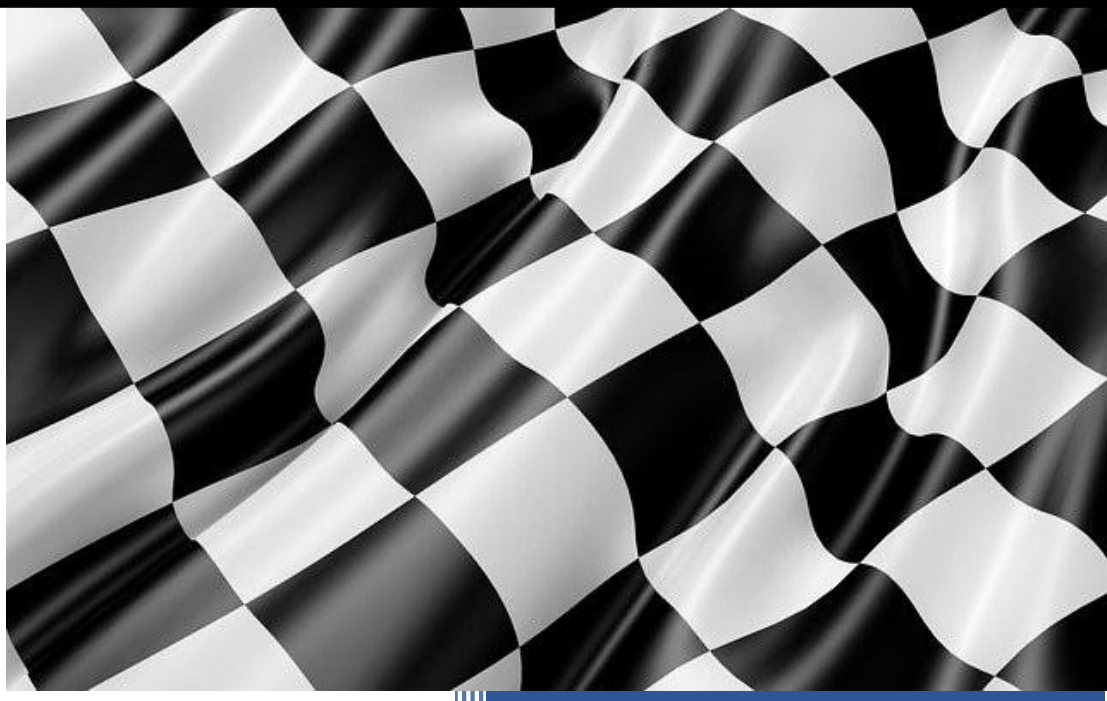
MOTORSPORT SOUTH AFRICA

2025

NATIONAL CHALLENGE STANDING SUPPLEMENTARY

SUPER VEE SPORTING AND TECHNICAL REGULATIONS



Version 1

1 January 2025

REVIEW AND AMENDMENTS

Motorsport South Africa (MSA) will periodically review these rules and will present the revised version to all members for agreement to publish the updated version.

Amendments and updates to the rules will be recorded in the Amendment Record, detailing the updated version, date of approval, and a short summary of the amendment.

AMENDMENT RECORD

Modified SSR / Art	*Date Applicable*	*Date of Publication*	*Clarifications*

CONTENTS

SPORTING REGULATIONS

1. CONTROLLERS

1.1. The controllers will be the Super Vee Association Committee with the oversight guidance of SAES management. Each competitor shall participate in any competition voluntarily at their own risk, acknowledging the risks, dangers and perils attendant upon motor racing, its rules, and the technical specifications for the competition vehicle.

2. ASSOCIATION MEMBERSHIP

2.1. The SAES reserves the right to refuse any entry that we feel does not fulfil the ethos and objectives of both the SAES management and Super Vee SA.

3. AIM OF THE SERIES/CHALLENGE

3.1. To declare a 2025 Overall Super Vee National Challenge Winner.

4. RULES AND REGULATIONS

4.1. All qualifying races will be held under the General Competition Rules and Standing Supplementary Regulations of Motorsport South Africa, these standing regulations, and the supplementary regulations issued by the promoters.

4.2. The GCRs and SSRs must be read and understood in addition to these regulations and specifications.

4.3. All competitors must have an MSA Regional Circuit Car licence and comply with all MSA rules, regulations, guidelines, and requirements.

4.4. All SVSA policies, procedures, guidelines, and the constitution must be adhered to. Any breach to MSA and SVSA constitution, policies, procedures, guidelines, principles, GSRs, and SSRs will be managed through MSA and /or SVSA (whichever is relevant) disciplinary procedures.

4.5. It must be noted that all drivers whose membership application has been accepted commit to participate in all events scheduled in our calendar for the year. Should there be extenuating circumstances leading to you not being able to participate in any scheduled event, then drivers are required to apply for leave of absence, which will be evaluated by the management committee before leave of absence is granted. This is to ensure that we honour SVSA's commitment to SAES.

4.6. Should drivers choose to participate in additional events organised by other promoters, excluding SAES, then they need to inform the SVSA management committee in writing at least 30 days prior to participating in such events. Before participating in such events, drivers must consider SVSA series sponsors, concepts like the brand image of SVSA sponsors and conflicting brands of other series sponsors. The SVSA brand and its sponsors brand must be protected at all costs.

5. ELIGIBILITY OF DRIVERS AND CARS

5.1. Competitors must comply with SSR1. SVSA membership must be applied for using the relevant application forms at least 14 days before participation in any SVSA events.

5.2. Eligible drivers must be registered as members with SVSA.

5.3. The series will be open to cars complying with the 2025 Regulations and Specifications for SVSA cars. Organisers may not accept any car that does not comply with these specifications.

5.4. All SVSA cars must be registered with SVSA. On registration a chassis plate will be issued, which must be attached to the car with rivets or bolts and mounted inside the cockpit so that it is always visible. No car will be allowed to compete without the registration plate attached as per the regulations.

6. SERIES/CHALLENGE FORMAT

6.1. The 2025 Motorsport Calendar is available from MSA and gives details of all event dates.

6.2. There will be a minimum of two heats for SVSA cars at all race meetings except where an organiser has obtained special permission from MSA to run a single longer race, or in cases of "force majeure." Race heats will consist

of 12 laps. Points will accrue only for the 6 events set in the original calendar approved by MSA. Dates for the approved events may be changed if circumstances require it to change and you will be notified via a circular issued from MSA. Any additional races will not count for series points. If an event is dropped from the calendar, an additional event may be added to replace it with the approval of SVSA and MSA.

6.3. Refer SSR 82 (i) in connection with the minimum number of starters required.

6.4. To score points as per 6.5 below a minimum of 8 cars must have started qualifying. If less than 8 cars start qualifying, then a proportion of points will be scored calculated by number of cars divided by 5 multiplied by points for the finishing order if 8 cars qualified. E.g., 3 cars start qualifying then points will be calculated as follows: 1st - 3/5 x 10 = 6, 2nd – 3/5 x 7 = 4,2, 3rd - 3/5 x 5 = 3

6.5. Points will be scored in each heat as follows:

position	Points
1	25
2	21
3	18
4	15
5	12
6	10
7	9
8	8
9	7
10	6
11	5
12	4
13	3
14	2
15	1

6.6. An additional bonus point will be awarded to the competitor for setting the fastest lap time at each race meeting.

6.7. An additional bonus point will be awarded to the competitor setting the fastest lap time in qualifying at each race meeting.

6.8. Starting grid positions will be determined as per SSR XII 26 iii) & v): Grid positions shall be determined by qualifying times.

6.9. The starting grid will be as per qualifying lap times for heat 1.

6.10. Heat 2 starting grid will be as per finishing order in heat 1. If a third heat is run, then the finishing order for the 2nd heat will be the grid position for the 3rd heat.

6.11. Where only one race of longer duration is scheduled in the SRs, then double the number of points listed above will be scored.

6.12. All races will be scored towards the SVSA Challenge series.

7. SEPARATION OF TIES

7.1. The competitor with the greatest number of first place points in all heats for the year will be declared the series winner. If this does not resolve the tie, then the greater number of seconds, failing these thirds and so on will be used to resolve the tie. If a tie still remains, then the competitor to achieve the highest placing in the final round will be declared the winner.

8. COMPETITION NUMBERS

8.1. Competition numbers shall comply with SSR 4, with the exception that the width and height of the numbers may have a minimum size of 40mm x 230mm x 160mm, respectively.

8.2. Numbers allocated to competitors will begin from 1. The Number “1” shall be reserved for the current SVSA winner. Should the current winner not compete, this number will not be allocated. The top 10 finishers of the previous year’s challenge are entitled to use their finishing position number for the current season. Competitors may opt not to use their finishing order number. In such cases those numbers will not be allocated for the current season. Numbers shall be printed in white, black, or blue.

8.3. Before a number is allocated to a competitor campaigning a newly constructed or rebuilt car, the car shall be inspected by a competent person/s appointed by SVSA to examine the car for good engineering practice and general compliance with the specifications. SVSA reserves the right to request that a car be presented for inspection at any time.

8.4. Cars not meeting the safety and aesthetic standards as judged by SVSA or the SAES management will not be allowed to compete.

9. ADVERTISING

9.1. Where applicable, series sponsor decals must be prominently displayed on the car. Placement will be specified by SVSA. No competitor decals of the current sponsor may be displayed on any SVSA car.

9.2. Any competitor failing to display these decals on the car or displaying decals conflicting with the agreements reached between SVSA and the sponsor/s shall be precluded from receiving any benefits and prize or travelling monies paid out by those sponsors (see GCR 246).

9.3. A competitor not registered as a bona-fide member of SVSA, irrespective of him/her displaying decals in compliance with this Article, shall be precluded from receiving any benefits, prize or travelling monies paid out by the sponsors.

9.4. SVSA shall supply these decals.

9.5. 2 x SVSA decals must be prominently displayed on the front and rear wings or left and right sides of the car.

10. POST RACE SCRUTINEERING

10.1. Post-race scrutineering/stripping race meeting shall have post-race checks/striping done after the last heat for the day. (see GCR 252 & 254).

10.2. To ensure randomness and fairness, draws will be done for vehicles and for specific parts to be checked. The draw shall consist of two separate boxes.

10.3. Balls will be numbered and drawn; the number drawn shall represent the vehicle in the finishing position (finishing positions in the last heat of the day shall be used).

10.4. Balls will be numbered and drawn; the number drawn shall represent the SVSA technical regulation to be checked.

10.5. The draw shall be done by the chief/SVSA appointed technical scrutineer on the day whilst drivers are still in the post-race paddock.

10.6. MSA Clerk of Course (CoC) of the day may also select a vehicle to be scrutineered and the regulation to be checked. This will be in addition to 10.4 and 10.5 above.

11. RESEARCH AND DEVELOPMENT

11.1. SVSA will occasionally embark on Research and Development (R&D) projects. Such projects will be aligned to improvements concerning body components, chassis, suspension, wheels and tyres, engine, fuelling systems, gearbox, cooling, and steering systems. SVSA will allow only one such R&D car to participate in any officially sanctioned MSA events.

TECHNICAL REGULATIONS

1. DEFINITION

1.1 A Formula Super VEE is a single seater racing car based on Volkswagen Type 1 front suspension, transmission, rear axle, and a water-cooled VW engine.

1.2 All Formula Super Vee cars must be registered with the SVSA. A chassis identification plate will be issued on registration, which must be attached to the car using rivets or bolts. It must be attached inside the car's cockpit so that it is always visible. No car will be allowed to compete without the identification plate attached as per these regulations.

1.3 The engine shall be fitted using an adaptor plate (see Article 13.4) directly to and ahead of the transmission.

1.4 No MODIFIED parts or COMPETITION parts are permitted, except where specifically stated.

1.5 The abbreviation “SV SA” shall stand for “Formula Super Vee Association of South Africa.”

1.6 Unless otherwise stated, the term “Welded” shall imply either Welding or High-tensile Alloy Brazing.

1.7 Unless otherwise stated, all suspension and harness bolts and cap screws used must be of at least Grade 8.8 High Tensile Steel.

1.8 Safety decals shall be applied to the car as per GCRs and SSRs.

1.9 Provision must be made for mounting a rear facing red warning light (rain light) which must comply with the following:

1.9.1 Must be permanently mounted not more than 600mm from the ground and be visible to cars approaching from the rear.

1.9.2 Must be able to be switched on or off by the driver while he/she is fully strapped into the car.

1.9.3 Must be operative at any stage of practice, qualifying or racing when visibility levels are low or when the Clerk of the Course (CoC) or an SV SA Committee member warrants its use on safety grounds.

1.9.4 What is not explicitly permitted is forbidden. (Refer GCR 226).

2. DIMENSIONS

2.1 Overall length - from front of body to rear of transmission selector housing bush: Maximum 4000 mm Minimum 3100 mm.

2.2 Maximum front body overhang - measured from the front of the top tube of the axle beam: 1050 mm.

2.3 Wheelbase - from centre of front wheel to centre of rear wheel (with front wheels in the straight-ahead position):

2.3.1 Maximum 2550 mm

2.3.2 Minimum 2070 mm

2.4 Track – measured from the centre line of one tyre to the centre line of the opposite side tyre (must be measured at the top most point of the tyres with the driver seated in the car):

2.4.1 Front - Maximum: 1 380mm

2.4.1 Rear - Maximum: 1 380mm

2.5. **Minimum Mass:**

2.5.1 Including ballast but without driver and helmet: 480 kg.

2.5.2 With driver, helmet, and ballast: 560kg

2.5.3 Ballast must be permanently secured between the main roll-over bar and steering roll-over bar by either welding or bolting in such a manner as to be deemed safe by the SV SA.

2.5.4 The mass may be checked at the finish of a race or at any time during qualifying.

2.5.5 The scales present on the day shall be deemed correct. The calibration allowance shall be taken into effect. Should no calibration allowance be available, a deemed value of +—1kg will be used.

2.5.6 No ballast, fuel, oil, brake fluid, or coolant may be added prior to checking the mass. The driver may not consume any liquid or food before being weighed in Parc Fermé. Once the driver has left the weighing area,

the car may not be re-weighed. If the car is underweight, it may be immediately rolled off and back onto the scale to be re-weighed. The car may not be weighed more than three times.

2.5.7 Only bodywork that has been displaced during a race / qualifying session may be retrieved and replaced prior to weighing. Only the actual displaced bodywork may be used for this purpose, not replacement parts.

3. FRAME

On completion of the entire frame or replacement of any tubes in the frame, the frame must be inspected for compliance by the SV SA Technical Committee. For inspection, the frame shall: Have all welding completed and Such welds cleaned up. Have the seatbelt mountings, tube inserts, triangulation etc. completed. Not be sandblasted or painted. The frame design and construction are unrestricted except that:

3.1 It shall be constructed of mild steel tubing or Chrome-Moly welded together. The minimum wall thickness of tubing will be 1.6mm

3.2 It may be braced by panels which are welded, bolted, or riveted to the frame. Refer to Article 4.3.

3.3 All holes drilled through the frame tubes shall be fitted with inserts that must be welded.

3.4 Chassis tubes may not be used to duct any liquid.

3.5 Where a roll-over bar or a front or rear roll-over bar support is attached to an unsupported point on a longitudinal member of the frame, it must have additional supports from a point directly below the point of attachment back to the roll-over bar (in the instance of a support) or nearest bulkhead node point, in such a way that effective frame triangulation is achieved.

3.6 It shall have a main roll-over bar, which must comply with one of the following specifications:

3.6.1 Conventional single roll-over bar (see 3.7);

3.6.2 Pyramid roll-over structure (see 3.8);

3.6.3 A roll-over bar conforming to FIA specifications (see 3.9).

3.7 Conventional single roll-over bar must meet the following criteria:

3.7.1 Have the design approved by the SV SA Technical Committee for compliance to the requirements of Article 3.7 only, before manufacture.

3.7.2 Be of sufficient height that the top of the apex of the roll-over bar shall not be less than 50mm above the driver's helmet when seated in the car (See Article 18F).

3.7.3 Be bent into an inverted "U" shape, with a rounded apex at the top of the roll-over bar.

3.7.4 Be constructed of a continuous length round tubing, either:

3.7.4.1 38mm outside diameter mild steel with a minimum wall thickness of 2mm or 3.7.4.2 40mm outside diameter chrome-moly with a minimum wall thickness of 2mm.

3.7.5 Be at least 350mm wide at a point 350mm from the top of the apex.

3.7.6 Must be welded to the frame.

3.7.7 Be fitted with double front support tubes, which shall:

3.7.7.1 Be made of a straight length of at least 18mm diameter round steel tubing with a minimum wall thickness of 1.6mm.

3.7.7.2 Be mounted not more than 200mm from the top of the apex of the roll-over bar.

3.7.8 Be supported from the rear by supports taking the form of either an inverted "U" or two support tubes in such a way as to meet the following criteria:

3.7.8.1 Where two supports are used:

3.7.8.1.1 They must be made of round steel tubing with a diameter of at least 25mm and a minimum wall thickness of 1.6mm.

3.7.8.1.2 They must be mounted not more than 50mm from the top of the apex of the rollover bar.

3.7.8.1.3 They must be straight over their full, unsupported length.

3.7.8.2 Where the support is in the form of an inverted "U":

3.7.8.2.1 It must be made of at least 32mm diameter round steel tubing with a minimum wall thickness of 2mm.

3.7.8.3 Must be welded to the frame.

3.7.8.4 Must extend down on either side of the centre line of the frame.

3.7.8.5 Where, for space reasons, it is impractical for a frame to comply with the above criteria a special dispensation can be applied for from the SV SA Technical Committee. An official letter of authorization from the SV SA must be kept with the car's logbook.

3.8 Pyramid roll-over structure must meet the following criteria:

3.8.1 Have the design approved by the SV SA Technical Committee for compliance to the requirements of Article 3.8 only, before manufacture.

3.8.2 Be made up of two individual roll-over bars each constructed of a continuous length round tubing, either:

3.8.2.1 38mm outside diameter mild steel with a minimum wall thickness of 2mm or 40mm outside diameter chrome-moly with a minimum wall thickness of 2mm.

3.8.3 Have one roll-over bar at least 350mm wide at a point 350mm from the top of its apex.

3.8.4 Be of sufficient height that the top of the apex of the roll-over structure shall not be less than 50mm above the driver's helmet when seated in the car (See Article 18F).

3.8.5 Have the top of the roll-over bars bent into inverted "U" shapes, with rounded apexes.

3.8.6 Have the apex of each roll-over bar abutting against the other, joined together by a welded steel plate of at least 1.5mm thickness. The steel plate shall cover at least 60% of the arc of the rounded shape of the roll-over bar apex.

3.8.7 Have an included angle between the individual roll-over bars of not less than 30 degrees and not greater than 45 degrees.

3.8.8 Must be welded to the frame.

3.9 FIA specification roll-over bar which must meet the following criteria:

3.9.1 It must conform in all respects to the requirements of Article 227 - Appendix J of the FIA Yearbook.

3.9.2 In the case of cars supplied by an official car manufacturer registered with MSA, conformance to the requirements of Article 3.9 will have to be submitted, in writing, in a form acceptable to MSA.

3.9.3 Any cars designed and constructed by any party not registered as an official manufacturer with MSA and whose roll-over bar features require conformance to Article 3.9, will be required to submit written proof of such conformance in a manner acceptable to MSA. Such written proof shall furthermore be required to be counter-signed by a registered engineer in terms of Act 114 of the Republic of South Africa.

3.10 A Steering bulkhead roll-over bar shall be provided that must be welded in and comply with the following criteria: The top of the roll over bar shall be bent into an inverted "U" shape, with a rounded or flat apex. Be constructed of at least 32mm outside diameter mild steel tubing with a minimum wall thickness of 1.6mm.

3.10.1 Must be fitted with a minimum of two front support tubes that must be welded in and meet with the following criteria: Must be made of at least 19mm outside diameter mild steel tubing with a minimum wall thickness of 1,6mm. The supports may not be attached more than 50mm from the top of the apex of the roll over bar. They must be straight over their full, unsupported length. Must be constructed so that, when a straight line is taken between the apexes of the main and steering bulkhead roll bars, crash helmet clearance is provided (see Article 18).

3.11 A metal heel support plate at least 150mm wide, and not less than 1mm thick, shall be fixed to the top or sides of the lower chassis tubes.

4. BODY

The shape and design of the bodywork is unrestricted but shall incorporate the following requirements:

4.1 It shall encase the frame on all four sides from a plane ahead of the front suspension to the fire -wall, except for the driving compartment which shall be open at the top.

4.2 It shall also provide cover for the engine and transmission from the fire-wall to at least the centre line of the rear axle tubes.

4.3 It shall be constructed of metal, fibre-glass or other material approved by SV SA.

4.4 Specifically, Kevlar or carbon fibre bodywork components are not permitted; If such panels are manufactured from the materials mention, then approval must be sort from the Technical committee prior to fitting.

4.5 Air ducting may be attached to or incorporated in the bodywork.

4.6 Ground effect or downforce-enhancing front or rear aerofoil wings are permitted. Such wings must comply with the ffg requirements (refer to annexure 1 and 2): Front wing: (Annexure 2).

4.6.1. Minimum length from endplate to end plate must be 1250mm and a maximum of 1400mm.

4.6.2. Minimum width of the wing must be 90mm and a maximum width of 210mm.

4.6.3. The wing will comprise of only one plane which is adjustable. Rear wing: (Annexure 1)

4.6.4. Maximum of 3 aerofoil blades are allowed. Two blades at the top and 1 blade that the bottom.

4.6.5. The top adjustable blade may not be longer than 870mm or shorter than 850mm with a maximum width of 95mm and a minimum width of 80mm.

4.6.6. The middle adjustable blade may not be longer than 870mm or shorter than 850mm with a maximum width of 170mm and a minimum width of 150mm.

4.6.7. The bottom fixed non-adjustable blade may not be longer than 870mm or shorter than 80mm with a maximum width of 160mm and a minimum width of 75mm.

4.6.8. Both the upper blades may be adjustable. Note: the driver must not be able to adjust the wing whilst seated in the car.

4.7 There may be no fixed or moveable appendages sealing the longitudinal apertures between the sprung part of the car and the track.

4.8 Wheels shall remain external to the bodywork.

4.9 The height of the nose of the body may not exceed 360mm when measured at the extreme front - most /tip point to the ground directly below (at 90 degrees to the surface the car is standing on) on a level surface.

4.10 Fitment of a front wing is obligatory. The aerofoil wing must be mounted a minimum of 50mm from the tip of the nose cone. The wing blade must be fixed and not adjustable. The wing blade must be a minimum of 100mm away from the inside rim of the front wheel when the wheel is pointing directly/straight forward. The wing must be fitted with an end plate manufactured from 6mm plywood or aluminium plate. The wing blade must sit a minimum of 150mm above the ground at the lowest point of the wing blade.

4.11 Fitment of a rear wing is obligatory. The number of flaps/blades/wings is limited to 3 and must be set one below the other. Only the uppermost wing may be adjustable. The wing blade and end plates must be a minimum of 200mm away from the inside of the rim of the rear wheel when the wheel is pointing directly / straight forward. End plates manufactured from 6mm plywood or aluminium plate must be fitted to all wing blade ends. The wing must be mounted to the gearbox of the car with two upright metal pillars/plates. The pillar metal thickness may not be less than 6mm. The highest point of the top most wing must be 1.2m above the ground level.

4.12 A diffuser may be fitted to the rear of the car. The diffuser may not extend beyond the adapter plate between the engine and the gearbox. The Diffuser may also not protrude more that 150 mm beyond the rear cover of the gearbox. The diffuser must be manufactured with fibreglass.

5. DRIVERS COMPARTMENT

5.1 The driving compartment shall be so designed and constructed that the driver can get out of the safety belt and driving seat within 5 seconds without having to remove or manipulate any part of the car with the exception of a quick release steering wheel.

5.2 All cars shall be fitted with a seat mounted independently from, and not supported in any way, by the under-tray, approved by the SV SA technical committee.

5.3 A metal or aluminium firewall shall be fitted between the driving compartment and the engine compartment which shall extend from the bottom of the frame to the top of the engine cover over the full width of the body. If the engine cover extends to the top of the roll bar the firewall shall have a minimum height of 590mm and shall not have a gap between the driver and the engine compartment through which flames could come into contact with the driver. No holes may be drilled in the firewall to duct air onto the heat exchangers.

5.4 Seat belts of the double shoulder full harness type incorporating crotch straps, shall be fitted and must have either four, five or six attachment points to the frame, and shall hold the driver firmly in place when seated in the car. Crotch straps shall be used at all times.

5.5 Engine oil or water tubes including radiators and oil coolers are permitted within the driver's compartment provided they are totally screened from the driver by aluminium or fibreglass.

6. UNDER TRAY

All cars must be fitted with a mild steel or Aluminium under tray, which shall meet the following criteria:

6.1 Must be riveted, bolted, welded or high-tensile alloy brazed to the frame, and may not extend outside the confines of the frame and radiator side pods.

6.2 Must cover the area from the steering bulkhead to the main rollover bar.

6.3 A single ground effect floor tray may be fitted, provided it complies with the following criteria:
6.3.1 Must be constructed of plywood with a minimum thickness of 6mm.
6.3.2 May not extend further forward than the vertical plane of the front-most point of the front axle beam.
6.3.3 May not extend further back than the vertical plane of the gearbox selector housing bush if no diffuser is used. If a diffuser is used, then the rear of the floor tray may not extend beyond the adaptor plate between the engine and gearbox.
6.3.4 Maximum width of 1200mm.
6.3.5 Radius of curvature is allowed in one vertical plane only.
6.3.6 All mounting points must be substantially strong enough to withstand the pressures exerted. Mild Steel bolts for mounting is acceptable, however cable ties are not permitted.
6.3.7 May not have any apertures at any point on the wooden floor/under tray.
6.3.8 The profile is free, within the above constraints.

7. FIRE EXTINGUISHER

7.1 A fire extinguisher or fire extinguishing system of at least one-kilogram extinguishing capacity shall be fitted within the bodywork of the car so that it can be operated by the driver when strapped into the seat.
7.2 A Firestryker may **not** be used as a replacement for a fire extinguisher/extinguishing system or as an addition to fire extinguisher/extinguishing system. MSA bulletins in this regard will apply.
7.3 No fire extinguisher containing carbon tetrachloride is allowed.
7.4 If a gauge is not fitted, evidence must be furnished to prove that the extinguisher was purchased new or serviced in the period prescribed in (see GCR 257).
7.5 If an on-board fire extinguishing system is used, it must comply with the following:
7.5.1 All nozzles, pipes and bends shall be of fire-resistant material.
7.5.2 At least one nozzle must be aimed at the engine and at least one nozzle must be aimed at the fuel tank.
7.5.3 The system must be capable of staying intact during the release of extinguishant.
7.5.4 The system must have prior approval from the SVSA.

8. FUEL TANK, FILTERS, AND FUEL

8.1 **Fuel tanks**

The shape, position and installation of the fuel tank/s is unrestricted, but the following shall apply:
8.1.1 Fuel tanks may not protrude beyond the confines of the chassis.
8.1.2 Shall be constructed of metal, or other material acceptable to the SVSA.
8.1.3 Shall be securely fitted to the frame.
8.1.4 The filling port and its cap shall not protrude more than 5cm beyond the bodywork.
8.1.5 The filling port cap shall have an efficient locking action to reduce accidental opening on crash impact or incomplete locking after refuelling.
8.1.6 Tank/s must be fitted with fuel breather pipe/s of 3mm maximum bore. These must be routed from the tank/s to the highest convenient point in the car (must be higher than the top of the fuel tank/s) and return to a position external to the cockpit and below the level of the tank/s. A motocross style one way breather valve is permitted.

8.2 **Fuel filters**

8.2.1 Fuel filters must be placed away from any point which is vulnerable in case of a crash.

8.3 **Fuel**

8.3.1 Only commercial fuel, including aviation fuel, as specified in GCR 240 shall be used.
8.3.2 The addition of any additive to either the fuel or air is prohibited.
8.3.2.1 An additive is defined as any agent that improves the volumetric efficiency and/or heat of combustion.

9. FRONT SUSPENSION

The standard Volkswagen Type 1 front suspension (Link and Kingpin type), conforming in all respects to Volkswagen specifications, shall be used, except for the following modifications:

9.1 The beam mounting brackets may be re-located in any position on the beam.
9.2 The original rubber bump stops, and metal supports may be removed.
9.3 The use of coil-over (shock absorber) springs is prohibited.
9.4 Front shock absorber uprights may be removed; the cuts shall not be closer than 10mm from the upper torsion tube and they must be boxed and welded.
9.5 Any make or type of telescopic shock absorber(s) may be used provided that they are not performance enhancing racing products, Eg Penske shocks, and shall:
9.5.1 Be mounted either directly to the chassis or through push or pull rods.
9.5.2 Be a totally self-contained integral unit without any facility for varying pre-set damping and stroke parameters from within the drivers' cabin. Any adjustment mechanisms must be mechanical, not via an electronic interface.
9.5.3 Not be adjustable by the driver when he/she is seated in the cockpit.
9.6 The lower link arms:
9.6.1 The shock absorber mounting on the link arm may be removed or modified.
9.6.2 A bracket may be welded on for mounting the shock absorber or push / pull rods used to activate the shock absorber.
9.7 Negative camber on each front wheel shall be unlimited.
9.8 To enable the adjustment of the ride height of the car, adjusting mechanisms may be fitted.
9.8.1 These mechanisms must be of such a configuration that the ride height of the vehicle may be adjusted externally, with the vehicle stationary and without any dismantling of the front suspension components.
9.8.2 The locating bush at the midpoint of the axle tubes cannot be wider than 35mm.
9.8.3 Competitors may apply to the SVSA Technical Consultant/s for a ruling on any ride height adjustment mechanism they wish to use. Should there be any doubt on the technical conformance to the regulations of the mechanism, the controllers will act as sole arbitrators.
9.9 Anti-roll bars may be fitted.
9.10 To facilitate the fitting of an internal anti-roll bar, the locating bush at the midpoint of the axle tube may be removed.
9.11 Torsion Bars:
9.11.1 One torsion bar may be removed and the other modified by removing or adding spring blades (half or full) as supplied standard by Volkswagen and specified by the manufacturer for this use only. The maximum number of leaves in a spring pack cannot exceed the number in a standard pack.
9.11.2 Shortening of the torsion bar by any method is strictly forbidden.
9.11.3 The ends of the torsion bar spring packs must be square with a suitable countersunk conical drilling which will ensure firm location and fixing inside the link arms by the standard grub screws as fitted by Volkswagen.
9.11.4 To increase the stiffness of the torsion bar system, mild steel, or aluminium tube sleeves not greater than 3mm thick may be placed over the section of spring pack stretching between the end of the link arms and the central pivoting bush inside the carrier tubes. These sleeves cannot be fixed in any way to the link arms, the central pivot/locating bush, or any other areas of the suspension tube internals.
9.12 External lateral locating bushes or bearings may be fitted. 9.13 Internal Bushes:
9.12.1 The lateral location of the internal bushes by means of suitable fasteners will be allowed.
9.12.2 The internal bushes may be replaced but must be of the same configuration width and location as the original fibre bushes.
9.13 Link-pin shims may be cut for ease of adjustment.
9.14 Locating screws may be fitted to the uprights to keep the link pin bushes in place.
9.15 The link pin bushes may be machined with an angled centre hole to accommodate for camber changes.

10. STEERING

The steering mechanism shall either be of rack and pinion type or standard Volkswagen Type 1 system.
10.1 The castor angle and toe in/out settings are free.
10.2 The steering column is unrestricted.
10.3 Any steering wheel may be used.
10.4 The tie rod ends may be replaced with:
10.4.1 Aircraft or racing type spherical joints not less than 10mm (or the imperial equivalent) in diameter.

10.4.2 Industrial type spherical joints not less than 12 mm in diameter.

10.5 The hub steering arms may be re-drilled to mount the tie rod ends below the arms.

10.6 Any spacer used between the steering arm and the tie rod end must not be thicker than 15mm unless the steering arm encases the tie rod end.

10.7 To permit the mounting of steering mechanisms in front of the axle beams, front wheel hubs may be interchanged and mounted so that the hub steering arms are orientated towards the front of the car.

10.8 To permit commercially available rack and pinion assemblies to be used, it will be permissible to shorten the horizontal distance (nominally 130mm) between the tie rod end hole centre in the steering arm and the centreline of the kingpin housing to a minimum of 80mm. This may be achieved by either:

10.8.1 Fitting a bracket mounted onto the front wheel assembly using both the brake backing plate mounting bolt holes and the existing hole in the steering arm, or

10.8.2 Using an assembly that allows the existing steering arm to be removed. In either case, the system used must be approved by the SV SA Technical Representative prior to it being fitted or used. Photographic evidence may be taken, and written confirmation of the approval given will be provided to the driver, with a copy being retained by the SV SA committee.

11. REAR SUSPENSION

11.1 A Coil Spring surrounding a telescopic shock absorber or torsion bars shall provide the main springing medium. Only a 'mono-shock' system is permitted.

11.2 Fore and aft location of the suspension may be provided by a single or twin radius arm/s on each side, the mounting points for these being unrestricted.

11.3 Metal, rubber or fabric devices may be used to control the suspension travel;

11.4 An Anti-Roll device may be fitted to the rear suspension.

11.5 Camber and toe-in/out settings are free.

11.6 Shock absorbers may not be computer controlled, nor may they be adjustable by the driver when he/she is seated in the cockpit.

12. TRANSMISSION AND REAR AXLE

12.1 The standard Volkswagen Type 1 transmission and swing axle assembly conforming in all respects to Volkswagen specifications shall be used, except for the modifications listed below.

12.2 Only the following gearbox ratios are permitted:

1st gear ratio 3.80
2nd gear ratio 2.06
3rd gear ratio 1.26
4th gear ratio 0.93
Final drive 4.125

12.3 Only components from Volkswagen gear sets listed in Article 12.2 may be used or unless otherwise stated in Article 12.4. They may only be used if they can be fitted without any modification to any of the components in the transmission or in the gear set itself with the exceptions listed below.

12.4 **Gear types allowed:**

12.4.1 Standard VW Beetle type 1 Gears

12.4.2 Imported Weddle gears

12.4.3 Locally manufactured straight cut gears (as approved by the SVSA in accordance with Article 12.2)

12.5 Modifications are permitted, if necessary, to accept the 0,93:1 fourth gear and 1,26:1 third gear ratios, respectively.

12.6 The third and fourth gears may be welded and/or pinned (a hole spark eroded, and a pin inserted) to aid reliability of the gears.

12.7 The worn helixer teeth on any gear where the sliding hub connects may be removed to prevent the sliding hub jumping out of the gear.

12.8 The drive pinion shaft and clutch gear may be machined, if necessary, to accept the third gear ratio sets mentioned in Art. 12.2.

12.9 All synchromesh components must be in place and operating.

12.10 Any rear bearing housing may be used with suitable bearing spacers.

12.11 The crown wheel must be transposed to provide the required direction of side shaft rotation. The transmission may not be inverted.

12.12 For the purpose of re-adjusting selector fork positions on selector shafts without dismantling the gearbox, two holes not larger than 20mm in diameter may be drilled in the side of the gearbox housing. The openings must be properly tapped and plugged to avoid oil leaks. The selector fork locking bolts may be substituted with cap screws.

12.13 The use of locked or limited-slip differentials/final drives is prohibited.

12.14 It is not required for the vehicle to be able to select reverse gear and the reverse gear can be removed from the gearbox. This includes all the gears and mechanisms involved that can be removed for reverse gear.

12.15 The gearbox shall be ventilated to the engine oil catch tank or a separate container of no less than 50ml capacity.

12.16 Any make or type of lubricant commercially available through a recognised South African stockist may be used.

12.17 Any bearing, nuts, bolts, screws, gaskets, and oil seals may be used provided these are supplied as normal replacement parts in place of Volkswagen components and that they are freely available.

12.18 Any replacement gear set maybe used also long as the ratio confirms to the rules and the gear has a helical pattern.

12.19 Aftermarket replacement bearings may be used.

12.20 A bearing retainer plate as supplied by the SVSA maybe fitted in between the nosecone and bearing carrier.

13. FLYWHEEL, CLUTCH, PRESSURE PLATE AND ADAPTOR

13.1 **Flywheel:**

The flywheel may be obtained from any source but must be able to accept the standard type VW Type 1 180mm or 200mm clutch plate and pressure plate. It must have a ring gear that can be driven by a 6-volt or 12- volt Type 1 starter motor. The air-cooled engine flywheel may be altered so that it can bolt onto the crankshaft.

13.1.1 The minimum mass of the 200mm flywheel shall not be less than 4.37 kg, excluding all flywheel retaining bolts.

13.2 **Clutch:**

The clutch mechanism may be either cable or hydraulically operated.

13.2.1 Any clutch plate, pressure plate and thrust bearing may be used provided they are supplied as normal replacement parts in place of the Volkswagen components and that they are freely available in South Africa through a recognised local stockist.

13.2.2 An SVSA approved sintered clutch plate may be used and must, at all times, conform to the following specifications:

13.2.2.1 Must be a 3 or 4 button sintered clutch plate;

13.2.2.2 Ceramic Copper pad type sintered buttons shall be used;

13.2.2.3 The minimum mass shall not be less than 580 grams for the 200mm diameter clutch plate.

13.3 **Pressure plate:**

The minimum mass of the pressure plate shall be not less than 3,1kg for the 200mm diameter.

13.4 **Adaptor Plate:**

The adaptor plate is free, but the thickness thereof may not be less than 15mm or greater than 25mm.

14. BRAKES

14.1 The braking system shall consist of a double circuit, one controlling the front wheels and d the other controlling the back wheels, operated by a single pedal.

14.1.1 In the case of a failure or leakage in either of the braking circuits, the pedal shall still control two wheels, i.e., either the front brakes or back brakes.
14.1.2 Disc brakes shall be utilised on all four wheels as per Article 14.2 below.

14.2 **Disc brakes**
14.2.1 The brake calliper and disc used will be as originally fitted to the Volkswagen Chico Golf 1.
14.2.2 Callipers are to be fixed with high tensile bolts to a suitable mounting bracket. The mounting bracket must in turn be fixed with high tensile bolts to the existing backing-plate mounting points.
14.2.3 The disc assembly must be mounted onto the existing hub carriers and splined shafts in such a way that the stress pattern onto the carriers is similar to the drum brake configuration.
14.2.4 Prior to any non-approved disc brake system being fitted, a drawing showing the details of such a system must be submitted to the SV SA Technical Committee for consideration and approval.
14.2.5 Minimum disc thickness for a solid disc is 7mm.
14.2.6 Any brake pad not manufactured specifically for motorsport application may be used provided they are normal replacement parts supplied by a recognised stockist in place of genuine Volkswagen components.
14.2.7 Not more than two (2) holes with a maximum diameter of 10mm may be drilled through the rear brake discs for the sole purpose of accessing the bearing housing retaining bolts or cap screws.
14.2.7 Vented discs may be used only for the front braking system.

14.3 **General – Brakes**
Standard Volkswagen components need not be used in the braking systems except as specified in Article 14.2 above.

15. WHEELS, HUBS, AND TYRES

15.1 **Wheels and Hubs**
15.1.1 Wheels shall be 15-inch diameter with a maximum rim width of 7J and a minimum mass of 6kg. Wheels may be either pressed steel or aluminium alloys. No machining is permitted for the purpose of removing weight.
15.1.2 Wheel spacers may be used to widen the track up to the maximum allowed in the regulations (see Article 2.4).
15.1.3 Bolts or screw in Studs used to secure the wheels must be flush with or protrude through the rear face of the hub when screwed in.
15.1.4 Where studs and nuts are used to secure the wheels, the nuts must be open on the outer end. The stud must be flush with, or protrude through, the nut when tightened up. The length of thread in the nuts may not be less than 20mm. It is recommended that the studs be made out of at least Grade 8.8 high tensile steel.
15.1.5 Wheel bolts or nuts must match the type of wheels used.
15.1.6 Rear hubs may not be reversed when fitted.
15.1.7 The rear hub profile may not be altered and must remain a uniform circle.
15.1.8 Not more than two (2) holes with a maximum diameter of 17mm may be drilled in the hub for the sole purpose of accessing the bearing housing retaining bolts or cap screws.

15.2 **Tyres**
15.2.1 Tyres will be registered to a competitor and not to a car.
15.2.2 A maximum of three (3) sets of semi-slick tyres will be allowed per driver during a racing season.
15.2.3 All tyres used for qualifying and racing shall be registered by the competitor with the SV SA and controlled in accordance with procedures from time to time advised by the SV SA.
15.2.4 Competitors must ensure that their tyres are registered with the SV SA prior to the commencement of a race meeting.
15.2.5 Only tyres that are marked and registered may be used for the duration of any qualifying or race session having National, Regional and/or Club status counting towards any SV SA challenge or point's log.
15.2.6 A tyre's identification may be checked at any time during a race meeting.
15.2.7 Any tyre rendered unusable in the opinion of the SV SA Committee may, at the latter's discretion, be replaced by the competitor without affecting his/her allocation.
15.2.8 Only the following tyres are allowed:

15.2.8.1 Dunlop 195/55/15R front and rear.
15.3 The use of tyre warmers is prohibited.

16. ENGINE AND AUXILIARIES

16.1 Specifications

16.1.1 The engine shall be naturally aspirated. The maximum engine capacity is 1860 cc. 1400cc or 1600cc blocks may be re-bored to the required size as set out in this clause.
16.1.2 Engine components shall be assembled in the standard configuration and shall comply in all respects with VW specifications except for the modifications listed below. Unless otherwise stated, all tolerances or nominal dimensions listed in Section 16 will be in accordance with Volkswagen works specification.
16.1.3 The engine shall be mounted in the upright position.
16.1.4 The cylinder head gasket may be the standard part supplied by VWSA or the equivalent replacement part. In this regard see Articles 16.3.2 and 16.3.3.
16.1.5 The following components, emanating from sources other than Volkswagen SA, may be used, provided that they are recognised standard replacements (and not especially made for racing), that they do not require any unauthorised modification thereto (or of any other component) in order to fit them, and that they are freely available in South Africa through a recognised local stockist.
16.1.5.1 Nuts, bolts, screws, etc. The threads of bolts and studs must protrude fully through Nyloc 'y' type nuts.
16.1.5.2 Electric wiring.
16.1.5.3 Gaskets and seals.
16.1.5.4 Spark plugs. Any heat range in the standard long reach plug may be used and double washers or spacers may be used to eliminate thread exposure.
16.1.5.5 Connecting rod bearings, camshaft bearings and crankshaft bearings.
16.1.5.6 Pistons & Piston Rings.
16.1.5.7 Valves of the same profile as standard valves.
16.1.5.8 Electric fuel pump with a minimum of 3 bars pressure and a maximum of 6.5 bars pressure
16.1.5.9 Water Pump
16.1.5.10 Any conrod bolts and head bolts may be used.

16.1.6 Components may not be strengthened, reinforced, or hardened either structurally or by any type of treatment which inherently increases their strength or hardness other than as specified in 16.8.5.
16.1.7 The fitting of heli-coils, plugs, inserts, stud inserts, carburettor bushes, oil seals, etc., the welding of any cracks and the re-sizing of worn parts constitutes a repair and is acceptable providing no other regulations are contravened in so doing.
16.1.8 For the purpose of sealing the engine by the scrutineers or SV SA technical representatives using locking wire, it is required that a hole 2mm in diameter be drilled through two sump bolt head, one that fits on each side of the engine. It is further required that two cam cover studs/bolts be drilled that fit on either side of the cylinder head.

16.2 Balancing

16.2.1 Only the following moving parts may be balanced: crankshaft, flywheel, pressure plate, front pulley, pistons, connecting rods and the layshaft. Refer to the respective articles regarding restrictions.
16.3 The removal of any weight for balancing purposes must not weaken or compromise the integrity of the component being balanced.

16.4 Camshaft

16.4.1 Camshafts will only be supplied by SV SA approved supplier (at this point Van Der Linder Developments). A maximum of a 288 cam as supplied by the approved supplier will be allowed. A standard VW original cam or a small than 288 cams may also be used.
16.4.2 Cam timing may only be altered by means of an adjustable camshaft pulley Vernier pulley)
16.4.2.1 The duration between cam lobes may not be altered in any way.
16.4.3 Cam measurement

16.4.3.1 All cam dimensions to be standard as supplied by the association's official supplier. No modifications are allowed.
16.4.3.3 All camshaft measurements to be done using a Cam Doctor Analysis System (except common measurements "A" and "B" where a micrometre is to be used).
16.4.3.4 Camshaft checking height set at 1mm.
16.4.3.5 Only standard hydraulic lifters may be used.
16.4.3.6 All other dimensions (journal thickness etc.) to remain as per VW original camshaft.
16.4.3.7 All components in the operating train gear, their dimensions, tolerances, quality, and design must be standard production, especially in regard to their operating geometry relative to each other.
16.4.4 The cam followers may not be modified in any respect.

16.5 **Cylinder Head and Block**
16.5.1 The cylinder heads may be ported, flowed, and polished.
16.5.2 The cylinder head may be skimmed. In this regard see Article 16.3.
16.5.3 The location of the inlet and exhaust port holes may be port matched with the relevant manifolds.
16.5.4 The valve head protrusion into the combustion chamber for the 1800cc head shall be a maximum of 1,5mm and a minimum of 0,2mm.
16.5.5 Damaged or worn valve guides and valve seat inserts may be replaced or relined with any material.
16.5.6 Maximum inlet valve seat insert throat diameter measured at the apex of the 45° seat angle, and the 70° throat angle.
16.5.7 Maximum exhaust valve seat insert - throat diameter measured at the apex of the 45° seat angle and the 90° throat angle.
16.5.8 Inlet and exhaust port sizes may be port matched, ported, and polished.
16.5.9 material may not be added on to the valves to lengthen it.
16.5.10 Exhaust valve head diameter (maximum) must be as per manufacturers original specifications.
16.5.11 Inlet valve head diameter (maximum) must be as per manufacturers original specifications.
16.5.12 Valve springs and their retainers must be standard VW components or the equivalent replacement parts.
16.5.13 Non-standard camshaft covers are permitted provided that they do not improve the performance of the engine and are first approved by the SV SA prior to fitting.
16.5.14 The oil orifice on the front camshaft bearing saddle may be elongated in the direction or rotation of the camshaft, to improve lubrication.
16.5.15 Re-shaping of the cylinder head combustion chamber is not permitted; however, it may be polished.
16.5.16 The dimensions of the standard block from the crankshaft centre line to the top face of the block must be 218.0mm ± 0.1mm or as per manufacturers original specification.
16.5.19 The use of a vernier cam pulley and a maximum cam size of 288 as supplied by Van Der Linde Developments is allowed. A standard OEM hydraulic cam shaft or a small cam than a 288 is also allowed.
16.5.19 No cross-flow cylinder heads are allowed.
16.5.19 No aluminium blocks are allowed at all.
16.5.20 Any driver wishing to apply for any exemption from any rules and regulations must apply in writing to the Chairman of the association prior to the car being entered for any official SV SA event.

16.6 **Pistons and Rings**
16.6.1 Only standard VW pistons or their equivalents will be allowed.
16.6.2 For the purposes of balancing, material may only be removed from the following internal surfaces of the piston: Below the lowest point of the gaugeon pin housing; From the underside of the piston crown. One piston must remain untouched for balancing purposes.
16.6.3 See Art. 16.3.4 for equalising of volumes.
16.6.4 The measurement of the highest squish landing protrusion of the cylinder block, with the piston at TDC, must not be greater than 0.5mm ± 0.3mm. This measurement may be taken in either of the following ways:
16.6.4.1 The mean of two measurements taken at the widest point of one landing. The piston may be rocked for sequential measurement.

16.6.4.2 By placing a flat bar with a machined surface over the landings of the piston and then winding the piston down until the bar is resting on the cylinder block. Then place a dial gauge in the centre of the bar, zero the gauge and wind the piston up to TDC.

16.6.5 The outer profile of the piston may not be altered in any way.

16.6.6 Gurgaon pins may be fixed in position by either circlips or Teflon buttons.

16.7 **Connecting Rods**

16.7.1 Connecting rods shall be standard VW components.

16.7.2 Minimum mass of a connecting rod assembly, including bolts, nuts and small end bearing but excluding big end bearing shells shall not be less than 627 grams for a machined assembly.

16.7.3 Machining of a connecting rod assembly will only be allowed on the circumference of the small end and off the big end cap. No metal may be removed from the shank of the connecting rod. Polishing is prohibited.

16.8 **Crankshaft**

16.8.1 The crankshaft shall be the standard VW component.

16.8.2 The profile may not be altered except for spot machining to achieve balancing. The crank shaft may be ground to cater for damage or wear.

16.8.3 The width of the connecting rod bearing journals cannot be altered.

16.8.4 The groove type main bearing shell halves are permitted on both upper and lower bearing saddles.

16.8.5 The crankshaft journals may be hard chromed or nitride to improve wear characteristics.

16.9 **Lubricating System**

16.9.1 The standard manufacturer supplied oil pumps must be used and may not be modified, except that the relief valve springs may be modified to change oil pressure, and the fixing of the retaining plate is free.

16.9.2 The oil pump pick-up may be changed or modified.

16.9.3 Baffles and/or a windage tray may be fitted.

16.9.4 An external oil cooling system may be fitted were convenient. Any suitable fittings may be used to house the oil filter and the external oil cooling system.

16.9.5 An additional oil drain plug may be fitted to the sump.

16.9.6 The fitting of an oil temperature-sensing device is free.

16.9.7 The crankcase breather pipe may be altered but shall be connected to an oil catch tank of at least one litre capacity. The catch tank shall be clearly visible and easily accessible to be checked for oil content and firmly secured. This catch tank must be made of Aluminium or Mild Steel.

16.9.8 Any make or type of lubricant commercially available in South Africa through a recognised stockist may be used.

16.9.9 The use of high-pressure oil hoses and fittings is compulsory.

16.9.10 Oil filter bodies shall be locked or clamped to prevent them coming loose.

16.9.11 Sump plugs must be wire-locked.

16.9.12 The larger capacity standard sump off current model VW Golfs, Polos and Jetta's, is permitted.

16.10 **Electrical**

16.10.1 An alternator (12v) may be fitted.

16.10.2 The ignition system shall comprise any single coil with either a contact breaker system as found on the VW Golf range, the Passat, Jetta, or the standard electronic ignition system as used by the manufacturer.

16.10.3 The vacuum advance mechanism on the distributor may be removed, and the advance springs and weights may be modified. A standard distributer as used in the AFX engines may also be used.

16.10.4 The VW Polo, Jetta3 or Golf 3 solid shaft-type distributor, or its equivalent, may be used together with a Dictator STD ECU system.

16.10.5 Only a 3pin coil with a built in TCI unit must be used as was fitted in the golf 1,2 and 3, Polo or Jetta AFX engine units.

16.10.6 A 12-volt battery system shall be used.

16.10.7 A Circuit Breaker Master switch shall be installed in the main positive battery lead as per SSR 2 vii a.

16.10.8 The battery must be secured in a fixed and firm manner.

16.10.9 Any form of non-standard engine electronic management system, except as listed above, is prohibited and no form of electronic pit to car, or car to pit, communication will be permitted while the car is on track.

16.11 **The fuelling system**

16.11.1 The Volkswagen OEM MP9 fuel injection system may be used. The MP9 fuel injection system may not be modified in any respect except as stated below.

16.11.2 Only standard fuel injectors as used with the standard MP9 system may be used.

16.11.3 The fuel rail may be modified to accommodate the use of an N9 3 or 4 bar filter/regulator.

16.11.4 The ports on the intake manifold may be port matched and polished to match with the ports on the cylinder head.

16.11.5 Air cleaners and air boxes are unrestricted.

16.12 **Inlet Manifold**

Only the standard MP9 throttle body and intake manifold may be used. The manifold may be polished and port matched.

16.13 **Cooling System**

16.13.1 Heat exchangers (Radiators) are unrestricted.

16.13.2 The overflow pipe from the cooling system must be directed into a separate catch tank of at least one litre capacity.

16.13.3 Fenner or equivalent tooth belt taper lock couplings and pulleys may be used to drive the water pump from the crankshaft and the standard "V" belt pulleys may be removed.

16.13.4 If "V" belt pulleys are retained, Jockey pulleys may be fitted to tension the "V" belt. Any "V" belt and pulley combination may be utilised.

16.13.5 Coolant / water tubes including radiators are permitted within the driver's compartment, provided they are totally screened from the driver by aluminium or fibreglass.

16.13.6 Chassis tubes may NOT be used as a means of ducting coolant / water.

16.14 **Exhaust System**

16.14.1 Any exhaust system may be fitted, but the following shall apply.:

16.14.1.1 The lower edge of the outlet orifice/s of the exhaust pipes shall not be less than 10cm nor more than 60cm from the ground.

16.14.1.2 The outlet orifice/s shall not protrude more than 25cm beyond the rear of the transmission selector housing bush and may not deviate more than 22 degrees from the horizontal axis.

16.14.1.3. Must comply with GCR 245 "Silencing of Vehicles".

17. SV CAR DIMENSIONS

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17.1 Overall length – see Art. 2.1

17.2 Wheelbase – see Art. 2.3

17.3 Front body overhang – see Art. 2.2

17.4 Front track – see Art. 2.4

17.5 Rear track – see Art. 2.4
17.6 Roll-over bar clearance to driver's helmet – see Art. 3.7.2 and 3.8.4
17.7 Exhaust length – see Art. 16.14.2