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MSA NATIONAL STANDING SUPPLEMENTARY TECHNICAL REGULATIONS
MSA4

VERSION 5

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REVIEW AND AMENDMENTS

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

AMENDMENT RECORD

Modified SSR / ART	*Date applicable*	*Date of Publication*	*Clarifications*
ART 4.1.2	08.10.2026	08.10.2026	Regulation amendment
ART 4.1.3	08.10.2026	08.10.2026	Regulation amendment
ART 9	08.10.2026	08.10.2026	Regulation amendment
ART 13	08.10.2026	08.10.2026	Regulation amendment
Art 9.1.5	07.08.2026	07.08.2026	Regulation added
Art 8.11	19.06.2026	19.06.2026	Timing Modules
Art 16.1.7	19.06.2026	19.06.2026	Fuel Filter
ART 4.2.6	11.04.2026	11.04.2026	Additional Wording
ART 4.2.7	11.04.2026	11.04.2026	Additional Wording

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INTRODUCTION

All MSA4 cars participating in the 2026 Investchem MSA4 South African National Championship must be MSA4 WCT chassis cars fitted with the VW 1000cc 3cyl Turbo EA 211 4 valve engine as supplied and sealed and the chassis and components must remain as manufactured by WCT Engineering. No modifications are allowed. Cars must comply with the following documents in their entirety at all times during an event:

- Car, engine and transmission as per MSA4 homologation documents;
- 2026 SA National MSA4 Championship Sporting Regulations (the Sporting Regulations);
- and these Technical Regulations (the Technical Regulations).

Unless a component is specified as adjustable or a component is specified as an alternative or option part then the component must remain as originally supplied by its manufacturer and or in accordance with the vehicle homologation(s) (Refer Art 2.1.1).

Any dimensions, values, figures, materials and / or designs mentioned and / or detailed in these Technical Regulations, are for the information of the user and nominal values are generally stated. This information may be subject to manufacturing tolerances and specifications however there is no generic manufacturing tolerance value capable of application to any component in the car.

In the event of eligibility confirmation being required the original manufacturer of the part or component may be consulted for final verification of eligibility. Unless specifically permitted by the Regulations it must be assumed that unless it says you can then you may not.

ARTICLE 1: DEFINITIONS

Note: definitions from the Sporting Regulations also apply.

1.1 **MSA4 Car**

Four-wheel single-seater racing car as homologated and fitted with the South African National Championship specification performance equalised 1000cc EAc211 4V, VW turbo petrol engine.

1.2 **Bodywork**

All entirely sprung parts of the car in contact with the external air stream except the rollover structures and the parts definitively associated with the mechanical functioning of the engine transmission and running gear. Airboxes, radiators, intercoolers and engine exhausts for the purposes of these Regulations are part of the bodywork.

1.3 **Reference Plane**

The reference plane is the plane passing through the upper surface of the four contact pads of the scrutineering platform when the car is sitting on all these four contact pads through the four corresponding holes in its underneath skid block.

1.4 **Date of Car Build**

Cars built after 1st January 2025 (or 1.1.xx) is interpreted to indicate cars built for the season indicated as shown by the year code (“xxxx” or “xx”). Consequently, cars built to the new or revised specification but finished before that date will still be defined as new season cars.

1.5 **Sprung Suspension**

The means whereby all complete wheels are suspended from the body / chassis unit by a car springing medium.

1.6 **Wheel**

Flange and rim.

1.7 **Complete Wheel**

Flange, rim and tyre.

1.8 **Induction System**

All the elements between the inlet valves in the cylinder head and the external side of the air filter.
The only air filter permissible is WIX MSA4 filter (Part number 25-1091504).
The mandatory fabricated aluminium tube (outside diameter ("OD") 50.80mm and length of 550mm) and silicone hose between the turbo and air filter must be fitted.

1.9 **Ceramic Materials**

(e.g. AL2O3 SiC B4C Ti5Si3 SiO2 Si3N4) – These are inorganic non-metallic solids.

1.10 **Composite**

Material formed from several distinct components, the manufactured combination of which provides the whole with properties which none of the components taken separately possesses. High strength composites include components made with carbon and or aramid fibres.

1.11 **Mandatory Components**

Those components specified by VW, MSA4 or WCT Engineering which must be used and remain unmodified.

ARTICLE 2: REGULATIONS

2.1 Changes to car design

2.1.1 General

The complete car is divided into three types of parts.

Type 1: These parts must be supplied by the manufacturer and used exactly as supplied. Repairs may be carried out only by the manufacturer.

Type 2: These parts are Type 1 parts with specific restrictions. Only the modifications indicated in the homologation may be carried out. Repairs are allowed only in the range described in the homologation.

Type 3: These parts are unrestricted provided that they are used as designed by the manufacturer and do not fulfil any additional function.

The adding of colour or thin adhesive film up to a thickness of 0.5mm is not considered as a modification provided that the colour or film fulfils only an optical function.

2.1.2 Standard mounting parts

Standard mounting parts such as screws, nuts, bolts, washers and lock washers are considered as Type 3 parts unless specifically mentioned in the homologation. They may be replaced with equivalent or superior standard parts.

The thread type, size, length and pitch must remain the same.
In case the connection remains intact and the standard mounting part doesn't fulfil any additional functionality, the thread type and pitch are free and the size and length may be increased.

The use of locking wire is permitted.

Any type of standard mounting part which has an influence on the car set-up is considered as a Type 1 part unless specifically mentioned in the homologation.

Only Type 3 washers may be removed.

Washers may be added only for facilitating and improving mechanical installation. They may influence the set-up of the car only when specifically mentioned in the homologation.

Note: For the Championship Type 1, 2 and 3 parts may be amended by official notification (revised regulations, circular or bulletin).

2.2 Modifications to parts

2.2.1 Any VW or MSA4 or MOTEC Electronics are standard parts or mandatory MSA4 parts. They must be fitted and must not be modified / polished / machined or have any alteration whatsoever unless expressly permitted.

2.3 Permanent compliance with Regulations

Cars must comply with these Regulations in their entirety at all times during an Event and Official Testing.

2.3.1 Changes made for safety or clarification reasons may come into force without prior notice. In this instance MSA acting through the MSA4 Organisers may authorise and / or remove and / or modify specific technical regulations at any time during the Championship for immediate effect where necessary.

2.4 Controlled Components

2.4.1 The MSA4 Organisers reserve the right to replace any component with a controlled sealed alternative. The replacement must not be removed or replaced without prior written authorisation from the Championship MSA4 Organisers' technical officials. Any item that has a seal fitted must not be replaced without written authorisation and the seal must remain intact at all times. Written authorisations have regulatory value therefore the absence of a prior written authorisation as envisaged in these regulations shall be a breach of these regulations.

2.5 Repairs and replacements

2.5.1 Major repairs: Any repairs to the survival cell, driver safety systems, roll structure, nosebox, side intrusion panels or rear impact structure must be carried out in accordance with the manufacturer's specifications and in a repair facility approved by the manufacturer and registered with MSA4 (Championship Chassis Repairer). WCT Engineering competitors will be obliged to show the MSA4 Organisers, via the Investchem MSA4 Technical Consultant ("TC") (or the Assistant TC / Specialist Scrutineer if there is a conflict of interest) the original certificate of any repair. These must be registered in the car's Scrutineering Log Book during initial scrutineering at the next event or test following the repair whichever occurs first.

2.5.2 Minor repairs: Repairs to non-structural Type 1 or Type 2 components such as side pods or main bodywork may be made by the competitor provided the damage does not affect an area greater than 10% of the total surface of the part or 150mm at its maximum dimension whichever is less. The original shape and dimensions and materials must be maintained. In all other cases damaged components must be replaced by new ones or submitted to the original supplier for repair.

ARTICLE 3: CHASSIS

3.1 Registered Chassis

3.1.1 The Investchem MSA4 TC will maintain the list of MSA4 registered WCT chassis that are permitted to compete in the Championship. No team / entrant may run more than four chassis in the Championship unless agreed in writing by the MSA4 Organisers.

3.2 Vehicle Scrutineering Logbook

3.2.1 An MSA (Motorsport South Africa) MSA4 Vehicle Scrutineering log book must be obtained for each chassis and must accompany that chassis at all times except when on track.

ARTICLE 4: BODYWORK AND DIMENSIONS

4.1 Dimensions

4.1.1 Cars must conform to the dimensions laid out in the MSA4 Technical Specification Document at all times.

4.1.2 Front Track: ~~1800.00mm +/- 5.00mm~~ **not to exceed 1835.00 mm +5mm**

4.1.3 Rear Track: ~~1900.00mm +/- 5.00mm~~ **not to exceed 1915.00 mm +5mm**
Measured at the bottom of the tyres at the bulge, in race trim, including driver, at race ride height on a flat level surface such as the scale of the day. A measuring jig may be made available. The TC may allocate a suitable place on the day

4.1.4 Wheel Base: 2750.00mm +/- 5.00mm

4.1.5 A tolerance of 5.0mm to these dimensions will be allowed.

4.2 Wings

4.2.1 Front and rear wing adjustment can only be made within the parameters stated in the MSA4 Technical Manual. Front wing gurneys must not be removed or added or altered from the supplied form.

4.2.2 Front and rear wings and wing end plates must conform to as supplied. No modifications to mounting / adjustment holes and brackets allowed.

4.2.3 Front wing main plane may not be lower than 60.0 mm from the ground with driver in the car. This will be measured in Parc Ferme at the weighbridge.

4.2.4 For all sessions each car must have its front and rear wings securely fitted. Should the entire front and / or rear wing element become fully or partially detached or become loose or unstable for any reason the driver must come into the pits for a repair / replacement at the earliest opportunity. With missing or damaged wing end plates a car may continue providing it is not deemed unsafe by race officials.

4.2.5 Competitors are reminded that the car weight is determined by the car as it finishes the session or race, therefore a missing wing may result in the car being underweight.

4.2.6 The rear wing top element may not protrude rearwards, more than 680mm +/- 5.0mm from the rear axle horizontal centreline of the gearbox

4.2.7 The rear wing end plate at the top of horizontal section must remain horizontal within +/- 2 degrees when the car is on the ground

4.3 Permitted changes to the original specification

Side pod air ducts may be partially covered with adhesive tape only or on the forward face of the radiators for the sole purpose of optimising temperatures. Any such tape used must not be visible from outside of the side pod.

4.3.1 In addition to the above, tape or adhesive film may be applied to fasteners or any component surface. In all cases it must be clear that the tape has no function other than securing the fixings to provide colouring or to protect the parts to which it is attached and the part numbers and holograms must at all times remain visible to the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer)."Apart from securing fasteners or unless expressly authorised in these Technical Regulations or Technical Bulletins it is not permitted to apply tape to cover a junction or gap between abutments, components, holes or cavities.

4.3.2 Unless otherwise specified any component inside the bodywork may be fully or partially covered with thermal insulation material providing this insulation has no other function than protecting components against a direct source of heat. The thermal insulation material must be applied to the component it is protecting. Permitted maximum total uncompressed thickness of thermal insulation materials applied is 5mm. The following items are specifically prohibited from being fully or partially covered with thermal insulation material:

a) Turbocharger

b) Airbox top section

4.3.3 Unless otherwise specified, any component inside the bodywork can be covered with rubbing protection material and / or electromagnetic protection material providing this rubbing protection material and / or electromagnetic protection material has no other function than protecting components against chafing and / or electromagnetic perturbations.

4.3.4 Providing their sole purpose is the protection of the retaining wheel cables it is permitted to add covers to the leading edge or trailing edges of the front and rear wishbones. There must be no aerodynamic function.

ARTICLE 5: WEIGHT

5.1 Minimum Weight

5.1.1 The minimum weight of the car plus driver with all required personal safety items at any time during all events and official testing is 570kgs.

5.1.2 The minimum weight must be taken with the car in the condition in which it crosses the finishing line and enters Parc Fermé or at any time during the event and / or official testing.

5.1.3 It is mandatory for all competitors to attend any pre-race driver weighing wearing their full race attire and carrying their helmet and Frontal Head Restraint at the time / venue defined in the Pre-Event Information Bulletin.

5.2 Ballast

5.2.1 Ballast must be attached using the specific fixing points detailed in the MSA4 Technical Regulations. Ballast must be fitted securely under the driver's seat or on the floor between the fire extinguisher and the pedals.

5.3 Ride Height

5.3.1 The minimum ride height (clearance) with driver in the car is Front : 40.00mm and Rear 48.00mm. This is measured between the underside of the aluminium floor mounted to the chassis and the ground. This will be measured by the MSA4 TC in Parce Ferme, at the weighbridge or at a designated place at race events.

ARTICLE 6: ENGINE

6.1 Engine eligibility

6.1.1 The only permitted engine (which for the purposes of these regulations includes all engine ancillaries) is the Investchem MSA4 Championship specification VW 3 Cyl 1000 cc 4 valve EA 211 engine with Turbocharger. Nominal bore 72.0mm and stroke 75.60mm and supply-managed and equalised by the Championship Engine Supplier –D.A.W. Racing. All teams / entrants must enter a Technical and Support Services Agreement (TESA) with Investchem MSA4 for the purposes of maintenance of the engine(s) supplied by D.A.W. Racing to the team / entrant. Any breach of that Agreement by the team / entrant will be treated as a breach of MSA's General Competition Rules.

6.2 Engine modifications

6.2.1 Any revision, repair or change to the engine can only be carried out by or under the supervision of D.A.W Racing.

6.2.2 Once supplied, the engine and ancillaries supplied with it may not be modified in any way. No rework may be carried out on any component unless specifically authorised by the regulations. The engine and associated parts must remain exactly as produced and supplied by VW Motorsport and / or D.A.W Racing unless expressly detailed in these regulations or with the written permission of the Investchem MSA4 TC after consultation with D.A.W. Racing.

ENGINE USAGE will be logged per hour in Motec Logger and monitored by the MSA4 TC and charged for testing and racing as stipulated in the Investchem MSA4 2026 Engine Contract.

6.3 Engine sealing

6.3.1 The engine must remain sealed as originally applied by D.A.W. Racing. Other seals may be affixed by the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer)

6.3.2 No engine may be used in any event or official test if unsealed or if its origin is not recognised by the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer) or MSA4 Organisers.

6.4 Turbocharger

6.4.1 D.A.W Racing reserves the right to independently test and seal any and all turbocharger assemblies. The turbocharger may be exchanged at any time (including the time allocated for official testing) at the request of the Investchem MSA4 Technical Consultant ("TC") . Only the MSA4 appointed engine builder may remove or replace the turbochargers. These turbochargers are locked and sealed. Competitors may not remove the turbochargers from the engine. New turbochargers or centre cores may be replaced during the 2026 season at the engine builders / Investchem MSA4 TC discretion.

6.4.2 New turbochargers may be replaced upon the competitor's request, however this will be for the competitor's account. Any turbocharger that is damaged by a foreign object will be replaced at the competitor's expense. The cost of new turbochargers and cores are stipulated in the MSA4 Engine Contract.

6.5 Clutch

6.5.1 The only clutch permitted is that supplied for the Championship by Investchem MSA4. Service replacements must be sourced from Investchem MSA4.

6.5.2 The minimum weight of the clutch cover shall be 3.660kg (excluding clutch cover bolt).

6.5.3 The minimum weight of the complete steel flywheel including ring gear and locating dowels is 4.20kg.

ARTICLE 7: OIL SYSTEM

7.1 Engine oil

7.1.1 The only engine oil permitted for all events and official testing is MOTUL 5W40 which must be obtained from Investchem MSA4. Wicks Oil Filters (Part number WL7203) are supplied free of charge.

ARTICLE 8: ELECTRICAL SYSTEMS

8.1 Modifications

8.1.1 Modifications to the original electrical system are forbidden.

8.2 Battery

8.2.1 The battery must be capable of demonstrating at least 3 engine starts without external recharge or assistance at any time during official testing, free practice, qualifying, races or in Parc Fermé.

8.2.2 A supplementary external source of energy temporarily connected to the car may be used to start the engine whilst in the pit area or on the grid prior to the formation lap but cannot be used whilst checking. See Art 8.2.1 above.

8.3 Alternator

8.3.1 The alternator must be driven at all times whilst the engine is running. The alternator must be connected to the vehicle electrical system and battery. The installation shall ensure that the charging output from the alternator is available at all times whilst the engine is running.

8.4 Engine Control Unit (ECU)

8.4.1 It is prohibited to modify the software contained in the Motec M122 ECU.

8.4.2 Competitors will not be able to access the Motec ECU. ECU is fitted with a security code.

8.4.3 The Investchem MSA4 TC is the only person able to access the ECU with the security code.

8.4.4 Competitors who try to access the Motec ECU will cause a lock on ECU and the competitor will be liable to pay the cost of a NEW Motec ECU.

8.4.5 Unless officially requested by the Investchem MSA4 TC the ECU must be set-up to record the standard logging parameters as supplied in the ECU or by the Investchem MSA4 TC without deletions.

8.4.6 The ECU diagnostic connector must be positioned in an accessible position on the outside of the vehicle and mounted solidly without obstruction allowing the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer) free access to it at all times on demand. The free access location must allow for the driver to be seated in the car and fully prepared to take part in the event / races.

8.4.7 The ECU may be exchanged or electronically interrogated and downloaded at any time (including the time allocated for official testing) upon the instruction of the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer) Penalties will be applied should this not be possible at the time of instruction for any reason.

8.5 Wiring harness

8.5.1 No rework or modification to any loom is permitted with the exception of replacing damaged connectors (like for like and with the prior written permission of the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer) who may be present while such substitution is effected and thereafter interrogate the system for conformity).

8.6 Ignition system

8.6.1 The standard production spark plug NGK VW AG must be used with the electrode tip placed in the standard position in the combustion chamber.

8.6.2 The standard production coil-on-plug units must be used and must not be repositioned. It is prohibited to use any other method or component to trigger, distribute or time the ignition or fuel injection.

8.7 Sensors

8.7.1 All standard production VW engine sensors which have any influence whatsoever on the operation of the engine must be retained and be located in the standard position and in working order. It is not permitted to reposition positional sensors. It is not permitted to change the strength or form of any of the sensor signals to or the outputs from the ECU. For the avoidance of doubt this means any / all additional sensors are prohibited as are any modifications to the standard production ones for this engine. The following standard sensors must be fitted and connected to the ECU to ensure a signal is transmitted and received as intended at all times:

- Crankshaft Position Sensor (CPS) VW
- Camshaft Position Sensor VW
- Exhaust Camshaft Position Sensor VW
- Throttle Position Sensor (TPS) – part of the Electronic Throttle Body (ETB) VW
- Knock Sensor (1 off) VW
- Engine Coolant Temperature (ECT) Sensor Bosch
- Air Charge Temperature Sensor (ACT) / Manifold Pressure (MAP) Sensor VW
- Pre-Throttle Pressure Sensor VW
- Universal Exhaust Gas Oxygen (UEGO) Sensor Bosch
- Fuel Pressure Sensor Bosch 0281 006 119
- Oil Pressure Sensor VW
- Direct Injection Fuel Pressure Sensor Bosch 0281 006 119
- Direct Injection Pump VW 04E 127 026 BH
- Direct Injection Injector VW 0261 500 475

- Engine Oil / Gearbox Temperature Sensor Bosch 0280 130 026
- Coolant Pressure Sensor • Bosch • 0281 006 119
- Gear Speed Sensor • Bosch • 0281 002 728
- Brake Pressure Sensor • Bosch • 0281 545 040
- Clutch Pressure Sensor • Bosch • 0281 545 040
- Inlet Manifold Boost Pressure / Temp Sensor VW AG 0261 230 566
- Inlet Throttle Body Pipe Boost Pressure, Temp Sensor VW AG 4C 906 051
- Gear Shift Accumulator Pressure Sensor Bosch 0281 545 040
- Ignition Coil VW AG 04E 905 110 P

8.7.2 The vehicle speed sensors is via GPS Speed and connected to the ECU.

8.7.3 The mandatory gearbox sensors must only be connected to the ECU via the chassis wiring harness.

8.7.4 The gear shift switches in the steering wheel paddles must only be fitted and connected to the ECU via the chassis wiring harness.

8.7.5 The mandatory lap GPS with co-ordinates must be fitted and connected to the ECU via the engine wiring harness. The GPS unit must be positioned such that it can receive the signal.

8.7.6 It is the competitor's responsibility to ensure that the lap timing system is working at all times during all event's practice sessions, qualifying and races including fully functional beacon signal and no missing / incorrect laptimes in the recorded ECU data.

8.7.7 A clutch pressure sensor is permitted. The sensor must be the Bosch sensor part. no : 0281 545 040

8.8 Electronic dashboard

8.8.1 The specific Motec C125 Dashboard / Logger + OMP steering wheel + Paddle Levers must be fitted and connected to the ECU via the chassis wiring harness.

8.9 Data Logger

8.9.1 The Investchem MSA4 Championship Organisers reserve the right to require a competitor to carry an Investchem MSA4 supplied Motec C 125 Dash / Data logger on the car at any time during the event.

8.9.2 The Investchem MSA4 Championship Organisers have the right to record and retain any data gathered by the Championship Officials from each car's onboard data logger during each event and official test session and retains the right to use this data howsoever it chooses.

8.9.3 During each event and official testing it is prohibited to modify or delete any data from the car's onboard data logger, unless otherwise instructed by an Investchem MSA4 Championship Official.

8.9.4 Competitors agree that the selected channels of data and video can be used by instructors appointed by the Championship at the service of drivers' tutoring.

8.9.5 The Investchem MSA4 Organisers reserve the right to define the tyre circumference measurements for the cars'ECU / data logger via an official Championship Bulletin.

8.10 Pit lane speed limiter

8.10.1 The pit-lane speed limiter (ECU controlled) engaged by a steering wheel mounted button must be operable in all gears and must be set to the speed for the pit lane in use and must be used whenever the car is in a speed-controlled area. The pit lane speed limit is 40 km/h.

8.11 Timing modules

8.11.1 All competitors' race cars can be fitted with the MOTEC GPS unit as originally supplied with the MSA4 Car.

The alternative ECU Masters GPS – Can unit is also permitted for data logging, lap times and fault finding in conjunction with the Motec Electronic Management system that controls the engine and sensors.

8.12 Onboard Judicial Camera

Refer to MSA4 Sporting Regulations – Article 33

ARTICLE 9: TRANSMISSION TO THE WHEELS

9.1 Gearbox

9.1.1 The only permitted gearbox is the unmodified Hewland JLR 221 gearbox. All five (5) forward gears and single reverse gear must be fitted at all times when a car runs during any event.

9.1.2 The only permitted gear ratios, solely supplied by the original manufacturer, are:

1st: 12/31 (2.58)

2nd: 16/30 (1.87)

3rd: 16/24 (1.50)

4th: 20/25 (1.25)

5th: 24/26 (0.92)

Final Drive CWP Ratio 12/35 Sailsbury type differential. Limited Slip Differentials are prohibited. **The Gripper manufactured open differential part no: G2-410-JPR-A will be allowed as an alternative.**

9.1.3 The Investchem MSA4 Organisers reserve the right to nominate alternative ratios to those defined in these Technical Regulations.

9.1.4 All cars must have a reverse gear in accordance with these Technical Regulations Investchem MSA4 Technical Manual operable by the driver at all times during an event or test session when the engine is running.

9.1.5 The gear selection actuator mounted to the Hewland JLR gearbox is optional for use in competition. The original MME VLV - 01 as supplied with the MSA4 cars or Geartronics actuator ACT 3230 + 2 x way Geartronics solenoid kit. These units are available from Investchem MSA4 Parts Supplier at competitors' cost. These gearbox actuator systems both function with current Motec Electronics.

9.2 Traction control

9.2.1 The use or fitment of any type of traction control device or mechanism is forbidden at all times.

ARTICLE 10: SUSPENSION AND STEERING

10.1 Suspension

10.1.1 Suspension settings may be changed provided the adjustment provided by the standard components is maintained and / or the margins specified are respected and all pick up points are as standard configuration and location as stated in these Technical Regulations. Gearbox pick up points must be as standard configuration as stated in these Technical Regulations.

10.1.2 Mounting points and mounting brackets must not be modified or moved from the original locations provided.

10.1.3 Coil springs are free restricted to the following:

Front 350 – 450 lbs and Rear 700 -900 lbs.

10.1.4 No modification of any sort to any damper body or damper sub-component is permitted.

10.1.5 No packers, washers and bump rubbers may be fitted to damper shafts. Belleville washers or coil springs are not permitted on the damper shaft.

10.1.6 Anti-roll bars may be changed but only from the range specified in the Investchem MSA4 parts supplier.

10.1.7 Front Anti Roll Bars sizes are limited 12.0 mm – 14.0 mm only (Thickness of Horizontal solid Bar).

10.1.8 Rear Anti Roll Bar sizes are limited to 12.0mm – 16.0 mm only (Thickness of Horizontal solid Bar).

10.1.9 Anti-roll bar links may be disconnected. If disconnected, the links may be removed.

10.2 Dampers

10.2.1 The damper casing design is free. They must be ferrous or light alloy units and separate reservoirs for fluid and / or gas are permitted. The shock damper casing is defined as the item which contains the piston, fluid / gas, and moving parts which control the damping action. Any form of active damping is prohibited.

10.2.2 Any method of altering the damper performance by the driver whilst seated in the car is prohibited.

10.2.3 Only conventional hydraulic, single tube dampers with one (1) piston and maximum four (4) – way adjustment are permitted in any position.

10.2.4 Damper fluid may be pressurized.

10.2.5 The use of blow-off valves, inertia valves, external electronic inputs, the storage of energy or any hydraulic or electronic connections between dampers are not permitted.

10.2.6 Damper lengths are restricted to overall length of 268.0mm +/- 3.0mm between centres of mounting eyes (Spherical).

ARTICLE 11: BRAKES

11.1 Brake components

11.1.1 Except where specified otherwise below, all brake components including callipers, lines and hoses must remain original as supplied by Investchem MSA4.

11.1.2 Brake cooling or brake cooling ducts are not permitted.

11.1.3 The only brake pad allowed will be as follows as supplied by Investchem MSA4.

PFC Brakes only.

Front: Part No: PFC 7720.11.15.44

Rear: Part No: PFC 7719.11.11.44

No other type of brake pad or friction material will be allowed.

11.1.4 Brake discs: The only brake discs permitted for all events and official testing are the PFC Championship brake discs which must be obtained from the Championship Parts Supplier.

11.1.5 Brake fluid brand and / or DOT rating is free.

ARTICLE 12: WHEELS & TYRES

12.1 Wheels

12.1.1 The mandatory front and rear wheels must be used.

12.1.2 Front Rims 8 x 13 inch + Rear Rims 9 x 13 Inch

12.1.3 The fixing will be via a single centre lock nut system.

12.1.4 A safety linchpin must be in place on the wheel nut throughout the event and must be refitted after each wheel change. These linchpins must be painted dayglow red.

12.1.5 No pressure limiting device of any kind is allowed in the complete wheel / tyre assembly.

12.1.6 Valve caps must be correctly fitted to all four wheels at all times.

12.2 Tyres

12.2.1 The only tyres permitted for all events and official testing are those detailed below which must be obtained from the Championship Tyre Supplier:

Slick:	Dunlop	Front: 195 /550- R13	Rear: 240/570- R13
Wet:	Dunlop	Front: 180/550- R13	Rear: 240/570-R13

The Investchem MSA4 Organisers reserve the right to amend these specifications.

12.2.2 Only the Dunlop slick tyres which have been supplied to the competitor at that event by ATS Motorsport, the Championship Tyre Supplier, may be used throughout the event.

12.2.3 Competitors may transport wet tyres from one event to another provided they were originally allocated to them by the Championship Tyre Supplier.

12.2.4 Each new tyre used must be to the specification as supplied by Dunlop (ATS Motorsport). Any modification or treatment including cutting, grooving, application of water solvents or softeners, the use of heat retaining (and / or cooling) devices or pre- heating / cooling is prohibited. This applies to both wet and slick tyres.

12.2.5 During the event no artificial warming of the tyre or other component of the inflated wheel assembly is permitted.

12.2.6 Covering of the tyres on the grid is not permissible.

12.2.7 Pre-heating and any modification or treatment or the application of solvents altering the tyres compound are strictly forbidden.

12.2.8 No cleaning or removal of rubber pick-up from the tread area of the tyres is permitted using any form of other mechanical aid.

12.2.9 The Investchem MSA4 Organisers reserve the right to impound and / or replace event nominated tyres at any time before, between and after qualifying and races. Responsibility for the wheels and tyres remain with the competitor throughout the period that they are held by the Investchem MSA4 Organisers and / or Championship Tyre Supplier. (ATS Motorsport)

12.2.10 Slick tyres allotted to each car for each event's qualifying and races are: two (2) new front tyres and two (2) new rear tyres. These new tyres must be used for the duration of the qualifying session. Thereafter allotted tyres may be used in any combination throughout the event.

12.2.11 If wet tyres are used the rain light must be switched on.

12.2.12 If wet tyre wear during an event is deemed to be excessive a meeting of entrants / competitors may be convened in which a majority vote (using a system of one vote per team / entrant, not one vote per car entered) may decide to allocate one additional set of wet tyres per car for the remainder of that event.

12.2.13 During each event no allocated tyre may be turned or reversed on the rim after initial fitment. Used tyres can be turned on the rim in advance of arriving at the circuit for an event.

12.2.14 Each competitor must nominate via the official method the tyres for use at each event. This nomination must be submitted to the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer) prior to the start of the first qualifying session.

12.2.15 The use of tyres without appropriate identification may result in a grid position penalty or exclusion from the qualifying or race. The Officials may, at any time, during the event, conduct spot-checks.

12.2.16 The replacement of any tyre is subject to the prior mutual agreement of the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer) and a representative of ATS Motorsport, the Championship Tyre Supplier.

Any damaged or punctured tyre will be replaced on a "like for like" basis and both tyres must be presented before any approval may be given.

12.2.17 Only tyres allocated for that event are permitted in the pitlane for each competitor during the qualifying session and races.

12.2.18 All tyres, when under the control of a team, must remain visible within the team's designated pit area at all times during an event.

12.3 Tyre testing

12.3.1 Unofficial testing: Tyres are free. No limitation.

12.3.2 Official testing and official qualifying and race events: Tyre sets are limited to those specified above.

12.3.3 Parc Fermé conditions will apply in pit areas for thirty (30) minutes after each official timed qualifying and races in order for tyre checking to take place unless authorisation to release is given by the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer)

ARTICLE 13: COCKPIT

13.1 Safety harness

13.1.1 The car will be fitted with a safety harness to be worn at all times by the driver during official testing, free practice, qualifying and races and while the driver is driving the car in the paddock. All harnesses must be MSA compliant.

13.1.2 The safety harness fixing system to the tubular chassis must be utilised in accordance with the MSA4 manufacturers' requirements and must not be changed or modified.

13.1.3 It is not permitted to mix parts of safety harnesses. Only complete sets as supplied by manufacturers are to be used. The lap strap with the FIA hologram must be fitted on the driver's left-side position.

13.2 Headrests

13.2.1 All cars must fit the mandatory head restraint assembly as supplied by WCT Engineering. This head restraint must be fitted at all times when the car is on the track. A penalty will be applied if competitors are on the track without the head restraint. **The mandatory cockpit headrest standard rear thickness is 90mm. The tall driver option thickness is 45 mm. To be supplied by WCT only**.

13.3 Seat

13.3.1 The seat must be extractable without the need to cut or remove any of the safety harness.

13.3.2 The foam seat insert positioning system is part of the car in the cockpit area.

13.3.3 Non-flammable padding only and only minor modifications of the seat and / or gap filler are allowed for driver's comfort providing all the functionality of the seat and its associated safety equipment is preserved.

13.3.4 The driver seated normally with his / her safety harness fastened and with the steering wheel removed must be able to raise both legs together so that his / her knees are past the plane of the steering wheel in the rearward direction. This action must not be prevented by any part of the car.

13.3.5 A cockpit evacuation test may be required at any time by the Investchem MSA4 Championship Organisers, in accordance with MSA FIA requirements and Art 13.3.6.

13.3.6 The driver must be able to remove the steering wheel and get out of the car within seven (7) seconds and then replace the steering wheel in a total of twelve (12) seconds. This must be demonstrated from the normal seating position, with all seat belts fastened and whilst wearing the usual driving equipment,

For the test, the position of the steered wheels will be determined by the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer) and after the steering wheel has been replaced the steering control must be maintained.

ARTICLE 14: VEHICLE SAFETY EQUIPMENT

14.1 General safety recommendation

14.1.1 Cars must comply with all articles relating to any requirements of Motorsport South Africa.

All personal safety equipment: overalls, underwear, helmet, boots etc. must comply with at least the minimum requirements of MSA for the event being contested and must be in conformity with the Sporting Regulations.

14.2 Fire extinguishers

14.2.1 All cars must be fitted with a fire extinguishing system. SPA Firesense 1.25kg capacity which must discharge into the cockpit and into the engine compartment.

The driver must be able to trigger the extinguishing system manually when seated normally with their safety harness fastened and the steering wheel in place.

Furthermore a means of triggering from the outside must be located behind the rear roll hoop. It must be marked with a letter "E" in red inside a white circle of at least 100mm diameter with a red edge.

14.2.2 The system must work in any position even when the car is inverted.

14.2.3 Extinguisher nozzles (2 of) must be as homologated for the extinguisher and be installed in such a way that they are not directly pointed at the driver's face. 1 x nozzle in cockpit + 1 x nozzle in engine bay.

14.3 Rear view mirrors

14.3.1 All cars must have at least two mirrors mounted so that the driver has visibility to the rear and both sides of the car.

14.4 Accident Data Recorder

14.4.1 The data obtained from the Motec Data Logger must be surrendered upon request by the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer) at any point in the Championship or at any moment during a given event.

ARTICLE 15: DRIVER'S SAFETY EQUIPMENT

15.1 Helmet

15.1.1 Drivers must wear a helmet compliant with Motorsport South Africa Regulations and FIA Appendix L of the International Sporting Code to one of the following FIA Standards:

- FIA Standard 8859-2015
- FIA Standard 8860-2010
- FIA Standard 8860-2018
- FIA Standard 8860-2018-ABP

15.2 Frontal Head Restraints

15.2.1 The use of Hans or Leatt Brace is mandatory in accordance with Motorsport South Africa Regulations for single seaters.

15.3 Flame resistant clothing

15.3.1 Drivers must wear flame resistant clothing (including under-clothing) compliant with FIA Appendix L of the International Sporting Code and one of the following FIA Standards:

- FIA Standard 8856-2000
- FIA Standard 8856-2018

There is a minimum overlap required in the neck area (between the balaclava and the top underwear) of 3cm,

except on the front central line where the overlap shall be at least of 8cm as shown in Figure 1 below.

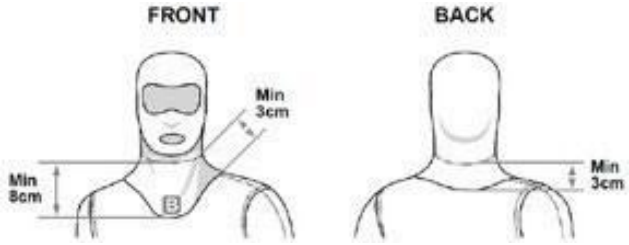


Figure 1 – minimum overlapping at the neck area.

ARTICLE 16: FUEL

16.1 Fuel

16.1.1 The only fuel permitted for all events and official testing is 95 Octane pump fuel which must be obtained from a Petrol Filling Station.

16.1.2 The Investchem MSA4 Organisers reserve the right to nominate a Petrol Filling Station near to the race event.

16.1.2 It is not permitted to inject or use any fuel or additive other than that specified in these regulations.

16.1.3 It is the entrant's responsibility to ensure that the entire fuel system has been purged of test fuel prior to the start of an official event.

16.1.4 The use of any specific device whether on board or not to decrease the temperature of the fuel below the ambient temperature at the time of use of the car is forbidden

16.1.5 A minimum of three (3) litres of fuel must remain in the car when it arrives in parc fermé at the end of each qualifying session and / or race.

16.1.6 Fuel cooling is not allowed at any time during testing or races.

16.1.7 Only the Wicks Fuel Filter Part No : 8037 as supplied is permitted. The position of the fuel filter may be changed and fitted within the left hand sidepod and mounted to the chassis for better cooling, The MSA 4 TC will advise teams and competitors where to position the fuel filter within the sidepod.

16.2 Fuel testing

16.2.1 Fuel samples for fuel testing may be requested at any time during the event. These samples will be drawn under the control of the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer).

16.2.2 To facilitate the taking of fuel samples and to confirm the fuel volume remaining all cars must be fitted with an MSA4 drain connector and the entrant must also make available an associated fitted pipe with a minimum length of 300mm.

16.3 Refuelling and fuel handling

16.3.1 During all refuelling or fuel handling operations:

a) The relevant personnel must be wearing clothing which will provide adequate protection against fire.

b) An assistant wearing clothing which will provide adequate protection against fire and who is equipped with a suitable fire extinguisher of appropriate capacity must be present.

c) All other team personnel must keep a safe distance from the car.

d) All cars' refuelling equipment and containers must be suitably grounded where necessary.

e) Any powered pumping system used to transfer fuel must be operated by a non-latching switch or be turned off automatically if the operator leaves.

ARTICLE 17: MISCELLANEOUS

17.1 Material treatment

17.1.1 The action of adding / applying a surface treatment (i.e. shot peening, anodization, any kind of plasma coating, superfinishing, etc …) other than painting or adhesive film to a genuine component is a modification of the component itself and therefore prohibited.

17.2 Scrutineering

17.2.1 Any car which has passed initial scrutineering may not be removed from the confines of the venue during the remainder of the event, except with the express permission of the Clerk of the Course or the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer)

17.3 Vehicle and component examination

17.3.1 The Investchem MSA4 Organiser (in addition to any other powers they may have under these Regulations) reserves the right before or after any qualifying or race in the Championship to designate any one or more of the competing cars for special eligibility scrutineering. Upon such election being made the competitor shall immediately place the car under the control of the Investchem MSA4 Organiser and be deemed to have permitted all such scrutineering examination and testing as the Investchem MSA4 Organiser may responsibly require to undertake. The Investchem MSA4 Organiser has the right to:

a) Examine the car at the circuit for such period as they may reasonably require and take fuel and / or lubricant samples.

b) Retain the car for detailed examination at premises chosen by the Investchem MSA4 Organiser. If the Investchem MSA4 Organiser elects to retain the car they shall make it available for collection by the competitor at least seven (7) days prior to the qualifying session for the next race in the Championship unless the car is found to be in breach of these regulations

c) In the event of an engine being required by the Investchem MSA4 Organiser in order to determine compliance with the regulations during the course of an event the relevant competitor must surrender the engine to the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer) Championship Technical Delegate as soon as such notification is given. Under these circumstances the Organiser may choose to deliver another spare engine to the competitor concerned for that car until the original is returned. The use of this spare engine will be at no cost to the competitor provided it is returned with its official seals intact and its usage is bound by the same terms as the original Investchem MSA4 Engine Agreement.

d) Re-inspect cars at any time during the course of the season should there have been a regulation infringement or circuit incident.

e) Seal the car and its components in accordance with Motorsport South Africa Regulations in such a manner as they may choose and require the competitor at their own expense to present the car at any other premises chosen by the Investchem MSA4 Organiser for detailed examination within a specified period and / or remove the car by transporter at no expense to the competitor to an appointed location. The competitor will be advised in writing of the time, date and location of the subsequent testing or eligibility examination. The competitor or their agent will be invited to witness this inspection and will be required to provide all the labour required to perform the vehicle or component strip.
The Investchem MSA4 Organiser may nominate an agent to additionally observe and report to the Investchem MSA4 Organisers.

f) Undertake any form of verification procedure necessary and may order the removal of parts, fuel or oils from the car for examination and verification and with all associated incurred costs to be borne by the competitor on demand of the Investchem MSA4 Organiser.

17.3.2 The competitor will be personally and solely responsible for ensuring that his / her car complies with his / her registration details and with these regulations for each event at which he / she is entered. Failure to comply in either respect will be a breach of these regulations.

17.3.3 It is the competitor's responsibility to present on demand any component requested by the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer) for inspection.

17.3.4 Queries concerning eligibility should be referred in writing to the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer) at least seven (7) days prior to an event entered to permit a ruling in advance of any event at which it is intended to compete.

17.3.5 The decision of the Investchem MSA4 Organisers as to the eligibility of any component in the car is final subject only to manifest error.

17.4 Cooling devices

17.4.1 During all sessions it is permitted to cool the radiators and brakes of a car when it is stationary using an integral battery powered hand carried (by one person) portable fan(s) with ducting. These may be used in Parc Fermé upon authority from the Investchem MSA4 TC (or the Assistant TC / Specialist Scrutineer). It is permitted to temporarily mount these on the car. It is not permitted to artificially cool the ambient air passing through this device by any means. In other words the portable fan is purely a device to direct ambient air onto the radiators. Neither is it permitted to use dry ice or any other substance to aid the cooling.

17.5 Silencing

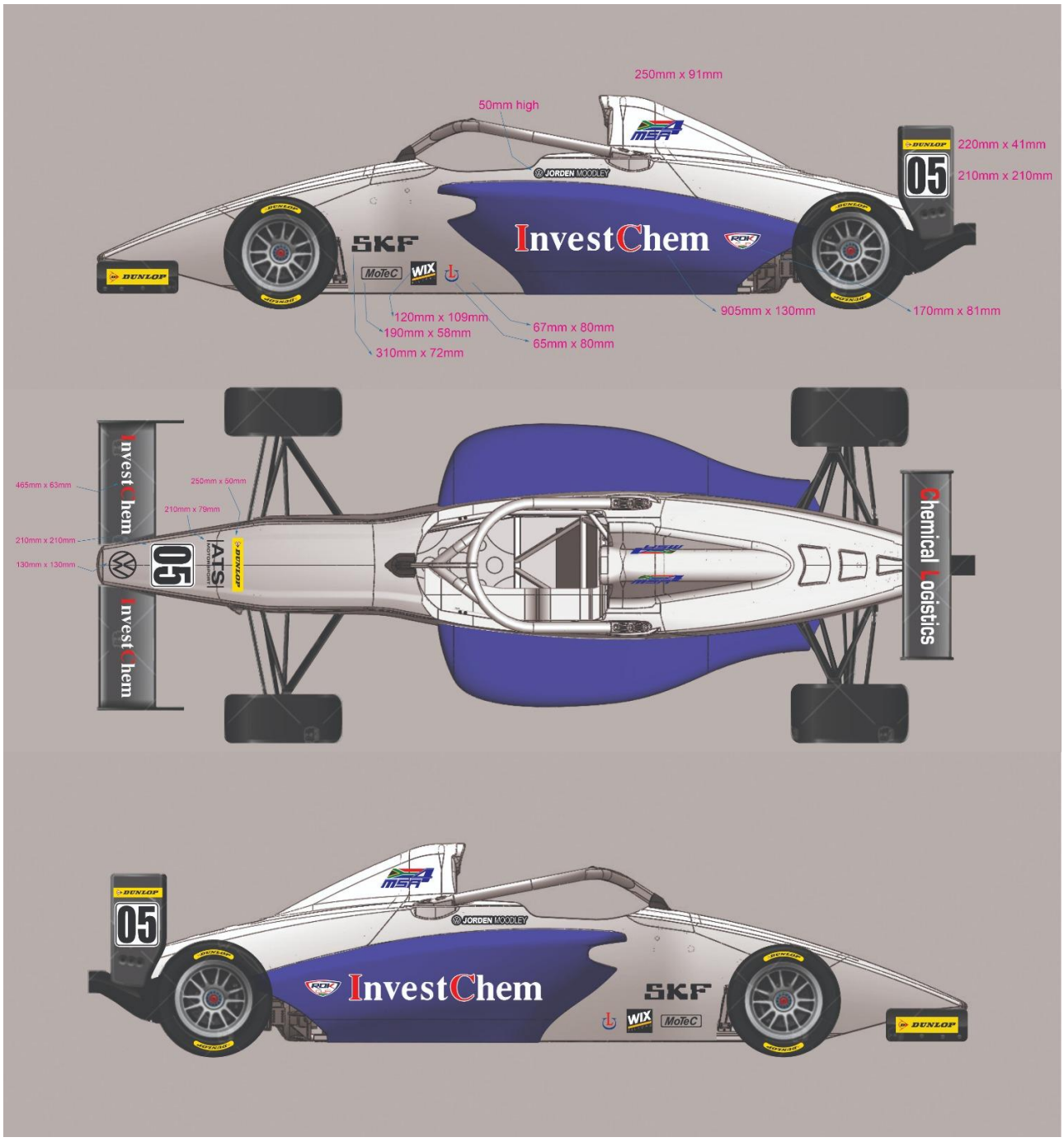
17.5.1 The vehicle must comply with the relevant MSA and specific event regulations.

17.6 Branding, Numbers and Decals

17.6.1 Competition numbers must be displayed on a white backing in accordance with Investchem MSA4 regulations.

17.6.2 Branding supplied by the Investchem MSA4 Organisers must be displayed in the areas as specified below. Failure to adhere to this regulation will be deemed to be a breach of these Championship Regulations and may result in loss of Championship points.

17.6.3 No competitor race suits / overalls or team branding may carry any form of sponsorship or advertising which conflicts in any way with MSA and Investchem MSA4 Championship requirements. Any competitor or team who do so may not be permitted to take part in the Championship. The decision of the Investchem MSA4 Organisers is final.



In the above illustration of the vehicle decals, the “Investchem” decal on the sidepod is not obligatory.

Suit Branding Guideline

135mm x 35mm

DUNLOP

APPENDIX 1: CONTACTS

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