SCHEDULE TR

SUPER-TRUCK TECHNICAL REGULATIONS 2025-26 Season

PREAMBLE

The Super Truck series is an approved MotorSport New Zealand Race Championship.

Since its introduction to New Zealand in 1991, Super Truck racing has proven to be a popular and highly entertaining race category with dedicated followers throughout the country.

The technical regulations detailed hereinafter are based on the FIA's International regulations for Racing Trucks (Group F) and have been tailored to the racing requirements of New Zealand, but in essence have not changed the original philosophy of this class of racing. Two-axle heavy tractor units classified by engine size and competing weight. Additionally, safety features have been improved over the years to provide for current expectations.

The spirit of Super Truck racing and these regulations expects all Competitors and constructors to keep costs of running and maintaining a race truck within reasonable bounds.

The New Zealand Truck Racing Association, through their Executive Committee, shall on an annual basis submit to MotorSport NZ any necessary submissions relative to proposed changes to these technical regulations for the purposes of maintaining; safety, fair and just competition between competing trucks and adaption of overseas specifications to enable Trans-Tasman competitions.

COMPETITOR RECORD OF AMENDMENTS ISSUED TO THIS SCHEDULE

Use this table to keep a record of all official 'Manual / Championship Amendments' issued during the season relative to this Schedule;

Amendment Number	Issue/Effective date	Regulation reference	Subject / Notes

1.0 GENERAL INFORMATION RELATIVE TO THIS SCHEDULE

1.1 MotorSport NZ is solely responsible for the control of the Super Truck regulations and their interpretations. All enquiries relative to these regulations shall be directed (at Events) to the dedicated appointed Scrutineer or (away from Events) to the MotorSport NZ Technical Manager.

1.2 It is the responsibility of each competitor to satisfy the appointed Scrutineers and the Stewards of the Meeting that their truck complies with these technical regulations in their entirety at all times during an Event.

1.3 Amendments to these technical regulations (being changes introduced to the previously published Schedule) are highlighted such. Text changes for grammatical and/or formatting reasons are not highlighted.

1.4 All trucks competing in Events to which these technical regulations apply shall have a valid MotorSport NZ logbook or Motorsport Australia vehicle logbook.

1.5 All modifications to the manufacturer's standard production specification are forbidden unless expressly authorised by these regulations. The components of the truck must retain their original functions. Any manufacturer optional equipment may only be used if specifically authorised within the following Articles. Supplementary accessories that do not, directly or indirectly affect performance or handling are permitted (e.g. air horns).

1.6 Telemetry devices are strictly prohibited, excepting those devices, approved by MotorSport NZ, whose sole function is to provide lap timing and GPS monitoring (recording) of road speed as prescribed in Article 4.1.1.

1.7 **Technical eligibility and safety equipment enquiry:** Where any doubt may exist in understanding any regulation contained within this Schedule it will be understood that it is the Competitors obligation to enquire as to the correct interpretation. All technical eligibility and/or safety equipment enquiry shall be submitted in writing to:

MotorSport NZ Technical Department,
MotorSport New Zealand Inc,
P.O. Box 133, Paraparaumu, 5032.

Phone: 04 815 8015 **Mobile:** 021 745 056
E-mail: technical@motorsport.org.nz

- All enquiries should detail the article in question and the specific subject matter.
- A written reply will always be given to a written enquiry.
- On matters of technical eligibility and/or safety compliance, a verbal statement will have no validity.

2.0 DEFINITIONS

2.1 Definition of terms used within this Schedule shall be referenced from the MotorSport NZ National Sporting Code, Appendix Two Schedule A and as detailed below:

"Cab" is defined as the structure, the volume of which accommodates the driver and the passengers; and

"Chassis" is defined as the assembly of members accommodating the various mechanical parts of the truck. The chassis must be made up of two(2) chassis rails and transversal cross members. The chassis rails dimensions, section and thickness must originate from a road going tractor unit homologated for the transportation of merchandise; and

"Engine Manufacturer" means those companies recognised as a "world" manufacturer of commercial vehicle diesel engines; and

"NZTRA" means the New Zealand Truck Racing Association; and

"Race trim" means the condition the truck competes in and includes the driver, all safety apparel/equipment, all vehicle fluids and any ballast necessary to maintain weight compliance; and

"Split-rim wheel" means a multi-piece wheel design using a 'locking' ring; and

"Standard" is defined as a specification and/or parts and/or material as manufactured or supplied by the manufacturer and listed as standard item(s). It shall not include manufacturer's options; and

"Tractor / Semi-trailer" is defined as an articulated vehicle comprising a tractor unit with semi-trailer exerting an appreciable vertical force on the coupling device.

"Truck Manufacturer" shall be considered to include only those companies who are, or have been, in possession of a "world manufacturer identification" coding for use in vehicle identification numbers (V.I.N.).

"Wheelbase" means the longitudinal area defined by the front axle and rear axle centre-lines.

3.0 ELIGIBLE VEHICLES

3.1 **Eligible trucks:** to compete under this Schedule trucks shall be two-axle road tractor units, of which the cab and chassis have been manufactured by a recognised Truck Manufacturer (as defined in Article 2.1 above) with at least fifteen(15) examples of each having been produced and made commercially available within a one(1) year period. These cab/chassis combinations shall have a gross chassis mass (GCM) of at least 14,000kg.

3.1.1 **Eligible Engines:** shall be units which have been manufactured by a Recognised Engine Manufacturer (as defined in Article 2.1 above) with at least 100 examples of each having been produced and made commercially available within a one(1) year period.

3.1.2 At all times, it is the Competitors responsibility to provide any evidence required to authenticate their vehicle (as presented) eligibility with the above criteria. This may be by official documentation obtained from the Truck Manufacturer and/or engine manufacturer.

3.2 **Class structure:** There are two classes as follows:

(a) **Supertruck:** being for trucks equiped with electronic engines with no restrictions on engine displacement. (Electronic engine being defined as Electronic diesel engines utilizing an electronic control unit (ECU) and sensors to manage fuel injection.) With a minimum race weight of 5300kg

(b) **Historic class** being for non electronic trucks with no restrictions on engine displacement and a minimum race weight of 5000kg

(c) Both Supertruck and the Historic class are eligible to race for the Super-Truck Racing Championship.

4.0 GENERAL CONDITIONS

4.1 **Maximum road speed limit:** All competing trucks shall ensure that the maximum specified road speed (limit) is not exceeded at any time including all Testing, Qualifying Sessions and Races.

4.1.1 All competing vehicles shall be fitted with a MotorSport NZ/NZTRA approved Racelogic GPS speed sensing equipment. It is the Competitors responsibility to ensure the unit is switched on and operating correctly at all times the truck is on the circuit. It is specifically forbidden for the competitor to interfere in any way with the operation of the GPS unit. The data cards shall only be inserted and/or removed by the officials appointed to do so.

4.2 **Minimum Truck weight:** The minimum race weight (in race trim) shall be as follows:

- **Supertruck: 5,300 kg**
- **Historic Class: 5,000 kg**

4.3 **Ballast:** Where additional weight is required in order to comply with the class weight requirements, ballast shall be used that is securely attached to the chassis by bolts / U bolts and placed within the wheelbase and that shall have provision for Scrutineers' wire seals to be applied.

4.4 **Ground clearance:** No part of the truck shall touch the ground when all the tyres on one side are deflated. Compliance shall be checked on the designated measuring pad in race trim. Adjustable suspension (if fitted) shall be set to lowest position.

4.5 **Fuel:** The term "fuel" shall include all substances fed into the combustion chambers of the engine, excepting atmospheric air and water vapour contained naturally therein.

4.5.1 The use of commercially available diesel fuel is mandatory, and shall correspond to the following specifications:

- Hydrocarbon content: 99.0 min (% mass)
- Density: 0.860 max (Kg / Litre)

- Cetane No. (ASTM D613) 55 max
- Calculated Cetane Index (ASTM D976/80) 55 max

4.6 **Official Seals and sealing requirements:** Engines shall have provision for fitting wire seals to the engine sump. This means that two(2) adjacent bolts, being easily accessible when the engine is installed in the chassis, are drilled with 3mm holes (to enable the fitment of the wire seals).

4.6.1 The definitive text regarding official seals is detailed in Appendix Two - Schedule A, Article 3.7 of the current MotorSport Manual. Whenever it may be deemed appropriate by the Championship Scrutineer / Technical Officer or as prescribed in the Championship Articles, seals may be applied to component parts of the race truck.

4.6.2 When fitted and detailed in the vehicle's logbook, it is the competitor's responsibility to ensure that these seals remain intact for the duration of their application period (as specified in Schedule A). A written application for permission to remove the seals shall be made to the Championship Scrutineer. This application is required prior to removing any such seals. A written reply containing "Permission Granted" in the subject line will outline the permission to remove the seals. This reply will need to be carried at all times and produced, if requested by the Championship Scrutineer. Penalties are prescribed under Schedule P of the current MotorSport Manual for any breach of these requirements.

5.0 SAFETY EQUIPMENT / REQUIREMENTS

5.1 **Any race truck, the condition of which is deemed to be dangerous, may be excluded from competing by the Event Director / Clerk of the Course / Stewards of the Meeting.**

5.2 **Safety cage - general:** All safety cages shall be homologated by MotorSport NZ with the homologation certificate contained in the vehicle's logbook. Trucks competing under a Motorsport Australia logbook shall have a ROPS certificate issued by Motorsport Australia . It is the competitor's sole responsibility to ensure that the MSNZ Homologation Certificate or the Motorsport Australia ROPS Certificate remains up to date and valid, i.e. representing the actual structure fitted.

5.2.1 **Safety cage - specific:** The principle (minimum acceptable) safety cage structure is detailed in diagram D1 at the rear of this Schedule. The main rollbar, front rollbar or lateral rollbars should ideally be constructed from one piece of material with a smooth and even surface appearance although these may be welded together at their intersecting connections to form a one-piece structure.

The attachment (top mounting) of the rear diagonal member shall be on the driver's side of the cab. Additionally, the attachment (rear mounting) of the roof diagonal member shall be on the driver's side of the cab.

A 3.0mm thick sheet of steel plate shall be welded to the upper section of the safety cage directly above the driver's seat and large enough in area to fully cover the outer seat dimensions when viewed from above. The plate shall be welded on two opposing sides at a minimum of 50% stitch welding.

It is highly recommended to fit additional struts to the safety cage, examples are shown in diagram D2 at the rear of this Schedule. These additions should ideally be welded although demountable joints may be used.

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5.2.2 Mounting: The minimum mounting of the safety cage to the cab shall consist of four(4) mounting plates (inner footings), one for each vertical pillar of the safety cage together with four(4) reinforcement plates on the underside of the cab. The mounting plates (both footing and reinforcement) should be as large as possible although a minimum of 200cm² in area by 3mm in thickness is mandatory. The plates must be fitted such that the cab floor is sandwiched between them. At least three bolts ISO 8.8 – 'S' grade and minimum of 12mm diameter shall clamp each mounting footing to its reinforcing plate.

5.2.3 Material specification: Cold drawn seamless steel tube with a minimum tensile strength of 340 N/mm^2 (22.02 TNF/IN^2). The minimum tube sizes are as follows that may be used in combination:

- 57.0mm outside diameter x 4.9mm wall thickness, or
- 63.5mm outside diameter x 3.2mm wall thickness, or
- 70.0mm outside diameter x 2.4mm wall thickness.

Note: *The tube sizes quoted above are examples of standard sizes commonly available; however alternative sizes may be authorised provided that certification is provided by an approved engineer (contact the MotorSport NZ office for currently approved engineers) stating that the alternative tube exceeds the strengths stated above. Notwithstanding this a minimum tube size of 50.8mm outside diameter x 3.96mm wall thickness is the minimum acceptable sizing for any members of the principle structure.*

5.2.4 Mandatory inspection requirement: All individual tubes of the principle structure shall have an inspection hole of 5mm diameter, drilled in an easily visible position.

Recommendations: The safety cage should be directly connected with steel sections to the chassis in a minimum of four(4) separate locations. These connections must comply with the minimum material strengths as detailed above. Additionally, upon application, part of the safety cage may be mounted outside of the cab, on the following conditions that; no part of the external structure may be in front, and/or project beyond the side and top, and/or be located more than 1.5metres rearward of the cab, and there shall be only one(1) transversal rollbar outside the cab.

5.2.5 Protective padding: shall be used on all members of the safety cage that encroach on the occupant's head space (as defined in Appendix Two Schedule A, Diagram 4.6(6)).

5.3 Safety harness: As a minimum, a six-strap safety harness in full compliance with the current Appendix Two Schedule A requirements shall be installed for each seating position. These harnesses shall respect the expiry date of the relevant standard.

5.4 Door window protection: If the window next to an occupied seating position is open or missing a window net shall be fitted in accordance with Appendix Two Schedule A. The net shall cover the window aperture (but not impede the drivers' vision).

5.5 Driver and passenger seats: A competition seat (incorporating a head restraint) shall be fitted for the driver, mounted in accordance with Appendix Two Schedule A. All other (passenger) seating is optional but when fitted shall respect the same type / installation requirements as the driver's seat.

5.6 Fire extinguisher/s: As a minimum, a hand-held extinguisher in full compliance with the current Appendix Two Schedule A requirements is mandatory. This requires a metal retaining system incorporating a minimum of two(2) quick release metal straps to be used. Additionally, a plumbed-in system in full compliance with FIA Appendix J, Article 290-2.7.9 may be installed.

5.7 Engine shutdown / Circuit breaker: An isolator switch that shuts down the engine and disconnects the battery/s from all electrical circuitry (except any automatic fire extinguisher system) shall be installed. This switch shall be painted yellow and identified by a red spark on a white edged, blue triangle. Additionally, a label not less than 200mm width shall be affixed to each side of the vehicle to indicate the location of the switch. The switch and the engine shutdown shall be located outside the cab between the chassis rails and forward of the fifth wheel. The main earth between batteries and the chassis, or the negative lead in the case of insulated-return wired vehicles, shall be coloured yellow. The circuit breaker shall remain accessible at all times, even if the vehicle is lying on its side or roof.

Note: *For mechanical engine shut-down systems, a shut-down device may be fitted which is separate to the electrical circuit breaker, however, the device shall be fitted close to the circuit breaker, be clearly marked and have clear operating instructions (e.g., pull knob to stop engine). Additionally, an engine shut-down switch shall be fitted in the cab, with positive on-off positions clearly marked. It shall be operable by the driver in a belted in position. The switch must also isolate any electric fuel pumps.*

5.8 SIDE, FRONT and REAR PROTECTION GUARDS:

5.8.1 Side Protection Guards: Metal side guards shall be installed between the mudguards of front and driven axles to prevent wheels interlocking and to protect the fuel tanks as follows:

- Aluminium may be used in place of steel, but material thickness shall be doubled.
- Mounting outriggers (chassis to side guards) shall be constructed from material at least equal in strength to the side guard material.
- Maximum spacing between any two(2) outriggers is 1.5metres.
- Maximum unsupported side guard overhang is 500mm.
- Maximum permitted gap (in side view) between front or rear mudguard and the side guard is 100mm. Outriggers shall be mounted to the chassis using spreader plates of at least 100cm² (area) and 5mm thickness. These plates shall be welded to the outriggers and bolted or welded to the chassis. At least four(4) M8/ISO 8.8 bolts as a minimum shall be used for each outrigger.
- The bottom of the side guard must be between 400mm and 500mm above the ground.
- The top must be no more than one(1) metre from the ground.

- The side guards must extend outward so that they are within 300mm of the extremities of the vehicle plan view.

- They may not project beyond the extremities of the vehicle plan view.

- The side guards must not present any sharp angles or corners in plain view.

Note: *It is permitted to cover the side guards with fairings (refer Article 8.2.3), provided all such fairings are readily detachable to permit inspection. Additionally, extra guards may be added, provided they do not project beyond the extremities of the vehicle plan view or extend forward beyond any part of the front tyres.*

Side guards may be constructed from any combination of the following material:

- Steel channel 100mm high x 50mm x 5mm

- Steel box section 100mm high x 50mm x 3mm

- Steel tube 65mm diameter x 3mm wall thickness

- Steel tube 50mm diameter x 3mm wall thickness.

5.8.1.1 Mandatory inspection requirement: All tubes and box sections shall have a 5mm hole drilled in a visible position for inspection purposes.

5.8.2 Front protection guard: The front face shall be vertical and in line with the front face of the standard bumper, and the top face shall be in line with the top face of the standard bumper.

Note: These requirements shall be read in conjunction with the requirements imposed for the front bumper.

5.8.3 Rear protection guard:

- The rear face shall be vertical, and

- No part shall extend more than 200mm behind the end of the chassis rails, and

- The top face shall not be above the top flange of the main chassis rails, measured at the extreme rear of the vehicle, and

- The overall width of the rear guard shall not exceed 2550mm.

5.8.4 Front and Rear protection guards: shall comply with the following:

- The bottom face of each guard shall be between 300mm and 400mm above the ground. This bottom face shall be between 1800mm and 2300mm wide, and

- All exposed parts of the guards shall be made of tube, the specification of which should follow that of the roll protection or side guard specifications above, and

- All tube ends shall be neatly capped, and

- Lower tubes shall be joined to top tubes / bumper(s) with no sharp edges, corners or angles exposed, and

- Panels may be installed to cover all or part of the guards, and

- Each guard shall be able to withstand a load, equal to the vehicle weight on the rear axle, applied horizontally to the bottom tube, along the axis of the vehicle. It shall also be capable of supporting the weight of its own end of the vehicle.

Note: The load requirements may be checked by:

- *Positioning the vehicle with the guard against a wall, engaging a gear and applying load until the driven tyres spin on dry road, and/or by jacking up the appropriate end of the vehicle on the guard, with the load spread over the central 100cm of the bottom tube.*
- *These loads must not cause permanent distortion of the guard(s).*

6.0 GENERAL CONSTRUCTION REQUIREMENTS

6.1 **Cab condition:** The cab shall be constructed to maintain strength and integrity. Any significant structural corrosion shall warrant the vehicle ineligible

6.1.1 The cab may be locally manufactured to a tradesman like standard and must retain the general OE shape and size. Materials are limited to aluminium alloys, ferrous metals and fibre-glass composites. Article 6.1.2 must be observed in the manufacture.

Bonnets are free but they must conform to 6.1.3.

6.1.2 **Cab isolation from engine and transmission:** All trucks shall have a protective bulkhead of non-flammable material between the engine/transmission and the driver's compartment capable of preventing the passage of fluid or flame. All gaps shall be adequately sealed. All levers penetrating the bulkhead must be fitted with boots or gaiters that act as a seal. Magnesium is prohibited for bulkheads.

6.1.3 **Cab and bonnet lock down:** Trucks with tilt cabs shall have an additional device that bridges the normal tilt lock mechanism and will prevent cab tilt in the event of that mechanism disengaging. The weakest part of the device shall be either one steel bolt or pin of at least 16mm diameter to ISO 8.8 minimum, or two steel bolts or pins of at least 12mm diameter, to ISO 8.8 minimum. Vehicles with separate opening bonnets shall be fitted with an additional locking device, in addition to the standard bonnet lock, to prevent the bonnet from opening in case of failure of the standard lock.

6.2 **Fuel lines:** shall not be routed through the interior of the cab.

6.3 **Oil lines:** within the interior of the cab are solely restricted to those supplying the temperature and pressure gauges and shall be metallic.

6.4 **Coolant lines:** within the interior of the cab are solely restricted to those supplying the temperature/pressure gauges and the cab heater. All such lines shall be painted red and, if non-metallic, shall be enclosed in a solid metal cover or internally/externally metal braided hydraulic pressure hose used.

6.5 **Windscreen and other glazing:** All glazing shall comply with Schedule A Article 4.5 Door windows may be removed (together with their operating system), in which case the fitment of a window net becomes mandatory.

Recommendation: All glazing excepting the windscreen should have 'safety film' applied to the inside.

6.6 **Steering lock:** mechanisms shall be removed or rendered inoperative.

6.7 **Park brake:** The location of the park brake control shall be clearly indicated by a 200mm wide notice inside the cab. The park brake control shall remain operable by the belted-in driver.

6.8 **Windscreen wipers and washers:** shall remain fitted and in compliance with Appendix Two Schedule A.

6.9 **Engine breather/s:** All engines with external crankcase venting shall have a catch tank/s installed with a capacity of at least four(4) litres. If multiple tanks are installed, each tank shall be at least two(2) litres capacity. Tanks shall be constructed of suitable materials that maintain their shape / capacity at all times.

7.0 CHASSIS

7.1 **Modifications permitted:** The chassis assembly may only be modified for the following purposes:

- To satisfy the safety requirements of this Schedule,
- To enable the fitment of an alternative engine / transmission assembly,
- To enable fitment of authorised suspension modifications (refer Article 10).

7.1.1 A Truck Manufacturers chassis may be replicated through local manufacture. The minimum material that can be used for local manufacture of a "C" section chassis is; 250mm high, 90mm wide, and 5mm thick "Easysteel Strenx 700 MC Plus". The profile of the chassis, if not parallel, must follow the contour of the OE chassis. The onus is on the competitor to prove compliance. MotorSport NZ will approve, and a permanent ID Seal will be applied and recorded in the Vehicle Logbook.

7.2 **Towing attachment:** All trucks shall have a front towing attachment of sufficient strength, painted yellow, red or orange, that does not project forward beyond the front face of the bumper.

8.0 CAB and BODY

8.1 The original appearance of the truck cab shall be maintained. The following requirements apply:

8.1.1 **Door locks:** shall be kept in the unlocked position while the truck is competing and shall be fully operable from both the inside and the outside.

8.1.2 **Driver and Passenger seats:** shall comply with Article 5.5. All standard seating may be removed.

8.1.3 **Interior trim:** is free, hence may be removed.

8.1.4 **Steering wheel:** may be substituted for a wheel of proprietary manufacture in accordance with Schedule A.

8.1.5 Foot pedals: may be modified, provided that modification to the cab is not required.

8.1.6 External rear view mirrors: It is permitted to fit additional rear view mirrors, although the standard type of commercial vehicle rear view mirror must be retained and kept in working order, at all times.

8.2 The following requirements apply to the truck body:

8.2.1 Mudguards: shall be fitted that cover the full width of the tyre/s around a continuous arc of 120^{o} having a continuous surface of rigid material uninterrupted by any gaps, holes, slots or vents. Mudguards shall extend forward of the relevant axle centre line and the trailing edge of the mudguard shall be no more than 75mm above the relevant axle centre line.

8.2.2 Aerodynamic devices: as fitted by the manufacturer may be removed, but shall be removed if they contravene the requirements of 'body fairings' as detailed below. An aerodynamic device may be fitted above or in front of the fifth wheel (area), providing the width is less than the truck's track. Additionally, under these same provisions, aerodynamic devices may be fitted on the horizontal plane of the bonnet

8.2.3 Body fairings (e.g. panels fitted for appearance and advertising purposes): Both side and top fairings shall not extend beyond the truck's (unfaired) plan view but may be fitted subject to the following provisions:

- fairings shall be firmly affixed and made of rigid material, and
- fairings may not impede access to any safety items (e.g. cut-off switches), and
- where fairings impede inspection of side guards, they shall be removable, and
- top fairings shall be able to support the weight of a person walking on them, and
- fairings may not extend forward of the front axle mudguard, or rearward of the end of the chassis rails, and
- wheels and tyres shall not be obscured, and
- when viewed from the side, all parts of all fairings must be parallel to the chassis rails for their entire length, and
- maximum height of any fairing shall not exceed 100mm above the top face of the chassis rails.

Note: *Rear axle mudguards may be integral with fairings.*

8.2.4 Front bumpers: may be modified or replaced, but the requirements of Article 5.8.2 (Front protection guard) shall take precedence.

9.0 ENGINE

9.1 **Engine type:** shall comply with Article 3.1.1. The engine shall not be mounted further rearward than the mid point of the vehicle's wheel base, (measured at the rear most part of the engine block).

9.1.1 **Supertruck:** being for trucks equipped with electronic engines and no restrictions on engine displacement (Electronic engine being defined as Electronic diesel engines utilizing an electronic control unit (ECU) and sensors to manage fuel injection). The freedoms authorised under Article 9.2 as detailed below.

9.1.2 **Historic Truck:** Being for non electronic trucks with no restrictions on engine displacement and the freedoms authorised under Article 9.2 as detailed below.

9.2 **Engine modifications permitted:** Engines and their internal components and design shall be free and the following provisions:

9.2.1 **Cylinder head/s and gasket/s** are free.

9.2.2 **Compression ratio** is free.

9.2.3 **Valves** are free but not their operating principle (e.g. coil / hydraulic springs etc).

9.2.4 **Pistons** including rings and pins are free.

9.2.5 **Connecting rods** are free provided that 80% by weight is of pure iron.

9.2.6 **Crankshaft** is free provided it is entirely of ferrous material. The use of non-ferrous materials for balancing the crankshaft is not permitted.

9.2.7 **Bearings:** are free but not the type, which shall remain standard.

9.2.8 **Fuel feed system:** (injection) system is free.

9.2.9 **Camshafts:** are free provided they are of ferrous material.

9.3 **Exhaust system:** components after the turbocharger may be modified and may include mounting the exhaust piping vertically behind the cab.

9.3.1 **Exhaust exit guard:** A protection device shall be fitted to the extreme end of all exhaust pipes that shall ensure no broken engine components exit the system.

9.4 **Induction system:** Components of the air induction system, up to the turbocharger, may be modified or replaced, provided that no part projects more than 200mm beyond the side or top extremities of the cab.

9.5 **Forced induction:** The fitment of both **turbochargers** and/or a **supercharger** is authorised. In the case of turbochargers, a maximum of two(2) units are authorised and in the case of a supercharger, a maximum of one(1) unit is authorised. Installation must be achieved without the need to alter the external shape of the body or the chassis. It is authorised to replace the induction manifold and the intake system with components of free design to facilitate fitment.

9.5.1 The fitment of intercoolers is authorised.

10.0 SUSPENSION

10.1 Dampers (shock absorbers): Damper units are free including mounting brackets, provided no more than two(2) single units are fitted to any one(1) axle.

10.2 Anti-roll bars (sway bars): Anti-roll bar systems shall solely perform the function of control of relative lateral roll between axles and chassis. Axle location or geometry shall not be affected in any way by the anti-roll bars. Apart from this stipulation all anti-roll bar systems may be added to and/or modified.

10.3 Ride height and attitude: The chassis may **not** slope downward toward the rear of the vehicle when measured at the midpoint of the wheelbase. Any device that alters the ride height while the truck is moving is specifically forbidden. If originally fitted such device/s shall be removed.

Note: *The requirement of Article 4.4 'Ground Clearance' needs to be respected at all times.*

10.4 Wheel track and vehicle width: The combination of axles and wheels/tyres fitted shall not cause the vehicle width to exceed 2550mm. In addition to this overall restriction, the combination of axles and wheels/tyres fitted must not increase the front or rear wheel track by more than 150mm beyond the manufacturer's standard specification.

10.5 Castor angle: The castor angle is free and adjusting wedges may be installed to any steering axle.

10.6 Camber angle: The maximum total permitted camber angle on a steering axle is -3° (3 degrees negative camber) with a total measuring tolerance of .5° (Half a degree, 30´). The measurement must be taken on either side independently at 0mmm – 0´ toe.

10.7 Suspension: The suspension components are free with the exceptions that:

(i) In the case of pneumatic suspension, the tank must be of unmodified proprietary manufacture. It is forbidden for the vehicle's air system pressure to exceed 12 bar, and

(ii) It is forbidden for suspension components, other than those of proprietary manufacture, which have any axle locating function to be made of non-ferrous material (excepting bearing bushes).

(iii) It is prohibited for any suspension which uses air components to adjust ride height to be operated by the driver from inside the cab.

11.0 GEARBOX

11.1 **Gearbox:** the make and type of is free (manual or automatic) provided it is of a type normally fitted to heavy trucks and incorporating a functional reverse gear.

11.2 **Clutch:** assembly and operating mechanism is free.

11.3 **Gear ratios:** for the gearbox and final drive are free.

11.4 **Axle(s):** The front axle assembly must be rigid and of propriety manufacture. Independent suspension on either/both axles is strictly prohibited. The front axle assembly may not be driven. It is not permitted to use the rear axle for active steering. Alternative axle(s) may be fitted but must be rated by the axle manufacturer as having an on-road weight rating equal to, or greater than, the trucks original axle(s).

11.5 **Propeller shaft (drive shaft):** is free provided it is of proprietary manufacturer and appropriately rated.

11.6 **Propeller shaft (drive shaft) safety hoops:** A minimum of two(2) steel safety hoops shall be installed for each propeller shaft ensuring that in case of shaft breakage, the shaft location shall be maintained.

12.0 ELECTRICAL SYSTEM

12.1 **Lighting systems:** The fitment of lights is free, excepting the mandatory provisions for a rear warning light and brake lights as detailed below. Any forward facing lights of more than 32cm² surface area, shall be adequately protected or alternatively they may be removed.

12.2 **Rear facing red warning light:** of at least 20 watt to a maximum of 30 watt or equivalent LED is mandatory. A single unit on the vehicle's centre-line or two(2) individual units equally spaced shall be mounted on the rear panel of the vehicle cab as high as possible. The light units shall be at least 60cm² but not exceed 100cm². **These lights MUST be switched on for the duration of all qualifying sessions and races.**

12.3 **Brake Lights:** Shall be mounted on both sides of the rear of the cab, midway to the height of the cab and shall be functional at all times and must not be obscured. Additional brake lights may also be fitted to the rear of the chassis.

12.4 **Battery/s:** shall be to manufacturer's original specification or an equivalent specification. They must not be located inside the cab, nor shall they be visible from outside the vehicle. They shall be securely fastened, with each battery to be held down by at least two(2) steel bolts of size M10 or greater. The live terminal shall always be shielded. Charging systems shall remain in circuit.

13.0 BRAKES

13.1 **Braking system:** shall be capable of stopping the truck as required. A full dual circuit service brake system must be fitted. One of those circuits activates on all the front wheels and the other circuit activates on all the rear wheels.
Both circuits together must activate the brakes on all the wheels
There are no restrictions on the braking system provided all of the components are of proprietary manufacture and fit for purpose.

13.1.1 It is mandatory to have a system to prevent the brake failure in one circuit affecting the pressure on the other circuit.

13.2 **Parking brake:** An effective parking brake system is mandatory, operated by mechanical energy (i.e. not solely reliant upon air pressure).

13.3 **Additional cooling:** Is authorised using water and/or ducted air only, provided the cooling ducts comply with the bodywork regulations of Article 8.0. The water tanks shall be securely fitted to the chassis and adequately protected.

13.4 **Reservoirs and air pressure:** Air reservoirs shall be of unmodified proprietary manufacture with air pressure governed to 9.0 bar (130 lbf/in^2 or 900 KPa).

14.0 ROAD WHEELS

14.1 **Wheel rims:** Shall be of unmodified proprietary manufacture, the type and material being free, excepting multi-piece 'split rim wheels' are specifically not authorised. Steer axle rims may be modified solely to suit "Button Head" wheel nuts (example in Schedule TR Diagrams).

14.1.1 **Wheel rim dimensions:** The maximum authorised rim width is 229mm, provided no part of rim/tyre combination fouls on any part of the truck under extremes of steering or suspension movement.

14.2 Wheel nuts for the front axle must use "Button Head" type; and have a minimum head thickness of 11 mm, a minimum diameter of 50 mm and a minimum thread depth of 19mm. They must have chamfered edges to avoid sharp points.
Or you must adhere to 14.2.1.

14.2.1 **Wheel Mounting:** shall utilise wheel nuts and studs of unmodified proprietary manufacture that match the wheel rim mounting design. All wheel nuts must be kept correctly tightened to the manufacturer's specifications.

14.3 **Wheel spacers / adaptors:** fitted between the road wheel rim and the hub/drum are specifically prohibited.

14.4 **Wheel rim balance weights:** removable balance weights are specifically prohibited.

15.0 TYRES

15.1 **Tyres:** Tyres are a safety critical item and as such shall remain compliant with the tyre regulations of this Schedule at all times during competition.

15.2 **Tyre type:** unless advised otherwise by official bulletin, the only tyres authorised for the current Championship are:

- **Front Axle;** shall be either GITI or **Goodyear 315 / 70R 22.5** race tyre.
- Rear Axle; shall be either GITI or **Goodyear 315 / 70R 22.5** race tyre

15.3 All tyres fitted to competing trucks shall comply with the following:

- Tread depth that complies with relevant national legal requirements for the duration of the race meeting, and
- Have no grooves added, except where permitted under this Schedule, and
- Special tread compounds and/or patterns are not permitted, nor are any chemical compounds, and
- Maximum cold inflation pressure shall not exceed the tyre manufacturers' specification.
- Each axle must have the same brand and type of tyre fitted. It is permissible to have a different brand and type of tyre on the front axle to the rear axle.

16.0 FUEL TANK/S

16.1 **Type:** Fuel tanks shall be of unmodified proprietary manufacture and shall be fully proofed against accidental fuel spillage / leakage from fillers and vents and filler caps must have a positive closure action. However, the capacity, design and material type are free.

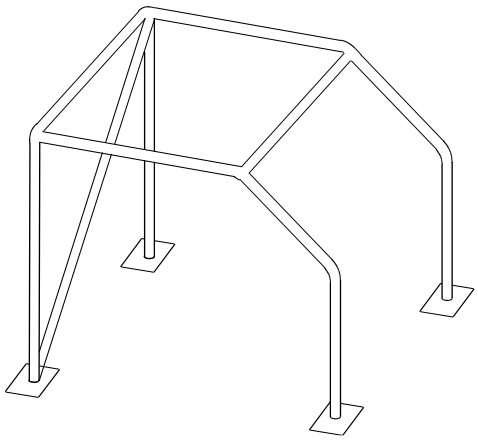
Recommendation: It is highly recommended that FIA FT3 safety fuel tank/s, as detailed in FIA Appendix J, Article 253 are installed.

16.2 **Mounting position:** Subject to the following requirements, the fuel tank position is free:

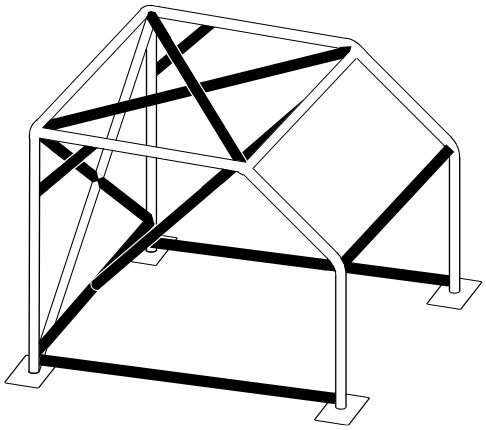
- Tank/s shall be adequately protected from impact, and
- Tank/s shall be securely mounted to the chassis, and
- Tank/s shall not be fitted inside the cab, and
- Tank/s mounted forward of the fifth wheel coupling may be mounted above the chassis rails if desired, and
- Tank/s mounted rearward of the fifth wheel coupling shall have all parts of the tank/s below the line of the top of the chassis rails. They shall also be protected by a rear guard made to the side guard specifications.

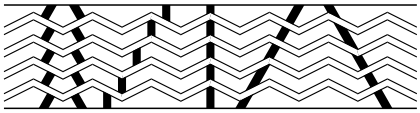
Schedule TR – Diagrams

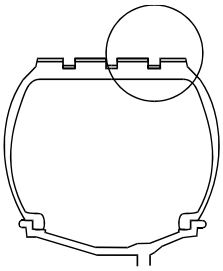
D1.

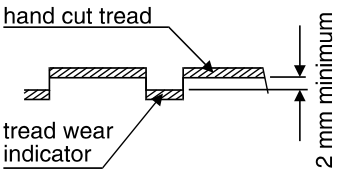


D2.









“Button Head” Wheel Nut