STOCK CAR COMPETITION RULES 2012

The Stock Car Competition Rules of the Stock Cars Australia in conjunction with the AASA rules are intended to assist in the orderly conduct of race events. They must be read in conjunction with the AASA rules. They are 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 are intended or shall result from publication of or compliance with these rules.

FOREWORD
Electronic SCCR are available via our web site www.waldenmotorsport.com.au
The electronic edition may be updated during the calendar year and will be available on the website. A notice to all registered teams will be sent via email when or if changes to the SCCR are made.
These rules are for the following categories. GTA class Stock Cars, Winston cup West Stock cars & Oz Truck utes.

1.0. AWARDS
Drivers compete for points and trophies in SCA events,

1.1. Trophies
National and Regional event trophies will be awarded on the following minimum basis for each participating class:
Number of Starters Trophies Awarded for Finishing Position
One or two cars 1st place only
Three or four cars 1st and 2nd
Five or more 1st, 2nd, and 3rd

A. Race Points Chart
Points in SCA race series are awarded to all finishers through 9th place as follows:

Position	Points		
1st	18	9th	7
2nd	15	10th	6
3rd	13	11th	5
4th	12	12th	4
5th	11	13th	3
6th	10	14th	2
7th	9	15th	to last 1
8th	8		

B. Dead Heat Race Finish
When there is a dead heat in a race finishing position, the total points for the positions tied are added up and divided equally between or among the tied drivers. Points then continue starting with the next untied position.

C. Division Championship Ties
Ties in final Division Championship standings are resolved based on the drivers' records of first place finishes, then second place, then third, as needed. If two or more drivers have identical records, they are tied for the position in the standings.

1.2. Withdrawing an Entry
If an entry is withdrawn prior to the close of entries, there is no penalty, and the organisers will give the competitor a credit for the next meeting.

2.0. TECHNICAL AND SAFETY INSPECTION
Chief Technical Officer
The Chief Technical Officer assures that cars comply with the SCCR and Supplemental Regulations. Specifically, he:

A. Approves cars that comply with all technical regulations.

B. Inspects cars at the request of the Clerk of the Course and recommends inspecting cars to the Clerk of the course.

C. Reports cars that do not comply with the SCR to the Clerk of Course. The Chief Technical Officer approves every car before it competes, A driver or entrant whose car is not approved and who subsequently competes or who presents it for recheck without the corrections will be penalised with either disqualification from all races prior to the car meeting all of the SCCR or exclusion of event or events.

2.1. Inspecting Automobiles
A. Annual Inspection
A car must have a full and complete Annual Technical Inspection by the Chief Technical inspector appointed by Stock Cars Australia once a year. (12 months).
If the car passes the inspection, the tech inspector enters the date in the Vehicle Logbook; he then stamps, decals, or inscribes approval; dates and signs the Vehicle Logbook.

B. Minimum Event Safety Inspection/Tech Sticker
Following the Annual Technical Inspection, minimum inspection for each event is required by event scrutineers for safety checks only & they may refer a car to the Chief Technical Officer for a further inspection.

2.2. Official Scales
A. The scales at the event are the official scales for the event. SCA will notify competitors prior to the meeting when & where weighing will take place.

2.3. Qualifying

Qualifying will determine the start positions for the first race only. Starting positions for all other races will determined from the finishing order of the previous race. Any car that fails to finish will start from the rear of the grid in order of the DNF.

2.4. TYRE MARKINGS
All tyres must be marked one (1) hour prior to qualifying

4.0. RACES STARTS
4.1. SCA Standard Rolling Start
The standard rolling start will be used at all SCA sanctioned events.

5.0. STOPPING A SESSION

5.1. Methods
When it is necessary to stop a session, the Clerk of the course may do any of the following:
A. Order a red flag at the Start line and a red flag at all other flag stations around the course.
B. Order the checkered flag to be displayed to the lead car if at least 75% of its scheduled time or distance has been completed.

5.2. Assistance During Race Session Stoppage
Replenishing or assisting cars is allowed after a practice or qualifying session is stopped and before it is restarted, but not after a race session is stopped and before it is restarted. All assistance must be done in pit lane only.

5.3. RESTARTING A RACE
If a race is stopped, the Clerk of the course may:
A. Restart in the original starting order.
B. Restart the cars single file in the physical order they crossed the control line on the last completely scored lap. When a race is restarted, each pace lap counts as a race lap. In a timed race, the clock is restarted when the field is dispatched. Any method of restarting the engine is permitted.

5.4. RAIN RACING
If a race is started in the dry, and it starts to rain on all or part of the course, the Clerk of the course may use one of the following procedures:
A. If the race has covered two thirds or more of the scheduled distance or time, it may be finished with the checkered flag.
B. If the race has not reached two thirds race distance or time, the black flag "ALL" procedure shall be used to bring all cars into the pits, and 15 minutes will be allowed to install rain tires, at the driver's discretion. The cars will restart single file in the physical order of the cars on the last completely scored lap.

5.6. TIMING LINE; STARTERS, FINISHERS, AND WINNERS

5.7. Starting Line for Timing and Scoring
Unless otherwise defined in the Supplemental Regulations, the start line is the control line where timing begins when crossed by a car.

5.8. Race Starter
One of the following conditions must be met for a car to be considered a race starter:
A. The car receives a green flag at the start of the race.
B. If the start is aborted, the car crosses the control line.
C. The car is anywhere on the course when the green is displayed.
D. The car completes the pace lap for the first start.
E. The car enters the race any time after the start before the checkered flag is displayed.

5.9. Race Finisher
A. A race finisher is a car that completes two thirds distance of the Overall winner of the race. To be classified as a finisher the competitor must cross the finish line within the slowest lap time of the race after the winner has crossed the line.
B. A car may complete a lap by being driven across the control line in the pit lane only using on-board power (such as the starter motor), but it may not be pushed across the line by its crew or any officials.

5.10. Race Winner
The race winner is the car that completes the race distance in the least time, or the greatest distance in the timed length of the competition. If the race is shortened, the leader of the last completely scored lap is the winner, provided the race is completed.

A. Checkered Flag
The checkered flag is displayed at the finish line first to the winner as he completes the race distance or after he completes the prescribed time, and then to the other finishers as they cross the finish line.

B. Checker to Wrong Car
If the checkered flag is displayed first to the wrong car, it shall be continuously waved until seen by the entire field. The race finishing order will be determined by the last completely scored lap.

C. Late Checker
If the checkered flag is not displayed at the scheduled end of the race and the race is one or more laps longer than scheduled, the race is scored as if it had ended at the scheduled length. As soon as the Starter is aware that the checkered flag has not been displayed at the scheduled end of the race, he may show the checkered flag immediately, if both Timing and Scoring and the clerk of the course concur.

D. Winning Car Not Running in Timed Race
If the winning car is not running at the expiration of the timed length, the checkered flag will be displayed to the highest placing car still running. The winner in a timed race is not required to take the checkered flag.

E. Dead Heats

Competitors in a dead heat share the prizes allotted to their finishing positions.

5.10.1. Off-Course Excursions
Drivers are required to follow the pavement or marked course, and may not gain an advantage from an off-course excursion. Unless the Supplemental Regulations specify otherwise, a driver who leaves an artificially marked course or an airport circuit with all four wheels must re-enter the course at the same location where he went off, subject to the directions of officials controlling re-entry.

5.10.2. Counter-Race Direction Driving
Specific approval of the Clerk of the course is required to drive a car in counter-race direction at any time or under any condition during an event. Violating this rule may result in penalties or exclusion from the event

5. Stopping on a Course; Accepting Assistance
A. A driver who stops his car on course must make every effort to assure that the location does not pose a danger or obstruction to other competitors.

6. Racing Rules and Procedures
A. During a race, a driver may receive assistance only in the pit lane by his pit crew, except for safety assistance from race officials.
B. For assistance during restarts, see 5.2.

6. CARS AND EQUIPMENT
6.1. CATEGORIES AND CLASSES
All cars competing in Stock Cars Australia sanctioned races must comply with the requirements of the SCR.
There are 3 types of SCA classes.
A. Stock car Class
B. GTA Stock car Class
C. Ute Stock Car class

7.0. VEHICLE DOCUMENTATION
7.1. VEHICLE LOGBOOKS
Each car shall have a complete and up-to-date logbook. A. The standard AASA Vehicle Passbook will be used by all competitors at all SCA competitions, unless excepted in the Supplemental Regulations for an event shared with another sanctioning organisation.
A. Only one logbook will be issued for each vehicle (except as a Continuation of the original or a replacement). When a continuation logbook is issued, the date the initial logbook was issued must be written on the front page of the continuation logbook. (It is not necessary to present all old logbooks for issuance of annual inspection stamp or a tech sticker.)
B. A complete description of the vehicle, its safety roll bar/roll cage, and the required photographs must be present in the places provided. All changes of ownership of the vehicle must be recorded.
C. The Vehicle Logbook must be issued by AASA& presented at all scrutineering & technical inspections.

7.2. Each vehicle shall have an identity number which will be permanently stamped on its roll bar, and which will correspond to the number on the Vehicle passbook.

7.3. If the logbook of the vehicle is not available at the scrutineering or Technical Inspection, the car may compete only after a thorough inspection of the car is completed. The log book must be presented to the Technical Officer within sixty (60) hours. If the book has not been cited within the sixty (60) hours then the vehicle will be disqualified from all results from the meeting in question and may face further penalties.

8.0. GENERAL TECHNICAL AND SAFETY SPECIFICATIONS

The points covered at Technical and Safety Inspection shall be:

8.1. ACCUMULATORS (e.g., Accusumps)

An accumulator (e.g., Accusump) may be installed. Location is free, but it shall be securely mounted within the bodywork. All oil lines that pass into or through the driver/ passenger compartment shall be of metal braided hose (e.g., Aeroquip).

8.2. ADVERTISEMENTS AND GRAPHICS

Advertising and graphics (names, symbols and logos) may be displayed on cars provided they are in good taste and do not interfere with identification marks and SCA logo & series sponsors a space will be set aside for series sponsors. Rear of front guard in front of race number, Windscreen top.

8.3. APPEARANCE NEAT AND CLEAN, AND SUITABLE FOR COMPETITION

Specifically, cars that are dirty either externally or in the engine or passenger compartments, or that show bodywork damage, structural or surface rust, or that are partially or totally in primer, or that do not bear the prescribed identification marks shall not be approved for competition.

8.4. BALLAST

Ballast may be added to all cars as required, to meet minimum weight, provided it is securely mounted within the bodywork and serves no other purpose.

8.5. BATTERIES

Battery location is unrestricted within the bodywork If located in the driver/ passenger compartment, vented wet cell batteries shall be in a nonconductive marine type container or equivalent. The hot terminal shall be insulated on all cars. All batteries (on-board power supplies) shall be attached securely to the frame or chassis structure independent of the marine type container.

8.6. COOL SUITS

Cool suits are allowed in all classes. Water tank mounts shall be of a safe and secure design.

9.0. CARS & EQUIPMENT

9.1. DRIVER'S RESTRAINT SYSTEM Minimum of a 76.2mm (3") seat belt.
All drivers in SCA sanctioned speed events shall utilise either a 5, 6, or 7 point restraint harness meeting the following specifications

• Two (2) approximately 76.2 (3') shoulder harnesses. • An approximately 50.8mm (2') minimum anti-submarine strap.
A. 5 point harness is considered a minimum restraint system. 6 or 7 point systems are highly recommended in all cars.
B. A 6 or 7 point system, recommended for use in all automobiles, consists of:
• A 76.2mm (3") seat belt.
• Two (2) approximately 76.2mm (3") shoulder harnesses.
• 2 or 3 approximately 2 inch leg or anti-submarine straps.
C. The shoulder harness shall be the over the shoulder type. There shall be a single release common to the seat belt and shoulder harness. When mounting belts and harnesses it is recommended that they be kept as short as reasonably possible to minimise stretch when loaded in an accident. The shoulder harness shall be mounted behind the driver and supported above a line drawn downward from the shoulder point at an angle of 20 degrees with the horizontal. The seat itself, or anything added only to the seat shall not be considered a suitable guide. Guides must be a part of the roll cage or a part of the car structure. Only separate shoulder straps are permitted. ("Y" type shoulder straps are not allowed.) "H" type configuration is allowed. D. The single anti- submarine strap of the 5 point system shall be attached to the floor structure and have a metal to metal connection with the single release common to the seat belt and shoulder harness.
D. The double leg straps of the 6 point or 7 point system may be attached to the floor as above for the 5 point system or be attached to the seat belt so that the driver sits on them, passing them up between his legs and attaching either to the single release common to the seat belt and shoulder harness or attaching to the shoulder harness straps. 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 his legs to the seat belt release or shoulder harness straps. All straps shall be free to run through intermediate loops or clamps/buckles.
E. Each seat (lap) and shoulder belt of the harness (5, 6, or 7 points) shall have an individual mounting point (i.e. 2 for seat belt and 2 for shoulder belt minimum). 6 or 7 point system anti-submarine straps may share a mounting point with one or both seat (lap) belt(s). The minimum acceptable bolts used in the mounting of all belts and harnesses is SAE Grade 5. *Mounting hardware, including eye bolts, as provided by the belt manufacturer, may also be used for mounting belts and harnesses.* Where possible, seat belt, shoulder harness, and anti-submarine strap(s) should be mounted to the roll structure or frame of the car. Where this is not possible, large diameter mounting washers or equivalent should be used to spread the load. Bolting through aluminium floor panels, etc., is not acceptable. Holes in the roll cage to accommodate the installation of the harness must be bushed and welded completely.
F. All driver restraint systems shall meet one of the following: SFI specification 16.1, 16.5, or FIA specification 8853/98 or 8854/98.
1. Restraint systems meeting SFI 16.1 or 16.5 shall bear a dated SFI Spec label. The certification indicated by this label shall expire on December 31st of the 2nd year after the date of manufacture as indicated by the label. If for example the manufacture date is 2006 the second year after the date of manufacture is 2008.
2. Restraint systems homologated to FIA specification 8853/98 and 8854/98 will have a label containing the type of harness designation ('C-###.T/98 or D-###.T/98) and date of expiration which is the last day of the year marked. All straps in this FIA restraint system will have these labels.

3. If a restraint system has more than one type of certification label, the label with the latest expiration may be used.
G. Harness Threading: Assemble in accordance with manufacturer's instructions. If no manufacturer instructions are given, use the methods shown in Figures 2-6.

Figure 2

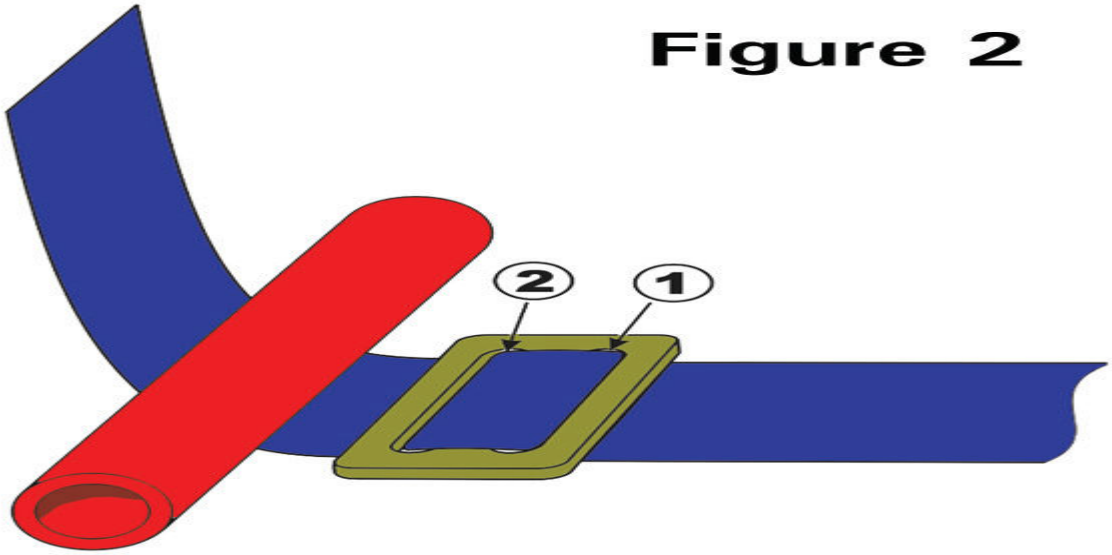
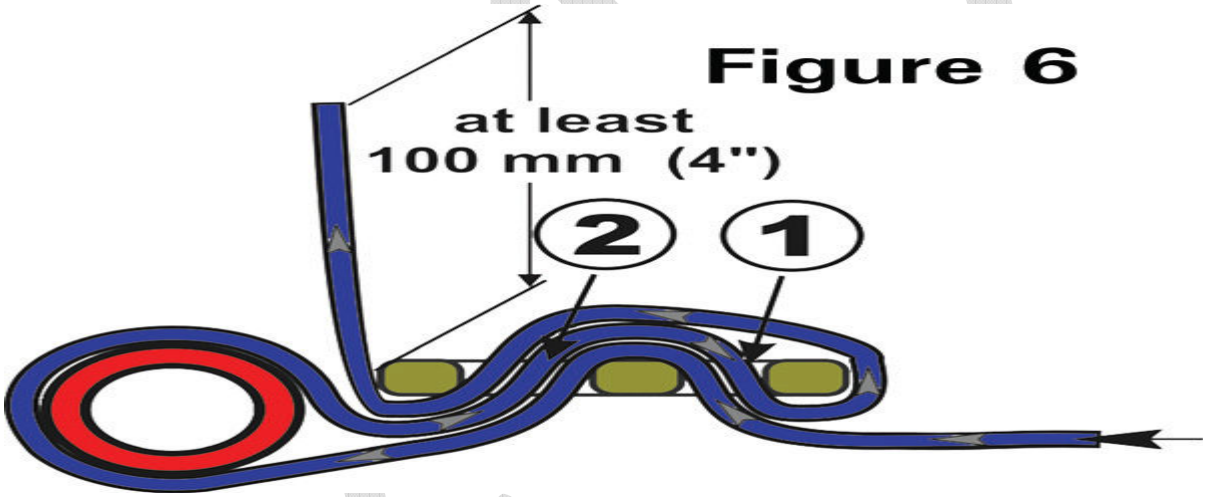


Figure 6



9.2. DRIVER'S SAFETY EQUIPMENT
All required driver's safety equipment must be worn at all times while on track. The participant agrees that the participant bears the ultimate responsibility at all times to ensure the safety of participant's driver's safety equipment, and compliance with all SCA rules, regulations, and agreements, including but not limited to those contained in the GCR.

9.3. ELIGIBILITY
Eligibility for class entered–compliance with the GCR and Specification of American stock cars.

9.4. EXHAUST SYSTEM
Shall be directed away from the body and shall terminate at or behind a point which is equidistant from the front and rear hubs.

A. Mufflers
A muffling device will be required. All cars must meet the track noise requirements of 95 DBA at 30 metres. The race tracks will notify the competitor when they exceed the DBA level with a warning to fix the noise.

9.5. FIRE SYSTEM
All cars shall be equipped with an On-Board Fire System

A. On-Board Fire System Requirements
Cars registered after 1/1/09 shall comply with the following on-board fire system requirements:
• Systems certified to SFI specification 17.1, or
• Those listed by the FIA on Technical List No. 16
The following information must be visible of the unit:
• Certification label
• Capacity
• Type of extinguishing agent
• Weight, or volume, of the extinguishing agent
The following is acceptable for cars registered before 1/1/09:
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 litre minimum capacity (by volume). All AFFF fire system bottles, except non-pressurised AFFF systems with CO2 propellant, 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.)
2. 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.

On Board Fire System
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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. 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.
6. All fire systems shall be serviced according to manufacturer's specifications.

9.6. FIREWALL AND FLOOR
Firewall and floor shall prevent the passage of flame and debris into the driver's compartment.

9.7.
Left blank to add to in the future

9.8. FUEL
All cars shall use fuel, as defined below, unless a specific exemption is made in the provisions for a specific category/class.

Permitted Fuel
A. Stock car class:
Leaded racing fuel is defined as a leaded petrol which is supplied by an oil company & having a composition the same as that supplied for piston engine general aviation use, ie, Avgas 100/130 or Avgas 100LL only. Unleaded racing fuel is defined as an unleaded petrol produced by an oil company in compliance with the specifications detailed in the FIA article 252.9.1 of appendix J to the current FIA year book. Such unleaded racing fuel supplied from a drum is permissible.

B. GTA class:
All fuels in this class must be pump fuel manufactured by oil companies. The mixing of fuels from different oil companies with different grades is forbidden. No additives are allowed to be added. Fuel octane must not exceed 98 octane.

C. Ute class:
All fuels used in this class must be E85 fuel manufactured by oil companies. The mixing of fuels from different oil companies with different grades is forbidden. No additives are allowed to be added.

D. Refuelling in pit lane.
1. For any refuelling undertaken in pit lane, during any testing, practice, qualifying or race, the following procedures must take place, unless Supplementary Regulations provide otherwise.
2. Any refuelling in a pit or paddock area not using these procedures must be undertaken either with a vehicle totally within a pit lane garage or in an area of the paddock specifically designated for the purpose of refuelling & must be performed with the engine off.
3. Under no circumstances will refuelling be permitted on the race circuit.
4. When event regulations allow the use of any alternative refuelling equipment, those regulations shall prescribe all relevant conditions, including capacity of permitted refuelling containers & the requirements for delivery hose/s.

5. Refuelling in pit lane is not permitted unless it is specifically authorised in the Supplementary or Further Regulations for the event.

Fuel Sample Acquisition
All cars shall be equipped with an accessible sampling port/valve/device located in a fuel line between the fuel tank or fuel cell and the carburettors or fuel injection system or in an unused carburettor port to allow safe acquisition of a fuel sample. If possible, the port/valve/device should be located outside the engine compartment. The sampling port/ valve/device will be installed and used by the competitor to obtain the sample without fuel leaking, spraying or squirting. Siphoning of fuel directly from the fuel tank or fuel cell or removing a hose or line is not allowed. Competitors whose cars are equipped with a factory fuel pressure test port or who have factory fuel pressure test equipment available are not required to have an additional fuel sampling port, providing the test port is accessible and the competitor obtains the sample without fuel leaking, spraying or squirting. Competitors will provide all the necessary and appropriate tools to obtain a fuel sample. A tech observer and manned fire extinguisher will be at the car at the time the sample is taken and the competitor will name the fuel brand and type for notation on the fuel sample bottle label.

9.9. FUEL CELL SPECIFICATIONS

All cars must be equipped with a safety fuel cell complying with these specifications, or as otherwise specified in the GCR. All safety fuel cells shall be constructed and certified in accordance with the FIA FT-3 or higher (FT-3.5, FT-5, etc.) specifications. Alternatively, safety fuel cells shall be constructed in accordance with FIA FT-3 or higher specifications and tested to those requirements by an independent facility as witnessed and certified by a Professional Engineer. The results of these tests shall be submitted to the Club Racing department for inclusion on a list of approved suppliers. All safety fuel cells shall consist of a foam-filled fuel bladder enclosed in a metal container at minimum. There is no restriction of fuel cell capacity or dimensions of the fuel cell, except where otherwise specified. The installation of more than one cell is permitted.

1. Installation
Internal body panels may be modified to accommodate the installation of fuel cells as long as modifications serve no other purpose. If installation includes encroachment into the driver's compartment, a metal bulkhead must prevent exposure of the driver to the fuel cell. The fuel cell must not be installed any closer to the ground than 152.40mm, unless enclosed within the bodywork or OEM floor pan.
A. There must be a metal bulkhead between the driver/passenger compartment and the compartment containing the fuel cell. This includes fuel cells that are flush mounted with driver/passenger compartment panels or otherwise exposed to the driver/passenger compartment.
B. Fuel cells must be located within 304.80mm of the standard tank. The 304.80mm measurement is taken from the perimeter of the stock and alternative fuel cell. Fuel filler location is unrestricted with installation of a safety fuel cell.

9.10. FUEL, OIL, AND WATER LINES

All fuel, oil, and water lines, including gauge and vent lines that pass into or through the driver/passenger compartment, shall be of steel tube or metal braided hoses or bull-headed. The driver shall not be exposed to header tanks. *Heat shielding between fuel/oil lines and fuel/oil filters and exhaust components is strongly recommended*

9.10.1. IDENTIFICATION MARKINGS

Each car shall carry identification numbers and class letters per A and B, below, and any markings required by the Supplemental Regulations.

A. Numbers and Class Letters

Numbers shall be placed on both sides of the car so that they are legible. Side numbers must be placed forward of the “B” pillar Font for numbers is Aardvark bold. Numbers shall be no more than 2 digits, and shall meet the approval of the Chief of Timing and Scoring. Class letters shall be placed on both front and rear RH sides of the car so that they are legible. The numeral “1” shall be exclusively reserved for the current outright series champion.

B. Size of Numbers and Class Letters

Side numbers shall be of the American Stock Car style on a contrasting background. Numbers must be impact font or simular style of font. Front & rear numbers & class letters must be 150mm high, with a 38mm stroke on a Contrasting background. The distance between 2 numbers shall be at least as wide as the stroke of the numbers. Class letters shall be at least 100mm high, with a 13mm stroke on a contrasting background.

C. An area directly behind the front wheel arch must be made available for series sponsors logo’s. Order of placement will be determined by SCA .

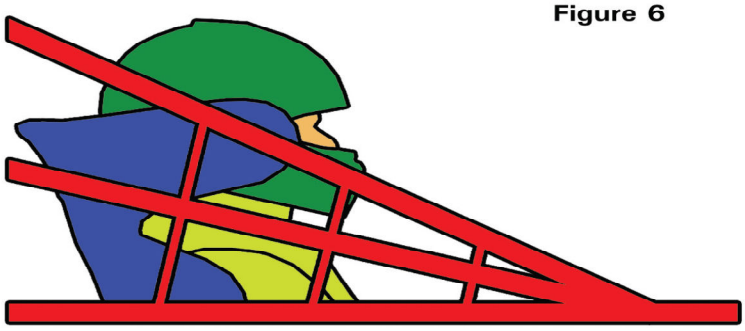
The top of the windscreen & rear window must be made available to the series main sponsor.

D. SCA will have a register for all race numbers & entrants must register their number with the SCA before commencing competition.

9.10.2. INSIDE NET

An inside net running between the main roll hoop and the dash is recommended for all cars see figure 6). It is recommended that the lower strand of the net pass the shoulder and run horizontally from the cage to the dash. The upper strand should pass the Cg of the helmet in the side view. The net should run parallel to the centre of the car in plain view and be as close to the seat as possible. It is recommended that the net be tensioned tightly and have a way to quickly disconnect it in case the driver needs to exit through the car in an emergency. Metal collars, or some other equivalent method, should be used to keep the strands of the net from moving along the roll cage. If possible, the recommended mounting method is to wrap the net strands around the back of the seat and attach them to the main hoop upright. However, teams should consult the net manufacturer to verify their recommended method of mounting.

Figure 6



9.10.3. LIGHTS
All cars shall have two operating red brake lights.

9.10.4. LOSS OF BODYWORK
All major body components such as front and rear hoods, fenders, doors, and windscreens shall be maintained in normal position throughout the competition. If loss of bodywork is a safety hazard, the car may be black-flagged. A car completing a competition with bodywork missing may be penalised.

9.10.5. MASTER SWITCH
All cars, 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:

9.10.6. MIRRORS
Shall provide driver visibility to the rear of both sides of the car.

9.10.7. NON-METALLIC WHEEL/CHASSIS CONSTRUCTION
Non-metallic wheel construction is prohibited. Non-metallic chassis construction is prohibited.

9.10.8. OIL AND OIL ADDITIVES
Any oil or oil additive may be used. Oil additives are defined as: Any liquid or particulate compound(s) delivered into the engine via the engine oil for the purpose of friction/temperature reduction, and/or metal surface conditioning.

9.10.9. OIL CATCH TANKS, FILTERS, AND BREATHERS

Oil holding tanks and engine breathers, whether directly or indirectly ventilating the crankcase, and all transmission/transaxle breathers shall be equipped with oil catch tanks. Minimum catch tank capacity shall be one litre for the engine and transmission. Oil holding tanks and oil filters may be mounted in the driver/passenger compartment. A metal bulkhead shall prevent exposure of the driver to oil spillage. Oil catch tanks shall vent into the engine compartment or outside the driver's compartment. A crankcase vacuum breather that passes through the oil catch tank(s) to exhaust systems or vacuum devices that connect directly to exhaust systems is prohibited.

9.10.10. ROLL CAGE/ROLL BAR

A. DRIVER PROTECTION STRUCTURES

These general specifications are for all automobiles. Roll cages are required in all automobiles. Roll cages may be of two (2) designs, low front hoop (top of steering wheel) or high front hoop (top of windshield). Specific installations are subject to approval by the Technical and Safety Inspectors at each event. The Technical Staff of the SCA shall have the responsibility to ensure specification compliance with SCA safety standards. To that end, the Technical Staff of the SCA may or may not accept alternate construction standards from any source that significantly vary from SCA standards of protection.

B. BASIC DESIGN CONSIDERATIONS

A. The basic purpose of the roll cage is to protect the driver if the car turns over, runs into an obstacle such as a guardrail or catch fence, or is struck by another car. It shall be designed to withstand compression forces from the weight of the car coming down on the rollover structure and to take fore/aft and lateral loads resulting from the car skidding along on its rollover structure.

B. Forward braces and portions of the main hoop subject to contact by the driver's helmet (as seated normally and restrained by seatbelt/shoulder harness) shall be padded with non-resilient material such as Ethafoam® or Ensolite® with a minimum thickness of 38mm Padding meeting SFI spec 45.1 or FIA 8857-2001 is strongly recommended.

C. No portion of the safety roll cage shall have an aerodynamic effect by creating a vertical thrust.

D. Roll cage or chassis design shall prevent engine intrusion into the driver compartment.

E. Material:

1. Seamless, or DOM (Drawn Over Mandrel) mild steel tubing (SAE 1010, 1020, 1025) or equivalent, or alloy steel tubing (SAE, 4130) shall be used for all roll cage structures. Proof of use of alloy steel is the responsibility of the entrant.

Vehicle Weight Material
Without Driver Mild Steel Alloy Steel

2201-3000 lbs. 1.500 x .120 DOM / Seamless / Alloy
1.625 x .120 DOM / Seamless / Alloy
1.750 x .095 DOM / Seamless / Alloy
(American Sedans may construct to these specs regardless of weight.)
3001-4000 lbs. 1.750 x .120 DOM / Seamless / Alloy

Over 4000 lbs. 2.000 x .120 DOM / Seamless / Alloy
Note: ERW tubing is not permitted in any car registered after 1/1/2003.
Main hoop: 4 bends max., totalling 180º ± 10º
Front hoop: 4 bends max. or
Front down tubes: 2 bends max.
Rear hoop supports: No bends. If any of the above bend requirements cannot be met, all components of the roll cage shall be fabricated from the tubing size(s) listed for the next heavier category of automobiles.
4. For purposes of determining tubing sizes, the vehicle weight is as raced without fuel and driver. The minus tolerance for wall thickness should not be less than .25mm below the nominal thickness. Improved Touring roll cage tubing size are to be calculated based on the published vehicle weight minus 82kilogram.
5. An inspection hole at least 4.8mm diameter, but no greater than 6.35mm diameter shall be drilled in a non-critical area of the front and rear hoop as well as the one of the supplemental braces to facilitate verification of wall thickness
F. General Construction
1. One (1) continuous length of tubing shall be used for the main hoop member with smooth continuous bends and no evidence of crimping or wall failure. The radius of bends in the roll cage hoop (measured at centreline of tubing) shall not be less than three (3) times the diameter of the tubing. Whenever possible, the roll cage hoop should start from the floor of the car, and, in the case of tube frame construction, be attached to the chassis tubes by means of gussets or sheet metal webs with support tubes beneath the joints to distribute the loads. It is recommended that gussets be used.
2. Welding shall conform to American Welding Society D1.1:2002, Structural Welding Code, Steel Chapter 10, Tubular Structures. Whenever D1.1 refers to “the Engineer” this shall be interpreted to be the owner of the vehicle. Welds shall be continuous around the entire tubular structure. All welds shall be visually inspected and shall be acceptable if the following conditions are satisfied:
a. The weld shall have no cracks.
b. Thorough fusion shall exist between weld metal and base metal.
c. All craters shall be filled to the cross section of the weld.
d. Undercut shall be no more than 0.01 inch deep.
e. Aluminium bronze or silicon bronze welding technique is permitted, but extreme care shall be used in preparation of parts before bronze welding and in the design of the attaching joints.

9.11.1. SCATTERSHIELD GUARDS

The installation of scatter shields or explosion-proof bell housings shall be required on all cars where the failure of the clutch or flywheel could create a hazard to the driver. Minimum material specifications are:
3 mm SAE 4130 alloy steel
6mm mild steel plate
6mm aluminium alloy

9.11.2. SEATS

The driver's seat shall be a one-piece bucket-type seat and shall be securely mounted. 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. Seats homologated to and mounted in accordance with FIA standard 8855-1999, or FIA.Standard.8862-2009 or higher need not have the seat back attached to the roll structure. Seats with a back not attached to the main roll hoop or its cross bracing may be mounted on runners only if they were part of the FIA homologated seats assembly specified in an FIA homologated race car. The homologation labels must be visible. Seat supports shall be of the type listed on FIA technical list No.12 or No. 40 (lateral, bottom, etc.). Mounting structures for racing seats may attach to the floor, cage and or centre tunnel. Seat mounting points forward of the main hoop, between the centre line of the car and the driver's side door bar and rearward of the front edge of the seat bottom are not considered cage attachment points in classes with limitations on the number of attachments. A system of head rest to prevent whiplash and rebound, and also to prevent the driver's head from striking the underside of the main hoop shall be installed on all vehicles. Racing seats with integral headrests satisfy this requirement. The head rest on non-integral seats shall be padded with a minimum of 25.4mm thick padding. It is strongly recommended that padding meet SFI spec 45.2 or FIA Sports Car Head Rest Material. The head rest shall be capable of withstanding a force of 91kilograms. in a rearward direction. The head rest support shall be such that it continues rearward or upward from the top edge in a way that the driver's helmet cannot hook over the pad.

9.11.3. TYRE WARMERS

Pre-heating of tires prior to competition by electrically heated covers or similar means is prohibited on the grid.

9.11.4. TOWING EYES

All cars 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. The minimum ID. 50mm. 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 centreline.

9.11.5. WEIGHT

All cars shall meet or exceed the minimum weight specified with driver, exactly as they come off the race circuit, at the conclusion of any race or qualifying session.

A. GTA class minimum weight (narrow track) 1283 kilos with driver

B. GTA class minimum weight (wide track) 1329 kilos with driver

C. Stock Car class minimum weight car 1543 kg. Add 90 Kilo's for driver. If driver is less than 90 kilo's then ballast will have to be added to the cars minimum weight. Weight totalling 1633 kilo's

D. Ute class minimum weight 1182 kg with driver

9.11.6. WHEEL FANS
Wheel fans are permitted, unless otherwise restricted.

9.11.7. WHEEL RIM WIDTH
Wheel rim width shall be measured at the base of the bead seat.

9.11.8. WINDOWS
Windows shall be clear or uncoloured.

9.11.9. WINDOW SAFETY NETS
Window safety nets shall be used on the driver's side window of all closed cars. All window nets shall meet SFI Specification 27.1., and shall bear an "SFI Spec 27.1., Label" to that effect. (Note: Window nets need not be dated.) The window net shall be equipped with a quick-release device and when released it shall fall down, thus not having to be flipped up on the roof. Nets shall be attached to the roll cage; plastic buckles, cable ties, hose clamps, and elastic cords are not permitted. Holes in the roll cage to accommodate either support rod are unacceptable unless bushed and welded completely. Refer to figures 7 and 8, "Proper Window Net Installation," for additional information on mounting methods.

Figure 7

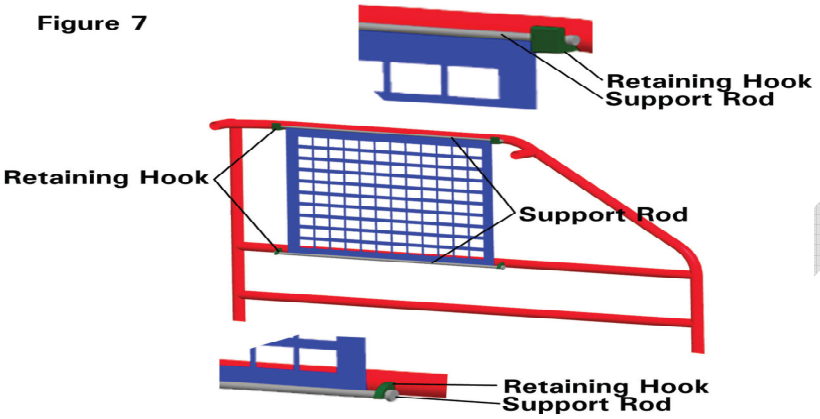
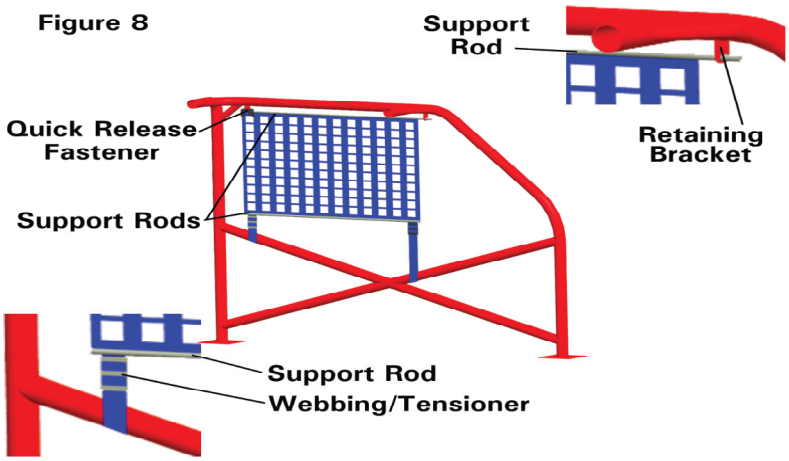


Figure 8



9.11.10. WINDSHIELD CLIPS/REAR WINDOW STRAPS

Windshield safety clips and rear window safety straps shall be installed on all cars. 3 clips (76.2mmm x 25.4mm) shall be bolted or riveted to the body at the top of the windshield. 2 clips (76.2mm x 25.4mm) shall be bolted or riveted to the cowl and extend over the bottom edge of the windshield. Clips shall be spaced a minimum of 304.8mm apart. It is recommended that 76.2mm – 25.4mm wide strips of steel or aluminium be installed behind the windshield to support it from collapsing inwards if it becomes damaged. The rear window shall be secured with 2 metal straps (25.4mm wide x 3mm thick) bolted or riveted to the body at the top and bottom of the rear window.

9.12.1.

APPENDIX G. FACTS, FORMULAS, AND MEASUREMENT STANDARDS

1. FACTS AND FORMULAS TO BE USED AT ALL SCCA EVENTS

1 inch = 2.54 cm = 25.4 mm
1 cubic inch = 16.387 cubic cm
1 millimetre = .03937 inch
1 kilometre = 1000 meters =.62137 mile = 1093.6 yards
1 mile = 1,760 yards = 1.60934 kilometres
Miles per hour = kilometres per hour x .62137
Kilometres per hour = miles per hour x 1.60934
1 cubic centimetre = .061 cubic inch
1 litre = 61.03 cubic inches = 1000 cubic centimetres (cc)
1 kilogram = 2.21 pounds
1 pound = 453.6 grams

General

2. MEASUREMENT STANDARDS

The following specifications shall meet the standards set below unless otherwise specified or unrestricted in the individual category or class preparation rules. Any specification not listed herein shall meet stock factory specifications unless otherwise specified or unrestricted in the individual category or class preparation rules. For these specifications, the tolerance shall be equivalent to ½ of the final digit of the specification (e.g. .25mm tolerance equals +/- .127mm). Absolute maximum means tolerances of +0.00 millimetres. Absolute minimum means a tolerance of -0.00 mm. Measuring devices available to scrutineers differ from location to location so it is the responsibility of the entrant/driver to insure that measurements comply with these rules.

1. Weight is absolute minimum.
2. Track is absolute maximum.
3. Rim width is absolute maximum.
4. Wheelbase has a tolerance of +/- 25mm
5. Valve size is absolute maximum.
6. Throttle bore and/or venturi size and intake restrictor size is absolute maximum.
7. Drum brake size is nominal i.d. plus manufacturer's "turning" tolerance.
8. Disk brake rotor diameter has a tolerance of +2.55mm.
9. Engine cylinder bore is absolute maximum before allowable overbore.
10. Engine stroke length is absolute maximum.
11. Valve lift is absolute maximum.
12. Compression ratio is absolute maximum

13. Diametric Constant has a tolerance of +0.2. (G-01 and FTK-01 meters) or +2 (DT-47FT meter).

APPENDIX H. INDEX