



NATIONAL MOTORSPORT FEDERATION WITH INTERNATIONAL FEDERATION AFFILIATION

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1660 MODIFIED CLASS (SS) TAR 2023

Introduction:

Competitor age restriction: Competitors may compete in this class from the Year in which they turn 14. Please note that whilst this is an 8v class the utilization of 12v and 16v engines will be investigated during the 2023 and 2024 seasons.

SS 1.

Eligibility of vehicle and bodies:

- 1.1** Any saloon, GT or Coupe type car or body replicated, semi or full space framed version may be used, except for station wagons and panel vans which are prohibited.
- 1.2** LDV's bodies may be used, with the following limitation which will not be negotiated:
- 1.3** Any LDV body which can carry a maximum load of 650kg, it follows that the Golf Caddy being the maximum which can be used.
- 1.4** Front and rear wheel drive vehicles are permitted.
- 1.5** Bodywork must be centrally placed on the chassis and may not be offset.
- 1.6** Any drive train, cooling, axle or brake component may be used provided the donor vehicle complies with the type of car or body.

SS 2.

General Racing Modifications

- 2.1** **The following listed modifications are free**
- 2.1.1** Flywheels (including flexplates)
- 2.1.2** Pressure Plates
- 2.1.3** Clutches
- 2.1.4** Pulley sizes and types including adjustable Vernier pulleys
- 2.1.5** Pistons and piston rings with exception of forged pistons which are not permitted
- 2.1.6** Connecting rods from various models of road going cars
- 2.1.7** Crankshafts from various models of road going cars
- 2.1.8** Compression ratios
- 2.1.9** Bore and stroke ratios
- 2.1.10** Valve and tappet covers are free with the condition that the cover does not form part of the valve train.
- 2.1.11** Sumps
- 2.1.12** Fuel pumps
- 2.1.13** Fuel pressure regulators
- 2.1.14** Camshafts
- 2.1.15** Dellorto and Weber carburetors parts may be interchanged
- 2.2** **The following listed modifications are not permitted**
- 2.2.1** The method of camshaft drive may not change
- 2.2.2** Dry sump systems

SS 2.6

Ignition/Engine Management

- 2.6.1** Any Standard distributor may be used.
- 2.6.2** A Standard electronic ignition may be fitted
- 2.6.3** EFI restricted to Dictator, Spitronics and Power Mods Units only
- 2.6.4** EFI Engine Map may not be adjusted from within the cockpit

2.6.5	Any aftermarket Spark Booster may be fitted to engines using carburetors and distributor type ignitions.
SS 2.7 2.7.1 2.7.2	The following items are permitted: Electronic Water Pumps ARE permitted. Roller rockers ARE permitted.
SS 3. 3.1 3.2 3.3 3.4	Brakes: 3.1 Restricted to 4,2 and single pot brake calipers from road going vehicles only. 3.2 4 pot calipers may only be off the Toyota Hilux Bakkies only. 3.3 Master cylinders are free. 3.4 Aftermarket pedal boxes may be used.
SS 4. 4.1 4.2 4.3 4.4 4.5	Dimension and Weights: 4.1 Weight of the car including competitor shall be a minimum of 800kg weighed pre, during or post event with no tolerance permitted. 4.2 Wheelbase of the vehicle must be within 50mm of the original manufacturers prescribed specifications. 4.3 All four wheels of the vehicle must fit within the body of the vehicle, which determines the maximum dimensions. 4.4 Maximum width of the vehicle is 2000mm. 4.5 All 4 wheels of the vehicle must fit within the body of the vehicle which determines the maximum dimensions.
SS 5. 5.1 5.2 5.3 5.4 5.5 5.6 5.6.1 5.6.2 5.6.3 5.6.4 5.6.5 5.6.6 5.7 5.7.1 5.7.2 5.8 5.9 5.10 5.11	Engine: 5.1 Donor Engines are free provided they are commercially available and do not have sport type applications 5.2 Engine displacement may not exceed 1660cc 5.3 Only 3 or 4-cylinder 4 stroke engines permitted 5.4 Engines restricted to 2 valves per cylinder 5.5 Turbo or super charging is not permitted 5.6 Fuel injection systems are permitted 5.6.1 Injectors are free but limited to one injector per cylinder only 5.6.2 Single throttle body on Plenum system may not exceed 70mm 5.6.3 The Plenum design is free. 5.6.4 Individual throttle bodies (4) are permitted and may not exceed 43mm in size 5.6.5 Side Draft Carburetors may be modified to be a throttle body but may not exceed 43mm 5.6.6 Fuel rails free Slide type Throttle Bodies are not permitted 5.7 Side Draught carburetors restricted to 40mm 5.7.1 Choke tubes sizes free 5.7.2 All modifications to the carburetor and jets are permitted provided the carburetor does not measure more than 40mm at the throat and butterflies. 5.8 Ram air system from positioning of ducting and air filter systems is permitted 5.9 Fasteners on engines free 5.10 Remote oil filter housings and aftermarket oil filters are permitted. 5.11 Oil coolers are permitted.
SS 6. 6.1	Engine positioning: - Rear wheel drive and Belly Plate 6.1 The rear face of the engine is where the bell housing and the engine meet will not be more than 600mm back of Centre line of the front wheels.
6.2 6.2.1	Belly plate 6.2.1 A steel or aluminium belly plate must be installed between the chassis rails to cover the area under the engine and gearbox. This belly plate must be secured using rivets or bolts. Cable ties and Tex screws are not permitted. It must be effective in containing any fluid that may drip out of the engine and gearbox.

SS 7.	<u>Exhausts:</u>
7.1	All piping shall be secured with saddles, preventing exhaust pipes from coming free in the event of it breaking off.
7.2	Exhaust tail pipes passing out the side of the vehicle may only do so at a maximum height of 450mm and be level or downward facing, measured from the top of the pipe to the ground.
7.3	Branches are permitted.
SS 8.	<u>Fuel</u>
8.1	Only Methanol may be used without any performance enhancing additives.
8.2	Lubricating additives may be added to Methanol and must be reflected in the competitors sign on sheet by listing the additive and mix ratio. These specific products are restricted to Silkolene Castorene R40S, Liquid Power Methanol Lubrication, Top Lube Alcohol Fuels Lubrication and Castor Oil
8.3	M5 Methanol is specifically excluded.
8.4	It is highly recommended that Methanol using vehicles do have fire extinguishers fitted to the competitor compartment, with all safety measures taken when fitting extinguishers, preventing the dislodging in an event of impact.
SS 9.	<u>Steering and Suspension:</u>
9.1	Only commercially available differential housings, steering racks and steering boxes or quick ratio versions thereof as fitted to road going vehicles.
9.2	Suspension design is free but limited to either commercially available suspension uprights as fitted to vehicles described in item SS 1. above or locally fabricated components.
9.3	Adjustable spring platforms may be fitted.
9.4	Competition springs are permitted.
9.5	The use of rose type joints are permitted.
9.6	Only South African made Gabriel, Armstrong, Monroe and KYB shock absorbers may be used.
9.7	The total limit permitted is 4, with one per corner.
9.8	No remote shock absorber reservoirs may be used.
9.9	Power steering is permitted.
9.10	Suspension may be designed with an offset.
9.11	A maximum of 5 links may be used on the rear suspension.
9.12	Wish bone type suspensions are allowed on space frames or semi space frames.
9.13	Front Wheel Drive Spaceframe cars may only use a beam rear axle.
SS 10.	<u>Transmission:</u>
10.1	Only local differentials and gearboxes shall be permitted.
10.2	No straight cut boxes permitted.
10.3	Gear ratios are free.
10.4	Only lock differentials permitted.
10.5	Limited slip differentials not permitted.
SS 11.	<u>Wheels and Tyres</u>
11.1	Restricted to the following types of tyres
11.1.1	- Dunlop FM800A 195/15 82V
11.1.2	- Continental Premium Contact 5 195/15 82V
11.1.3	- Hankook Ventus V12 Evo 2 195/15 82V
11.1.4	- Apollo Alnac 205/13 87H
11.2	Tyre profiles are free
11.3	Specific championship regulations to determine tyre allocations.
11.4	Competitors may not use more than 6 tyres an event
SS 12.	<u>Wings</u>
12.1	Wings are optional
12.2	Wing designs, positioning and sizes are free with the following restrictions
12.3	Wing may not protrude beyond the side of the vehicle.

12.4	Wing end plates may not exceed 500mm x 500mm and may be offset
12.5	Vehicles restricted to one wing only
12.6	Two tier wings are permitted provided they are contained within the prescribed wing endplates Highest part of the wing may not protrude more than 300mm above the highest part of the original roof when the vehicle is on level ground (wing endplates excluded)
12.7	Wing may not protrude more than 200mm behind the rear bumper, when the rear bumper is mounted correctly (wing endplates excluded). Where Competitors mount rear bumpers further back to exploit the rearward positioning rule the Officials will deduct the measurement of the offset difference of the misaligned bumper by comparing it to vehicles where the bumper is mounted correctly.