

2015 F4 Australian Championship Technical Regulation

T 1. PREAMBLE

Each automobile in the 2015 F4 Australian Championship – Certified by FIA (the Championship) shall comply entirely with Article 274 FIA 2015 Formula 4 Technical Regulations (the FIA T.R.), the FIA Formula 4 Homologation Documents:

- a) 2015 – 02 – F4 – Mygale + 01/01 VO and 02/01 EK
- b) 2015 – 03 – F4 – Ford
- c) 2015 – 02 – F4 - Sadev

as well as the associated manufacturer documents including any updates as advised by Technical Bulletin:

- d) *Mygale M14-F4 Ford User Manual V1.4 CAMS (User Manual)*
- e) *Mygale M14-F4 Parts Catalogue (Ford) V1.5 CAMS (Parts Catalogue)*
- f) Sadev Gearbox Manual
- g) Sodemo Documents

Unless varied by these Technical Regulations.

T 2. DEFINITIONS

Definitions are as per the FIA T.R.

T 3. MODIFICATIONS TO AUTOMOTIVE DESIGN

As per the FIA T.R.

T 3.01 GENERAL

The complete automobile is divided into three types of part.

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.

T 3.02 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. 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.

T 3.03 PROTECTIONS

Heat protections, mechanical protections (such as abrasion protection or tape) and protections for driver comfort may be added, provided that their sole function is the protection of the relevant element and unless specifically mentioned in the homologation.

T 3.04 BODYWORK

The modification of bodywork parts and bodywork supports is allowed only to ensure proper installation despite manufacturing tolerances.



T 3.05 QUICK COUPLINGS

Only the FIA Quick Couplings supplied and fitted to components by the manufacturer shall be used unless a specific additional coupling or fitting is added through a Technical Bulletin.

T 4. COMPONENT IDENTIFICATION

T 4.01 COMPOSITE COMPONENTS

All composite components shall be supplied, by Mygale, with an integrated identification TAG. No removal, modification or tampering of this TAG is permitted under any circumstances. Competitors shall notify the Technical Delegate as soon as practicable on identifying a damaged TAG.

T 4.02 MYGALE HOLOGRAM COMPONENTS

Components supplied by Mygale and identified by a Mygale Hologram label and part No. shall be controlled according to the User Manual and the Parts Catalogue. No removal, modification or tampering of this Mygale Hologram label is permitted under any circumstances. Competitors shall notify the Technical Delegate as soon as practicable on identifying a damaged Mygale Hologram label. The Technical Delegate alone is authorised to replace a Mygale Hologram label at their discretion. A record of any replaced Mygale Hologram label will be maintained and recorded by the Technical Delegate for each automobile.

T 5. BODYWORK AND DIMENSION

T 5.01 DIMENSION

Automobiles must conform to the dimensions as laid out in the User Manual at all times.

T 5.02 PERMITTED CHANGES TO THE ORIGINAL SPECIFICATIONS

- a) Tape 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, colouring or protecting the parts to which it is attached. Apart from securing fasteners or unless expressly authorised in these Technical Regulations, Technical bulletins, User Manual or Parts Catalogue, it is not permitted to apply tape to cover a junction or gap between components, holes or cavities.
- b) Any component inside the bodywork may be covered with thermal insulation material and/or rubbing protection material providing this insulation and/or rubbing protection material has no other function than protecting components against heat and/or chafing.

T 5.03 MINOR REPAIRS

Minor repairs to non-structural Type 1 or 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 150mm at its maximum dimension and providing the original shape and dimensions are maintained. Repairs to any fixing point must be approved by the TD. In all other cases damaged components must be replaced by new ones or submitted to the original supplier for repair unless a repair is further authorised by a Technical Bulletin

T 5.04 SKID BLOCK

The Skid Block, made of wood, shall be used as supplied by the manufacturer and in accordance with the User Manual. The Skid block shall:

- a) have a width of 300 mm with a tolerance of +/- 2 mm
- b) have a thickness of 3.5 mm with a tolerance of +/- 1.5 mm
- c) have a uniform thickness of at least 5 mm when new
- d) have three precisely placed 80 mm diameter holes the positions of which are detailed in Appendix 1, Drawing 1.6
- e) have no additional holes or cut-outs other than those necessary to fit the skid block to the car
- f) be fixed symmetrically about the centre line of the car in such a way that no air may pass between it and the surface formed by the parts lying on the reference plane

The front and rear edge of a new skid block may be chamfered over a distance of 50 mm to a depth of 3 mm.

In order to establish the conformity of the skid block after use, its thickness will be measured only around the three 80 mm diameter holes; the minimum thickness must be respected in at least one place on the circumference of all three holes.



T 5.05 AERODYNAMIC DEVICES

Each device designed to provide an aerodynamic effect shall be used and fitted according to the User Manual and manufacturers specifications. Any adjustment shall only be performed according to:

- a) Front and Rear wing adjustment shall only be made within the parameters set out in User Manual.
- b) Minor repairs to the components of the front and rear wing may be made by the competitor provided the damage does not affect an area greater than 50mm at its maximum dimension, does not affect a fixing or fixing area and providing the original shape and dimensions are maintained. In all other cases damaged components must be replaced by new ones or submitted to the original supplier for repair.

T 6. WEIGHT

T 6.01 MINIMUM WEIGHT

The minimum weight of the automobile, at any time during competition shall be 550kg. The minimum weight of the automobile plus driver wearing all and complete racing apparel, at any time during competition shall be 625kg.

T 6.02 BALLAST

Ballast used shall only be attached using the specific fixing points provided and detailed in the User Manual. It shall be possible to fix seals if deemed necessary by the Technical Delegate.

T 7. COCKPIT

The cockpit shall remain at all times in compliance with the FIA T.R. and the specifications as detailed by the manufacturer.

T 7.01 EXTRACTABLE SEAT

Each chassis shall utilise an extractable seat, fitted to the cockpit, as supplied by the manufacturer. Modifications to the extractable seat or its fixing points as advised by a Technical Bulletin are permitted. Any other modification is not permitted without specific approval of the Technical Delegate.

T 7.02 SEAT INSERT

It is permitted to fit a seat insert customised to suit the driver of the automobile. Each seat insert shall be easily removable and shall not affect the extraction of the driver using the extractable seat, whilst the driver is seated in the automobile. Each seat insert shall either be manufactured from or covered in a non-flammable and non-combustible material.

T 7.03 COCKPIT PADDING

Additional padding may be used within the cockpit provided it is non-structural and easily removed without the use of tools. Additional padding shall either be manufactured from or covered in a non-flammable and non-combustible material.

T 7.04 HEAD RESTS AND HEAD PROTECTION

The head rest and head protection insert as supplied by the manufacturer shall be fitted and used at all times according to the manufacturer's instructions.

T 7.05 SAFETY HARNESS

A six (6) point safety harness compliant with FIA 8853/98, as a minimum, shall be used at all times including at each event and/or test session.

T 7.06 FIRE EXTINGUISHER

A fire extinguisher compliant with the FIA T.R. shall be fitted according to the User Manual and the requirements of the FIA at all times. The fire extinguisher shall be maintained according to the requirements of its FIA Homologation.

T 7.07 COCKPIT COMPONENTS

All cockpit components operable by the driver shall be fitted according to the User Manual. Adjustments are only permitted according to and within the parameters detailed in the User Manual. Modifications to cockpit components are not permitted unless in compliance with these technical regulations. Cockpit components include:

- Driver operated pedals – accelerator, brake, clutch
- Driver operable switches
- Steering column
- Brake Bias adjuster
- Associated component sensors/actuators
- Driver rear vision mirrors

T 7.08 DRIVER STANDARDS VIDEO/CAMERA RECORDER

The driver standards video camera/recorder must be fitted according to the User Manual, and used in accordance with the requirements detailed in the Sporting Regulations.

T 8. SAFETY STRUCTURES

T 8.01 MAJOR REPAIRS

Any repairs to the survival cell, driver safety systems, roll structure, nose-box, 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. Competitors shall be required to show the original certificate of any repair; these must be registered in the CAMS Vehicle Log Book during initial scrutineering at the event or test following the repair, or by the Technical Delegate.

T 9. ENGINE

T 9.01 ENGINE MODIFICATIONS

Once supplied the engine, and all ancillaries supplied with it, shall not be modified in any way. No rework may be carried out on any component unless specifically authorised by these regulations. The engine and associated parts shall remain exactly as produced and supplied by the Ford Motor Company and or Sodemo unless expressly detailed in these regulations or with the written permission of CAMS after consultation with the engine and associated parts suppliers.

T 9.02 ENGINE SEALING

The engine shall be sealed as originally done so by the application of seals from Sodemo. Other seals may be affixed by the Technical Delegate.

Each competitor, for each automobile, shall:

- a) *Notify the Technical Delegate of any damaged, worn or perished engine seal.*
- b) *Remove, modify or manipulated any engine seal only with the permission of the Technical Delegate.*

T 9.03 ENGINE REPAIR

Each competitor, for each automobile, shall:

- a) *Advise the Technical Delegate of any Engine issue relating to performance, fluid consumption or fluid leak in which case the engine shall be inspected whilst maintaining the integrity of the engine seals. Repairs that can be undertaken without removal of the engine shall be done so only with approval of the Technical Delegate.*
- b) *Should the engine require removal for repair it shall be done so in its entirety maintaining the integrity of the engine seals.*

T 10. ENGINE CONSUMABLES

T 10.01 ENGINE OIL AND COOLANT

Only the engine oils and coolant as supplied by Penrite shall be used at all times including at any event and/or testing.

T 10.02 ENGINE FILTERS, BELTS

Only the engine filters, including inlet air filter and engine oil filter, and accessories drive belts as supplied according to the specifications of the Engine manufacturer and/or associated parts supplier shall be used. Any modification to these components as supplied is forbidden.

T 11. ENGINE COOLING SYSTEM

T 11.01 ENGINE COOLANT RADIATOR PIPE WORK

Only the engine coolant radiator/s, associated pipe work and joiners as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification, including any blanking of surfaces, to these components as supplied is forbidden, except those components applicable under T3 and/or T5 of these regulations.

T 11.02 ENGINE OIL COOLER

Only the engine oil cooler, associated pipe work and joiners as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification, including any blanking of surfaces, to these components as supplied is forbidden, except those components applicable under T3 and/or T5 of these regulations.



T 11.03 **ENGINE INLET AIR INTERCOOLER**

Only the engine inlet air intercooler, associated pipe work and joiners as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification to these components as supplied is forbidden, except those components applicable under T3 and/or T5 of these regulations.

T 12. **TURBOCHARGER**

Only the turbocharger including inlet restrictor, associated pipe work and joiners as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification to these components as supplied is forbidden, except those components applicable under T3 and/or T5 of these regulations.

T 13. **EXHAUST SYSTEM**

Only the exhaust system including catalytic converter and Universal Exhaust Gas Oxygen (UEGO) sensor as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification to these components as supplied is forbidden, except those components applicable under T3 and/or T5 of these regulations.

T 14. **ELECTRICAL SYSTEM**

T 14.01 **MODIFICATIONS**

Only the entire electrical system including the loom/s and the routing of the loom/s and location of the components as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification to these components as supplied is forbidden, except those components applicable under T3 and/or T5 of these regulations. Any repair shall only be conducted, to/on any component of the Electrical system including the loom/s, ECU and/or sensors, with prior approval of the Technical Delegate.

T 14.02 **BATTERY**

Only the single battery and components as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification to these components as supplied is forbidden, except those components applicable under T3 and/or T5 of these regulations.

Each competitor, for each vehicle, shall ensure:

- a) That the on-board battery shall be capable of demonstrating at least three (3) engine starts without external recharge, or assistance, at any time during the event.
- b) That a supplementary external source of energy is temporarily connected to the automobile, utilising the supplied connector, to start the engine whilst in the pit area or on the grid prior to the formation lap at each event. The supplementary energy source is not permitted to be fitted whilst checking according to T14.02 a) of these regulations.

T 14.03 **ENGINE CONTROL UNIT (ECU)**

Only the ECU, including software and components, as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification to these components as supplied is forbidden, except those components applicable under T4 and/or T5 of these regulations.

Each competitor, for each automobile, shall ensure:

- a) That the ECU diagnostic connector is positioned in an accessible position within the cockpit of the automobile allowing the Technical Delegate or appointed Technical Partner free access to it at all times. The free access must include when the driver is seated in the car and fully prepared to take part in the event.
- b) That the ECU is set-up to record the standard logging parameters as supplied in the ECU.
- c) That they notify the Technical Delegate of any damage or performance issue as soon as practical once identified.
- d) That ECU data is provided at the request of the Technical Delegate or the appointed Technical Partner at any time. Data downloads shall be undertaken prior to the commencement of any on-track activity at each event and at the end of on-track activities at each event.
- e) That the USB Memory device, commonly referred to as a Flash Drive, provided by CAMS for each chassis will be used for the supply ECU data at the request of the Technical Delegate or the appointed Technical Partner. A direct download to a laptop computer or similar may also be requested and if so must be provided in this manner.



T 14.04 SENSORS

All standard production engine sensors which have any influence whatsoever on the operation of the engine shall be retained in the standard position as supplied by the manufacturer 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. Any/all additional sensors are prohibited as are any modifications to the standard production sensors for the engine. The following standard production sensors shall be fitted, and connected to the ECU to ensure a signal is available at all times:

Crankshaft Position Sensor (CPS)
Inlet Camshaft Position Sensor
Exhaust Camshaft Position Sensor
Throttle Position Sensor (TPS) – part of the electronic throttle body (ETB)
Knock Sensor, by two (2)
Engine Coolant Temperature (ECT) Sensor
Air Charge Temperature (ACT) Sensor
Manifold Pressure Sensor (MAP) Sensor
Universal Exhaust Gas Oxygen (UEGO) Sensor
Fuel pressure Sensor
Oil pressure Sensor
Fuel Rail Pressure Sensor

T 14.05 WHEEL SPEED SENSORS

The wheel speed sensors shall be fitted on the front wheels and connected to the ECU via the chassis wiring harness. The signal from both sensors must be 12 pulses per revolution.

T 14.06 GPS/G-BOX

The GPS/G-box shall be fitted level on the longitudinal centreline of the automobile (beneath the damper hatch) with the connector facing rearwards and connected to the ECU via the chassis wiring harness.

T 14.07 GEAR POSITION SENSOR

The gear position sensor shall be fitted on the gearbox according to the User Manual and be connected to the ECU via the chassis-wiring loom.

T 14.08 ENGINE ELECTRONIC IDENTIFIER

The engine identifier must be securely and permanently fixed to the engine according to the User Manual and connected to the ECU via the engine-wiring loom. The fixing bolt shall be drilled and fitted with the required engine seal.

T 15. ENGINE IGNITION SYSTEM

T 15.01 SPARK PLUGS

The standard production spark plug as supplied by the manufacturer and/or associated parts supplier shall be used. The location of the electrode tip shall be in the standard position in the combustion chamber.

T 15.02 IGNITION COIL

The standard production coil-on-plug units as supplied by the manufacturer and/or associated parts supplier shall be used and shall not be repositioned. It is prohibited to use any other method or component to trigger, distribute or time the ignition or injection.

T 16. TRANSMISSION

T 16.01 FLYWHEEL AND CLUTCH

Only the flywheel and clutch assembly including clutch plate, diaphragm and clutch actuating slave cylinder as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification to these components as supplied is forbidden.

T 16.02 GEARBOX

Each competitor, for each automobile, shall ensure that:

- a) All casings and gearbox components, including shifter mechanisms, must be of original manufacturer supply.
- b) A reverse gear shall be operable by the driver at any time when the engine is running.

T 16.03 GEARBOX RATIOS

Gearboxes shall be sealed by the Technical Delegate prior to competition and shall remain sealed. Gearbox seals shall not be removed, modified or manipulated



without the permission of the Technical Delegate. Only the original gearbox ratios as supplied by the manufacturer are permitted as follows:

Crown wheel & pinion (Final Drive)	10/31
1st	14/37
2nd	18/35
3rd	18/28
4th	21/27
5th	20/22
6th	27/26

T 16.04 GEARBOX OILS

Only the gearbox oils as supplied by Penrite shall be used at all times including at any event and/or testing. The manufacturers specified gearbox oil level and quantity of oil must be used at all times.

T 16.05 GEARSHIFT

Only the complete gearshift system including actuators and compressor assembly as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification to these components as supplied is forbidden, except those components applicable under T3 and/or T5 of these regulations.

T 16.06 DRIVESHAFT

Only the complete driveshaft including boots and seals as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification to these components as supplied is forbidden.

T 16.07 TRACTION CONTROL

The use of traction control or any traction limiting function or device is forbidden, save for the mandatory pit lane speed limiter that shall only be used when entering/exiting or within the pit lane boundaries.

T 17. STEERING WHEEL, DISPLAY AND GEAR SELECTION

Only the complete steering wheel, including quick release coupling, display, gear selection actuators and required connections as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification to these components as supplied is forbidden, except those components applicable under T3 and/or T5 of these regulations. Only the items as detailed in the User Manual are permitted to be adjusted and only according to the parameters detailed in the User Manual.

T 18. FUEL SYSTEM

Only the complete fuel system, including tank, pump, filters, lines and required connections as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification to these components as supplied is forbidden, except those components applicable under T3 and/or T5 of these regulations.

T 18.01 REFUELLING CONNECTION

For the purpose of refuelling and for fuel tank draining it is permitted to fit approved dry break fittings to the *Fuel Tank Plate Front* IN and DRAIN positions according to the User Manual. Approved fittings include those supplied by the manufacturer for the fuel system according to the Parts Catalogue or fittings approved by the Technical Delegate.

T 19. FUEL

Only pump fuel, as supplied by the Championship fuel supplier shall be used. The supplied fuel shall have a minimum specification of 98RON. It is not permitted to use any additive or modify the fuel, including temperature, as supplied.

T 19.01 FUEL TESTING

A minimum of one (1) kilogram of fuel must be retained in the fuel system at all times at each event for the purpose of fuel sampling. Fuel sampling may be conducted at any time at the discretion of the Technical Delegate.

T 20. SUSPENSION AND STEERING

Only the complete front/rear suspension systems and steering systems, including uprights, bearings, arms, push rods, rockers, anti-roll bars, shock absorber and spring assembly, wheel mounting components, steering rack, steering column and required mounts/connections as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification to these components as supplied is forbidden, except those components applicable under T3 and/or T5 of these regulations.



T 20.01 SUSPENSION ADJUSTMENTS

- a) Suspension adjustments are permitted only within the range and utilising the methods detailed in the User Manual.
- b) Anti-roll bar adjustment is only permitted using the defined locating points for the adjustment clevis on each bar end.

T 20.02 PERMITTED ANTI-ROLL BAR AND SUSPENSION SPRINGS

Only the following components from the Parts Catalogue are permitted for use:

Part Reference No.	Description
F.41.14.107.B	Anti roll bar D14
F.41.14.022.A	Spring 600 lbs/in
F.41.14.024.A	Spring 800 lbs/in
F.41.14.026.A	Spring 1000 lbs/in

T 20.03 STEERING ADJUSTMENTS

- a) Steering adjustments are permitted only within the range and utilising the methods detailed in the User Manual.
- b) The collapsible steering column shall be inspected and maintained according to the User Manual. Following any major incident the Technical Delegate, at their discretion, may require the steering column to be inspected according to the manufacturer's specifications.

T 20.04 WHEEL RESTRAINT CABLE

Wheel restraint cables, compliant with FIA 8864 – 2013, must be used as supplied by the manufacturer and mounted according to the User Manual. Wheel restraint cables shall be replaced if deemed to have performed the function of retaining the wheel/hub assembly, following an incident, at the discretion of the Technical Delegate, or when expired according to the FIA Homologation.

T 21. BRAKES

Only the complete front and rear brake systems, including brake rotors, calipers, master cylinders, push rods, lines and required mounts/connections as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification to these components as supplied is forbidden, except those components applicable under T3 and/or T5 of these regulations.

T 21.01 BRAKE PADS

Only the brake pads supplied for the Championship are permitted to be used. No modification of the supplied brake pads is permitted save for any process of cleaning or de-glazing the brake pads.

Brake Pads permitted are:

DS1.11	Ferodo	FCP1562W
DS3000	Ferodo	FCP1562R

T 21.02 BRAKE FLUID

Only the brake fluid as supplied by Penrite shall be used at all times including at any event and/or testing.

T 22. WHEELS AND TYRES

T 22.01 WHEELS

Only the complete front and rear wheel and required mounting components as supplied by the manufacturer and/or associated parts supplier shall be used. Any modification to these components as supplied is forbidden, except those components applicable under T3 and/or T5 of these regulations. A safety spring must be in place on the wheel nut throughout the event and must be replaced after each wheel change. These springs must be painted dayglow red or orange.

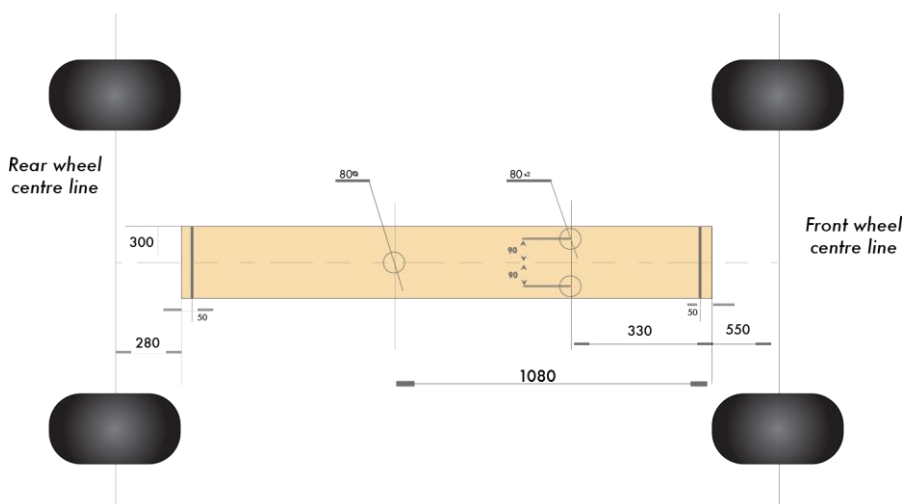
T 22.02 TYRES

Only the tyre as supplied by HANKOOK shall be used at all times at any event and/or testing. It is not permitted to modify, buff or apply any form of treatment to the tyre. It is permitted to manually scrape any excess build-up of used rubber from the surface of the tyre. It is not permitted to use a tyre at any time once worn to the limits of the tread depth indicators. It is not permitted to fit any device to adjust, change, reduce or increase the pressure of the tyre once fitted to the wheel,



save for the normal temporary equipment authorised for use on the dummy grid or within the pit-lane and competitor garage. The tyre shall only be pressurised with air or nitrogen.

T 23. APPENDIX 1
Skid Block Dimensions



As PER FIA Article 274, Drawing 6



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