, side numbers shall in no way be partially or completely obscured by the vehicle's wheels.
- v On production based cars, a racing number, one half the size of the normal number, must be placed on the rear of the car on a vertical surface and must be clearly visible and legible.

B - Metallic or other highly reflective numbers are not permitted.

C - Cars not meeting the specification of this regulation, in the opinion of the steward, during any scheduled track session will be black-flagged and not allowed to re-enter the track until the numbers are in compliance.

### ***2 - Class Designation***

A - Class designation shall be applied as follows:

- i The class designation shall be at least one half the size of the numbers.
- ii The class designation shall be placed close to the numbers on the sides of the car.

### ***3 - Competition Vehicles on Public Roads***

A - Racing numbers must be removed from the vehicle when driven on the streets. Failure to do so will lead to disciplinary actions.