



2021 V8 Touring Car Super3 Series Technical Regulations



Version 1

Published 24/02/2021

2021 V8 Touring Car Super3 Series Technical Regulations

A capitalised and italicised word in this document is defined in the National Competition Rules (*NCR*) or the Technical Appendix, Definitions Technical of the Motorsport Australia Manual (*Manual*).

Any **HEADING** is for reference only and has no regulatory effect.

Contents

S1	TITLE AND JURISDICTION	4
S1.1	Title	4
S1.2	Authority / Jurisdiction	4
T1	PHILOSOPHY	5
T2	ELIGIBILITY	5
T3	<i>MINIMUM WEIGHT</i>	6
T4	FREEDOMS PERMITTED	6
T5	DAMAGE REPAIRS	6
T6	GENERAL	6
T7	LOG BOOK	7
T8	EXAMINATION FOR ELIGIBILITY	7
T9	ENGINE	7
T9.1	General	7
T9.2	<i>Cylinder Block</i>	8
T10	CYLINDER HEAD/S	9
T12	INLET SYSTEM	10
T13	OTHER ENGINE COMPONENTS	10
T14	ENGINE SPEED LIMIT	11
T15	PIT LANE SPEED LIMITER	11
T16	COOLING	12
T17	EXHAUST SYSTEM	12
T18	ENGINE CONTROL	13
T19	TRANSMISSION	13
T20	GEARBOX	13
T21	OTHER COMPONENTS	14
T22	REAR AXLE ASSEMBLY	15
T23	TRACTION CONTROL	16
T24	SUSPENSION	16
T25	REAR AXLE LOCATION	16
T26	PIVOT POINTS	16
T27	ANTI ROLL BARS	16
T28	SHOCK ABSORBERS	17
T29	FRONT <i>CROSS MEMBER</i>	17
T30	REINFORCEMENT BARS	17

T31	ROLL CENTRE ADJUSTMENT	17
T32	RIDE HEIGHT ADJUSTMENT	17
T33	SUSPENSION ADJUSTMENT.....	18
	T33.1 Springing Medium	18
T34	WHEELS	18
T35	BRAKES	19
T36	STEERING.....	19
T37	ELECTRICAL SYSTEM.....	20
T38	BODYWORK	22
T39	EXTERIOR.....	23
T40	COCKPIT.....	24
T41	DASHBOARD.....	25
T42	DOORS.....	25
T43	REAR VISION MIRRORS	25
T44	TAIL SHAFT LOOPS	25
T45	ADDITIONAL ACCESSORIES.....	26
T46	WINDOWS	26
T47	FUEL TANK	26
T48	SAFETY EQUIPMENT	27
T49	AUTOMOBILE MARKINGS	27
ATTACHMENT 1	28	
	DECAL PLACEMENT.....	28

2021 V8 Touring Car Super3 Series

Technical Regulations

S1 TITLE AND JURISDICTION

S1.1 Title

This Series will only be known as and referred to as the “2021 V8 Touring Car Super3 Series”.

S1.2 Authority / Jurisdiction

- (a) Each round of the Series will be conducted in accordance with the Supercars Operations Manual 2021 as relevant to DS2/DS3 except for Division G.
- (b) Each *Automobile* must comply with the 2021 V8 Touring Car Super3 Series Technical Regulations to be eligible for the Series.
- (c) This Series has been sanctioned by *Motorsport Australia* as an Authorised Series.
- (d) Australian Racing Group Pty Ltd has been appointed as the Category Manager (CM) by *Motorsport Australia* for this Series.

Contact Details: **Liam Curkpatrick**

Tel. 0438 033246

Email. liam@australianracinggroup.com.au

2021 V8 Touring Car Super3 Series

Technical Regulations

T1 PHILOSOPHY

- (a) The category is based on de-registered Holden Commodore and Ford Falcon V8 Supercars which have competed as V8 Supercars post 1996 and 5 litre V8 Ford Falcon and Holden Commodore race cars with a proven heritage as competing in the Australian Touring Car Championship post Group A and pre AVESCO V8 Supercars.
- (b) These Technical Regulations are largely based on the respective *Automobile* technical requirements as documented by AVESCO/VESA/CAMS, with limited modifications designed to enhance reliability and cost effectiveness.
- (c) During its life the V8TCS3 category will be subject to amendments approved by *Motorsport Australia* to maintain exciting, cost effective *Competition*.

T2 ELIGIBILITY

- (a) The requirements of these regulations apply to former Group 3A V8 Touring Cars (V8TC), which are defined as large scale Australian produced Holden Commodore and Ford Falcon, right hand drive, four door vehicles, fitted with pushrod two-valve normally aspirated V8 engines.
- (b) Each *Automobile* must have a registered history with AVESCO/VESA/CAMS and documentation must be provided to establish a clear line of history for the nominated year the *Automobile* is to represent.
- (c) No new *Automobile* may be constructed.
- (d) Each *Automobile* must comply with the Technical Appendix of the *Manual*.
- (e) Each *Automobile* must run with a V8TCS3 category approved MoTeC engine electronic control unit (ECU).
- (f) Scrutineers in conjunction with the Chief Scrutineer may refer to the respective *Automobile* Technical Regulations as published for the nominated year by AVESCO/VESA/CAMS.
- (g) Any aspect relating to the construction and/or modification of an *Automobile*, which is not expressly permitted in these regulations is prohibited. Permitted modifications are allowed only on the condition that the weights, specifications and/or dimensions as documented in the relevant Motorsport Australia Automobile Homologation Documents are adhered to.
- (h) The following models of *Automobile* are eligible in the V8TCS3 category:
 - (i) Ford Falcon EF to FG
 - (ii) Holden Commodore VP to VE2

T3 MINIMUM WEIGHT

- (a) At no time may the *Minimum Weight* of an *Automobile* be less than 1350 kg.
This weight must be achieved without the *Driver*, fuel or *Driver's* equipment.
- (b) The minimum front axle weight of an *Automobile*, measured at the front axle centreline, is 750 kg.
This weight must be achieved at all times, without fuel, *Driver* or *Driver's* apparel on board.
- (c) It is permitted to complete the weight of an *Automobile* by one or more *Ballasts* provided that they are strong unitary blocks, fixed by means of tools and capable of being sealed by the Chief Scrutineer.

T4 FREEDOMS PERMITTED

- (a) Where in these regulations freedom is permitted to fit specific parts:
 - (i) Holes may be drilled/made to allow the passage or fixing of that part.
 - (ii) The minimum local modifications for clearance or mounting purposes only may be made in the surrounding area.
- (b) If the permitted part requires modifications to be made to "mating" parts, then those modifications are permitted.
- (c) Any modification permitted under these regulations is allowed only on the condition that the weights and/or dimensions contained in these regulations and the Homologation Documents are respected.
- (d) Unless specifically permitted in these regulations, the use of titanium or titanium alloy in any part of an *Automobile* is prohibited.
- (e) Throughout the *Automobile*, the use of any nut, bolt, screw, rivet, weld or adhesive may be replaced by the use of one of the other methods of attachment contained in this regulation.
- (f) Any damaged thread may be repaired by the fitment of an insert, with a similar internal diameter (e.g. helicoil).

T5 DAMAGE REPAIRS

- (a) Restoration of body shape and *Chassis* geometry following accidental damage is permitted by the addition of any material necessary to affect the repairs (e.g. body filler, weld metal).
- (b) All *Bodywork* including any repair of damage at an *Event* must be to a tradesman like standard and must permit the *Automobile* to be presented in as near to original condition as possible and is subject to approval by the Chief Scrutineer.

T6 GENERAL

Each *Competitor* is responsible for ensuring that each *Automobile* complies with the conditions of eligibility contained in these regulations and relevant Motorsport Australia Homologation Documents:

T7 LOG BOOK

- (a) Each *Automobile* must be subject of a current Motorsport Australia Log Book.
- (b) Each *Automobile* must correspond with the detailed description contained in the relevant homologation document and the Motorsport Australia Log Book issued for that make and model of *Automobile*.
- (c) The original AVESCO/VESA/CAMS Automobile Log Book must be produced upon request.

T8 EXAMINATION FOR ELIGIBILITY

- (a) Should the Chief Scrutineer suspect at any time that an *Automobile* does not comply with these regulations, the *Competitor*, or nominated representative, must be so advised and given the opportunity to comment on the suspected or alleged ineligibility.
- (b) Any comment so made may be recorded by the Chief Scrutineer, and subsequently may be presented at any Stewards inquiry.
- (c) The Chief Scrutineer and/or Scrutineers may refer to the original V8 Supercar/CAMS Technical Regulations for the particular model *Automobile* being inspected. Scrutineers may also carry out scrutineering by direct comparison of *Automobile* components as listed in the Motorsport Australia Homologation Documents.
- (d) The checking for eligibility and sealing as specified in these regulations prior to *Competition* will be performed by V8TCS3 personnel authorised by the CM. The presence of a *Seal* will not automatically protect the *Automobile* from being subject to a protest, or from examination by Scrutineers.

T9 ENGINE

T9.1 General

- (a) Each make/model of *Automobile* must only be fitted with a *Cylinder Block* and cylinder heads as detailed in the relevant Vehicle Specification Documents (VSD).
- (b) Each engine used during an *Event* must comply with all the dimensions in these regulations.
- (c) The maximum Engine Capacity permitted is 5000 cc + 25 cc.
- (d) With prior express permission in writing and with all restrictions applied by the TA, a *Cylinder Block* may be bored to achieve a total capacity of 5025 cc. All other engine dimensions will still apply.
- (e) The compression ratio must not exceed 10.0:1.
- (f) The engine must not produce power above 7500 rpm.
- (g) The engine must have suitable provision for the cylinder heads, sump and distributor to be sealed to the *Cylinder Block* so that the cylinder heads, sump and distributor are not able to be removed. Once an engine has been sealed by the TA, the *Seals* must remain intact and legible at all times. These *Seals* must only be removed by the TA or with the express prior approval of, and subject to the conditions of, the TA.

- (h) The minimum engine component weights stated in Rules G8.7 & G8.8 of the Supercar Operations Manual must be complied with at all times during any *Event*. It is permitted to use components which do not comply with these minimum weights during *Passenger Rides* and *Testing*.
- (i) Each Ford engine fitted with D3 cylinder heads and each HMS Holden engine, must maintain the same positioning of the cylinder heads in relation to the cylinder bore centre line. The bore centre line must be in the same position as specified by the engine manufacturer and the sample *Cylinder Blocks* held by Supercars.
- (j) Each Ford D3 and HMS Holden inlet and exhaust valve position in the cylinder head must remain as specified by the engine manufacturer and the sample cylinder heads held by Supercars.

NOTE: A radial tolerance of 1.0 mm will be applied to both inlet and exhaust valve centre lines with this dimension being measured at the cylinder head face.
- (k) Each *Automobile* must only mount and locate the engine, bell housing and gearbox combination by means of the engine mounts and the rear gearbox *Cross Member* mount.
- (l) Any engine component or accessory is prohibited to be constructed of magnesium alloy.

T9.2 Cylinder Block

- (a) The following conditions apply to the approved *Cylinder Block*:
 - (i) The bore size must be 101.473 mm or greater.
 - (ii) The fitment of sleeves to the *Cylinder Block* is permitted.
 - (iii) The normal section of each cylinder must be circular.
 - (iv) The location of the *Cylinder Block* within the *Body Shell*, as measured from the front edge of the oil pan mounting flange must be as stated in the relevant VSD.
 - (v) The axis of the crankshaft (the pitch angle of the engine) must be a minimum of 2 degrees and a maximum of 4 degrees downwards towards the rear with respect to the V8 Supercars "Z" datum.
 - (vi) The engine mounts are free but not their number nor position save for the following:
 - (A) It is permitted on the Ford *Cylinder Block* to utilize additional engine block mounting points. The additional engine block mounting points must be placed in the pan rail and must not be located past the second and third main bearing journals on either side of the *Cylinder Block*.
 - (B) It is permitted to mount the engine by the sump to the front suspension *Cross Member* complying with Schedule G8.6 of the Supercar Operations Manual. Each design of this type is required to be submitted to the TA prior to being implemented.
 - (C) Any other component or accessory is prohibited to locate or mount the engine to the *Chassis*.
 - (vii) The cylinder head face must remain at 90 degrees to the cylinder bore centre line.
 - (viii) It is permitted to add or remove material to or from the *Cylinder Block*, subject to:
 - (A) the integrity of the original casting of the *Cylinder Block* being respected; and
 - (B) that no attempt is made to vary the basic design of the *Cylinder Block* beyond modifications permitted in these regulations.

- (ix) It must always be possible for the *Cylinder Block* to be identified as the approved *Cylinder Block*.
- (x) The camshaft lifter bores must remain in the same location as specified by the manufacturer and the samples held by Supercars on the Ford M 6010 Boss 302 and the Holden Motor Sport 22534350 *Cylinder Blocks*.
- (xi) The minimum weight of any *Cylinder Block* used must be 70 kg. The weight of the block will include any core/oil gallery and rear cam tunnel plugs, cam bearings and any internal oil feed scavenge lines and removable rear main *Seal* carrier.
- (xii) A block that is less than 70 kg is permitted to have *Ballast* weight to bring it up to 70 kg placed on either:
 - (A) the *Chassis* rail, no further rearward than X+1855, no lower than the underside of the front *Chassis* rail and must not protrude more than 25 mm from the inner face of the front *Chassis* rail and be equally distributed side to side of the *Automobile*: or
 - (B) the block itself in a position approved by the TA that does not lower the centre of gravity of the block.
- (xiii) The maximum relative density of any material used as *Ballast* is 12.

T10 CYLINDER HEAD/S

- (a) Subject to respecting these regulations and the homologated dimensions, modifications to the cylinder head are free, save for the following:
 - (i) It is permitted to add material to the cylinder head provided that the integrity of the original casting is respected and that no attempt is made to vary the basic design of the homologated component beyond the permitted modifications and that it must always be possible for the cylinder head to be identified as the homologated part.
 - (ii) The original spark plug location must be retained in all respects.
 - (iii) It is permitted to use valves, valve spring retainers and collets manufactured from Titanium alloy.
 - (iv) Valves may only be opened by mechanical action and closed by means of coil springs.
 - (v) For each Ford and Holden Motor Sport engine, the maximum inlet valve diameter is 53.97 mm (2.125 inches)
 - (vi) The minimum inlet and exhaust valve stem diameter is 7.0 mm.
 - (vii) The inlet and exhaust valve heads and stems must be solid.

T11 RECIPROCATING COMPONENTS

- (a) Each reciprocating component is free, except that:
 - (i) No part of the piston may protrude beyond the cylinder head face of the *Cylinder Block* when the piston is at TDC.
 - (ii) The minimum weight of each piston, including the piston pin but not including the piston rings or retainers, is 500 grams. Each stem must be solid.
 - (iii) Each connecting rod must be of ferrous alloy.

- (iv) The minimum weight of each connecting rod, including the connecting rod bolts, nuts and washers but not including the “big end” bearings, is 500 grams.

T12 INLET SYSTEM

- (a) The inlet/induction system is free, except that:
 - (i) The engine must be naturally aspirated.
 - (ii) Water injection is prohibited.
 - (iii) Any device which alters the configuration of the manifold, induction system (eg; moveable inlet rams) or exhaust while the engine is operating is prohibited.
 - (iv) Throttle actuation must be exclusively by “butterfly” for any *Automobile* fitted with cylinder heads of material other than cast iron.
 - (v) There must be a direct mechanical connection from the accelerator pedal to the throttle/s of the engine, so the energy used to activate the throttle/s must be exclusively generated and controlled by the *Driver’s* foot.
 - (vi) With the exception of the full throttle stop and idle adjuster, any device which allows the throttle to be artificially positioned by resisting the force of either the *Driver’s* foot or the throttle return mechanism is prohibited.
 - (vii) The maximum number of fuel injectors is 8.
 - (viii) Each throttle link must be fitted with a return spring, which in the event of a failure in the throttle linkage must return each throttle to the closed position.
 - (ix) The maximum fuel pressure permitted at any time is 5.5 bar.
 - (x) Only one fuel injector per cylinder is permitted which must inject fuel directly into the side or the top of the manifold or trumpet only.
 - (xi) The only fuel injectors permitted are as follows:

Brand	Model	Part Number
Bosch	351/*363	0280150351/*0280150363
*Bosch 363 injector supersedes Bosch 351 injector.		
Bosch	036	0280150036
Rochester	2014	D04917104988
Rochester	2015	D049171104989
Siemens	F111405	F111405

T13 OTHER ENGINE COMPONENTS

- (a) Subject to these regulations, all of the other components necessary for the functioning of the engine including exhaust systems, engine management and the lubrication system are free.
- (b) Where a dry sump system is utilised, the engine oil pressure/scavenge pump assembly must be at the front of the *Cylinder Block* (to either side) and belt driven via an adaptor, off the nose of the crankshaft.

- (c) Each *Automobile* must be fitted with crankcase/oil tank breather/s discharging to the atmosphere and have fitted to such breather/s an oil-trap container (which must be empty at the start of *Competition*) of at least 3 litres capacity.
- (d) Camshafts are free for an *Automobile* with an 'H' pattern gearbox, but not their number and location, which must remain as homologated, nor the maximum valve lift, which is 0.730".
- (e) For an *Automobile* with a sequential gearbox and MoTeC M800 ECU, a control camshaft is required. In this case, the maximum valve lift is 0.710" (0 lash).
- (f) Any device which varies the valve timing whilst the engine is operating is prohibited.
- (g) The crankshaft must respect the homologated crankpin phasing and throw angles.
- (h) The stroke of the crankshaft must be a maximum of 77.22 mm and a minimum of 75.18 mm.
- (i) The minimum crankshaft "big end" journal diameter is 47.45 mm.
- (j) The minimum crankshaft "main" journal diameter is 56.55 mm.
- (k) The minimum weight of any crankshaft is 16.5 kg including the spigot bearing/bush but not including any keys, bolts or other external drive components.
- (l) The flywheel must be made of steel.
- (m) The flywheel ring-gear must either be an integral part of the flywheel itself or must be attached to the flywheel in the same manner as the production vehicle from which the *Automobile* has been derived.
- (n) The ignition distributor may be removed from its original location. The drive for the relocated distributor must be used exclusively by the distributor.

T14 ENGINE SPEED LIMIT

- (a) The engine must not be permitted to produce power above 7500 rpm.
- (b) Except for the operation of the Pit Lane Speed Limiter, under no circumstances may any engine management system or device provide any engine revolution limiting function under 6800 rpm.

T15 PIT LANE SPEED LIMITER

- (a) Each *Automobile* must be fitted with a functioning pit lane speed limiter (limiter), which must only operate as follows:
 - (i) The limiter must only operate using a secondary engine speed limit which must always be set below 3000 rpm and must only be activated by a switch operated by the *Driver*.
 - (ii) The limiter must not operate above 4000 rpm.
 - (iii) The switch that is used to activate the limiter must be connected directly to an engine management system input and must not be connected to any other device.
 - (iv) The limiter must be activated at all times while the *Automobile* is moving in pit lane.
 - (v) The engine rev limiting function used for the limiter must include a complete ignition cut of the engine.
 - (vi) Once the switch that is used to activate the limiter has been turned off, the engine management system must return immediately to the 7500 rpm limit.

- (vii) Regardless of the limiter, each *Competitor* always remains responsible for ensuring that the pit lane speed limit is respected, and that the limiter does not use a road speed input for any part of its operation.

T16 COOLING

- (a) Subject to other parts of this regulation, the cooling system, including the water pump, fans, screens and catch tanks are free.
- (b) The water pump must be driven directly by the crankshaft via a belt and must be mounted in the same position as in the production vehicle from which the *Automobile* is derived.
- (c) The cooling system must be arranged so that all of the return coolant from the radiator enters the engine via the *Cylinder Block*.
- (d) A replacement radiator may be fitted subject to:
 - (i) There being no modification to the *Bodywork*; and
 - (ii) It being fitted in the same general location relative to the engine.
- (e) Ducting to the front face of the radiator is permitted within the perimeter of the *Bodywork* but not lower than the lower edge of the front air dam.
- (f) Ducting of air from the rear of the radiator is prohibited.
- (g) Engine oil radiators are free and ducting to them is permitted, subject to the radiator/s and associated ducting being located within the perimeter of the *Bodywork* and not lower than the lower edge of the front air dam.
- (h) It is permitted to make the top of the radiator support panel removable solely to facilitate changing the engine.
- (i) Any part of any ducting (whatever the purpose of such ducting) is prohibited forward of a line drawn between the upper and lower edges of the rear opening in the homologated front air dam.

T17 EXHAUST SYSTEM

- (a) Each *Automobile* must be fitted with an exhaust system, to comply with Technical Appendix, Schedule B of the *Manual*.
- (b) No component of the *Chassis* may be used to evacuate exhaust gases.
- (c) It is permitted to modify the shape of the floor pan to accommodate mufflers, but any such modifications are limited to those surfaces of the floor pan which are located:
 - (i) Longitudinally, more than 100 mm behind the joint where the front bulkhead (which isolates the engine compartment from the *Cockpit*) meets the floor pan.
 - (ii) Laterally, between the inner edges of the sills.
- (d) It is permitted to:
 - (i) Remove material from the homologated side skirt/s to permit the protrusion of the exhaust through the skirt.
 - (ii) Fold or remove the seam of the rocker panel to assist with the exhaust pipe placement, subject to only the barest work necessary to facilitate this modification being undertaken.

- (e) Particular attention must be paid to the retention of the original strength and rigidity of the floor.
- (f) Any modification may not vary the horizontal height of the floor pan by more than 100 mm and may not be used for any other purpose other than to allow the fitment of mufflers.
- (g) No other component may impinge on the surface defined by the original floor pan.

T18 ENGINE CONTROL

The ignition timing of any engine must not vary by more than 6 degrees at any time while the engine is above 4000 rpm and above 10% throttle opening.

T19 TRANSMISSION

- (a) Each *Automobile* must be fitted with a clutch which, subject to the following requirements is otherwise free.
 - (i) The clutch must only have 3 driven plates that transmit torque directly to the input shaft of the gearbox.
 - (ii) The clutch must be controlled exclusively by the *Driver's* foot via a mechanical and/or hydraulic actuation system.
 - (iii) The clamping force which acts on the friction surfaces must be derived solely from a diaphragm spring.
 - (iv) With the exception of the fixed pedal stops, any device which allows the clutch to be artificially positioned, or its speed of engagement to be varied by resisting the force of either the *Driver's* foot or the diaphragm spring, is prohibited.
 - (v) The clutch driven plate/s must be a minimum of 180 mm in diameter.
 - (vi) The use of titanium and carbon fibre components is permitted.
 - (vii) Any device which allows or facilitates any aspect of clutch operation to be monitored in any way is prohibited.
 - (viii) The force required to disengage the clutch must only be applied towards the flywheel.
 - (ix) The machining of surfaces for the purpose of achieving clutch plate preload is permitted.

T20 GEARBOX

- (a) The gearbox must comply with all of the requirements of the gearbox dimensions contained in these regulations.
- (b) There must be 6 forward gears, the ratios of which must be those as per the following list:

Gear	Ratio	Tooth count
1 st	2.57:1	14/33
2 nd	1.99:1	17/31
3 rd	1.66:1	19/29
3 rd (optional)	1.60:1	19/28

4 th	1.35:1	21/26
5 th	1.14:1	23.24
6 th	1.00:1	Constant mesh 22/24

- (c) The gearbox must have an operating reverse gear.
- (d) The input shaft must be in-line with the output shaft.
- (e) The maximum dimension from the *Cylinder Block*/timing cover face to the rear of the gearbox casing (excluding the extension housing) must be 1291.5 mm.
- (f) For each *Automobile* with a “H” pattern gear box, each gear must be selected by the *Driver* exclusively, via a non-sequential mechanical linkage which permits an “H” pattern gear change mechanism only.
- (g) For each *Automobile* with a sequential gearbox, each gear must be selected by the *Driver* exclusively via a mechanical linkage which permits a sequential selection device. The use of any electronic, hydraulic or pneumatic selection device or assistance thereto is prohibited.
- (h) The Hollinger RD6H and RD6S are to be used in their entirety and the only modifications permitted are industry accepted polishing and detailing which must not change the basic design or operation of the component being detailed.
- (i) It is permitted to use gears and dogs of a different manufacturer subject to them being identically similar to the original components and complying with the samples held by the CM.
- (j) All replacement parts (other than gears, dog rings, bearings and gear position sensor) must be purchased through Hollinger Engineering and conform to the parts listed in the gearbox drawing exploded views titled RD6-H and RD6-SF which are held by the CM.
- (k) The gearbox to *Chassis Cross Members* and mountings are free.
- (l) Dry sump gearboxes using pressurised lubrication systems are prohibited.
- (m) A gear lever mounted switch, which must only provide a gear shift cut signal to the ECU may be fitted. This gear shift cut must only operate above an engine speed of 6250 rpm.

T21 OTHER COMPONENTS

- (a) Except for those matters contained in the relevant Motorsport Australia Automobile Homologation Document, and the gearbox and final drive ratios as listed, all other components of the drive train, including axles are free.
- (b) The final drive must not incorporate any differential action.
- (c) The crown wheel and pinion must be of hypoid design and must conform to the requirements of the final drive specifications contained in the relevant Motorsport Australia Automobile Homologation Document.
- (d) Additional oil radiators and pumps for the gearbox and final drive assembly are permitted within the external perimeter of the *Bodywork*, and air may be ducted to them but no aerodynamic benefit may be derived from such ducting and the external appearance of the *Automobile* must be maintained.
- (e) Axle drive shafts must be co-axial to each other and be parallel to the ground for a distance of 600 mm each side of the longitudinal centre line of the *Automobile*.

- (f) The use of drop gears are prohibited anywhere in the rear axle assembly.

T22 REAR AXLE ASSEMBLY

- (a) The rear axle assembly is free save for the following:
- (i) The minimum weight of the rear axle assembly is 115 kg which is the unsprung weight of the unit as it would be used in practice, qualifying and racing. This weight will be measured with:
 - (A) the complete rear *Wheels* removed; and
 - (B) all ancillary components (eg shock absorbers, lateral suspension and anti-sway bar links, electrical wiring, lubrication hoses etc) disconnected at the joint nearest the axle housing; and
 - (C) the longitudinal suspension trailing arms attached at both the body/*Chassis* unit and the rear axle housing; and
 - (D) all pivot arrangements moving freely; and
 - (E) the tail shaft connected at both ends.
 - (ii) The tail shaft must be made of ferrous material.
 - (iii) The tail shaft must have a minimum weight (not including the centre bearing mounting system) of 9.7 kg.
 - (iv) The maximum tube size of the tailshaft is 2.25 inches (nominal).
 - (v) Universal (Cardan Joints) or CV joints (Rzeppa CV joints) are the only joints permitted to be used in the tailshaft assembly.
 - (vi) The only final drive ratios permitted are as per the following:

Circuit	Ratio	Tooth count
Mallala	3.5:1	35/10
Mount Panorama	3.15:1	41/13
Phillip Island	3.25:1	39/12
Queensland Raceway	3.5:1	35/10
Sandown	3.5:1	35/10
Sydney Motorsport Park	3.5:1	35/10
The Bend Motorsport Park	3.5:1	35/10
Wakefield Park	3.5:1	35/10
Winton	3.5:1	35/10
Townsville	3.5:1	35/10
Gold Coast	3.1:1	34/10

T23 TRACTION CONTROL

- (a) Traction control is prohibited.
- (b) The Chief Scrutineer in their sole discretion, which will not be subject to any protest or appeal, has the right to deem any form of program, device, system, component/s, mechanism/s as traction control.
- (c) In order to provide *Wheel* speed information for the exclusive use of display and data acquisition instruments it is permitted to fit two of the non-driven *Wheel* hub assemblies with the necessary equipment, but under no circumstances may this signal or any other signal which provides a ground speed reference, be connected to the engine management system.
- (d) The engine management system must not receive input from any device which measures acceleration of the *Chassis*, and it is prohibited to have such a device fitted internally to the engine management system.

T24 SUSPENSION

- (a) The suspension is free except that the type of suspension and springing medium must always be as stated in the relevant homologation documents.
- (b) The number and position of the homologated suspension pivot points must be used in their entirety and exclusively.

T25 REAR AXLE LOCATION

The lateral location of the rear axle may be by Panhard rod or Watts link only, the mounting points for which are free.

T26 PIVOT POINTS

Each suspension pivot point on the body/*Chassis* may be re-located within a 20 mm radius of the homologated points and such points must be used as the pivot point for the suspension (e.g. no extension or relocation of this part of the suspension is permitted).

T27 ANTI ROLL BARS

- (a) Any anti-roll bar must be of the same basic design as those fitted to the production vehicle on which the *Automobile* is based.
- (b) Adjustment of the stiffness of an anti-roll bar from within the *Cockpit* is permitted.
- (c) An anti-roll bar may be mounted to the *Body Shell* or to the rear axle housing.
- (d) Each link connecting the anti-roll bar to the suspension or the *Body Shell* must be of a fixed length.
- (e) A rocker, which varies the motion ratio between the anti-roll bar and *Body Shell* or suspension, is permitted.

T28 SHOCK ABSORBERS

- (a) Each shock absorber is free except that adjustment of any unit from the cabin is prohibited.
- (b) Each shock absorber must function independently of each other, i.e. connections between units are prohibited.
- (c) Material may be removed from a MacPherson strut tower solely in order to facilitate the use of an adjustable shock absorber.
- (d) Each shock absorber mount on the body/*Chassis* may be re-located within a 20 mm radius of the homologated point except where MacPherson strut suspension is specified. Where MacPherson strut suspension is specified, each shock absorber mounts must remain fixed as stated in the relevant homologation documents.
- (e) The use of any electronically adjustable shock absorber is prohibited.
- (f) Only one shock absorber per *Wheel* is permitted.
- (g) Only 4 shock absorber characteristics that can be adjusted from outside of each shock absorber are permitted, but this number does not include shock absorber gas pressure adjustment.

T29 FRONT CROSS MEMBER

- (a) The detachable front suspension *Cross Member* is free, on the condition that it is possible to remove it from the *Automobile* (no attachment by welding).
- (b) The suspension pivot points must not be altered from the homologated *Body Shell* save for those freedoms allowed in Article T26. The *Cross Member* must utilize the two (2) rear mounting points as provided for this purpose in the production vehicle from which the *Automobile* was derived.

T30 REINFORCEMENT BARS

- (a) Reinforcement bars from the suspension pivot points to the *Body Shell* (or *Chassis*) may be installed subject to the distance between a suspension fixation and the anchorage point of the bar not being greater than 100 mm unless the bar is a transverse strut homologated/approved with the roll bar.
- (b) In the case of a MacPherson strut suspension or similar, an upper bar may be fitted provided that the maximum distance between the anchorage point of the bar and the upper articulation point does not exceed 150 mm.

T31 ROLL CENTRE ADJUSTMENT

Any device which allows the front or rear roll centre of an *Automobile* to be altered or adjusted from the *Cockpit* is prohibited.

T32 RIDE HEIGHT ADJUSTMENT

Any device or system which does, or has the capacity to, adjust the ride height of a moving *Automobile* is prohibited.

T33 SUSPENSION ADJUSTMENT

- (a) Where these regulations permit the adjustment of the suspension of an *Automobile*, the force required to make such an adjustment must only be generated and controlled by a member of the team permitted to work on the *Automobile* while the *Automobile* is stationary, or by the *Driver*, seated normally in the *Automobile* with the safety harness correctly fastened.
- (b) The minimum weight of the front upright must be 10.5 kg.
- (c) The weight of the upright will be determined after disconnecting the upright from the outer joints of the upper and lower wishbones and steering arm. The disc and caliper must be removed and all of the ducting and electrics must be disconnected at the closest joint to the upright. The upright weight will include all mounting bolts, nuts, washers and spacers removed during disassembly of the upright from the *Automobile*.

T33.1 Springing Medium

- (a) The springing medium on each corner of an *Automobile* must be ferrous of type coil-spring over damper.
- (b) Only a single linear coil spring per damper will be permitted.
- (c) For the purpose of T33.1(a) above, a linear coil spring is defined as a spring that is wound from a nominally constant diameter wire with an inside diameter that is normally constant for the length of the spring and, when tested, increases in load lineally.
- (d) It is permitted to use bump rubbers as a springing medium.
- (e) The overall spring rate of all springing mediums in the system is free.
- (f) It is prohibited to fit any springing mediums which react the displacement of the damper shaft inside the damper.

T34 WHEELS

- (a) The *Complete Wheel* is free provided that:
 - (i) The upper part of the *Wheel*, located vertically over the *Wheel* hub centre, is covered by the *Bodywork* when measured vertically.
 - (ii) The maximum width of the *Complete Wheel* is 305 mm.
 - (iii) The maximum rim diameter is 18 inches.
 - (iv) The maximum diameter of the *Complete Wheel* is 680mm.
 - (v) The minimum weight of any bare *Wheel* is 10.7 kg.
 - (vi) Any measurement must be made with at least 1.8 bar pressure in the tyre.
 - (vii) Where the *Wheel* is fixed using a central nut:
 - (A) a safety clip/spring must be in place on the nut while the *Automobile* is on the *Track*.
 - (B) The clip/spring must be replaced/reset after each *Wheel* change.
 - (C) The clip/spring mechanism must be coloured red or orange.
 - (viii) If using centrelock *Wheel* fixing (single *Wheel* nut) the centrelock spindles and nuts must conform to the following:
 - (A) The centrelock spindle thread must be M72 x 2.5 (left or right hand as appropriate).

- (B) The angle of any taper where the *Wheel* nut engages with the *Wheel* must be 90 degrees.
- (xi) Brake fans fitted to any *Wheel* are prohibited.

T35 BRAKES

- (a) Each *Automobile* must be fitted with a dual circuit braking system operated by the same pedal. The pedal must normally control all the *Wheels*. In case of leakage at any point of the brake system, its pipes or any kind of failure in the braking system, the pedal must still control 2 *Wheels*.
- (b) Each pedal and pedal box is free, and the firewall and/or floor pan may be locally modified only to the extent required to facilitate the fitment of any master cylinder and/or pedal box.
- (c) The complete brake hydraulic system (including calipers, lines and hydraulic cylinders) is free except for the following restrictions:
- (i) The maximum number of pistons in each caliper is restricted to 6;
 - (ii) Only one brake caliper and 2 brake pads per *Wheel* are permitted;
 - (iii) No system is permitted on an *Automobile* which can retract the caliper pistons for the purpose of pad change.
- (d) Any brake caliper body must only be made of aluminium materials with a modulus of elasticity no greater than 80 Gpa.
- (e) The brake caliper pistons may be made of titanium alloy.
- (f) Each brake rotor (disc) must be made of ferrous metal and conform to the following specifications:
- (i) The maximum brake rotor diameter must not exceed 376 mm;
 - (ii) The maximum brake rotor thickness must not exceed 35.56 mm.
- (g) In order to provide air for the cooling of the brakes of each *Wheel*, it is permitted to fit a duct to each, the intake of which must be situated wholly within the perimeter of the *Bodywork* and not below any point on the lower edge of the front air dam. A system which sprays a mist of water into such air ducts is permitted.
- (h) Any brake caliper incorporating a liquid cooling/recirculating system is prohibited.
- (i) The fitment of a handbrake/brake lock is optional.
 - (j) Any brake anti-lock system is prohibited.
 - (k) Maximum brake pad thickness must not exceed 30 mm.
 - (l) The braking system pressure in both front calipers must remain equal at all times.

T36 STEERING

- (a) The steering is free including the steering wheel, column, tie rods, rack, etcetera, save that the original mechanical principal (eg; rack and pinion, recirculating ball) must be retained.
- (b) If the original steering column is utilised, the steering lock device must be removed.
- (c) Power steering may be added or deleted.
- (d) Four-*Wheel* steering is prohibited.

T37 ELECTRICAL SYSTEM

- (a) A battery master isolation switch is mandatory and must:
 - (i) Disconnect all electrical circuits, battery, alternator, horns, ignition, electrical controls etcetera;
 - (ii) Stop the engine;
 - (iii) Be spark proof and able to be triggered from inside and outside the *Automobile*;
 - (iv) Have the external trigger situated near the lower part of the front windscreen, on the *Driver's* side, and be marked by a red spark in a white edged blue triangle with a base of at least 120 mm.
- (b) Each *Automobile* may be fitted with power control module/s to perform the circuit switching and protection functions in place of cables, fuses and relays. Only the following power control modules are permitted:

Brand	Model
MoTeC	MoTeC PDM
ADD	IPU Motorsport
PI Research	PCM Hyllus

- (i) The maximum amount of outputs for any one or combined units is 32.
 - (ii) Power control module system configurations may be requested by the TA at any time and this request will not be subject to protest or appeal.
- (c) The battery and its location are free save that it must not be placed in the *Passenger* compartment.
- (d) The alternator and its drive system are free.
- (e) Each lighting and signalling device must remain operational and as originally provided in the production vehicle from which the *Automobile* is derived, save that it is permitted to disconnect and remove the rear number plate lights, side indicator lights, reversing lights and all interior lights. The hazard function of the indicator lights may be removed.
- (f) The starter motor is free except that it must:
 - (i) Be exclusively electrically powered;
 - (ii) Engage directly with the flywheel as in the production vehicle from which the *Automobile* was derived;
 - (iii) Be capable of starting the engine at all times.
- (g) The starter motor may be mounted in front of, or behind, the flywheel, the ring gear of which must comply with Article T13(m).
- (h) At all times the *Driver* – when seated and secured in the *Automobile* as for *Competition* – must be able to activate the starter motor without outside or external assistance.
- (i) A high intensity rain light must be fitted into the highest part of the rearward face of the boot lid. The rain light must be mounted so its face is at 90 degrees to the road surface.
- (j) Unless the specific permission is first obtained from the Chief Scrutineer, a computer of any description, other than a computer which is an integral part of the *Automobile*, is prohibited to be taken onto the grid by any person at any time.
- (k) It is permitted to replace the front windscreen with a front windscreen incorporating a heating element.

- (l) Each *Automobile* must only be fitted with one data-recording unit in addition to any data recording capacity of the engine management system or any unit specifically required or approved by the Chief Scrutineer.
- (m) Unless otherwise specified, each *Automobile* must only be fitted with one of each of the sensors listed below which must only perform the function stated in each of the respective Regulations, and any other sensor is prohibited. The sensors listed are in addition to any other switches, carrier detect signal for telemetry or any sensors specifically required or approved by the Chief Scrutineer. The data gathered from the sensors listed may then be recorded, displayed or transmitted by any means permitted under these regulations.

(i) Engine sensors

Crankshaft position	Oil temperature
Camshaft position	Fuel pressure
Throttle position x2 (*see note below)	Fuel temperature
Coolant temperature	Fuel usage x 2
Coolant level	Lambda x 2
Coolant pressure	Manifold air pressure
Oil pressure	Air temperature

Note: Only one (1) throttle position sensor may be connected to the engine management system at any time.

(ii) General Sensors

Front <i>Wheel</i> speed – front x 2	Suspension position x 4
Steering angle	Brake light
Power steering pressure	Brake rotor temperature (front & rear)
Power steering temperature	Brake line pressure (front & rear)
Gearbox oil temperature	<i>Cockpit</i> temperature x 2
Differential oil temperature	Battery Voltage
G – Force – longitudinal	Beacon input
G – Force – lateral	Brake balance bar position
G – Force – vertical	Crankcase pressure
Brake master cylinders travel (external linear or rotary sensors only)	Anti roll bar position (front and rear)

- (n) Only a single direction electronic data link to be sent from the *Automobile's* engine management system to any other data logging or display system within an *Automobile* is permitted.
- (o) At any time only the following signals may be sent to or from an *Automobile*:

Signal	Send to <i>Automobile</i>	Send from <i>Automobile</i>
Any signal exclusively for television	Yes	Yes
Telemetry (transmission of data)	No	Yes
<i>Driver</i> voice communication	Yes	Yes
<i>Driver</i> visual communication	Yes	Yes
Lap beacon	Yes	No

T38 **BODYWORK**

- (a) The following regulations apply to the homologated *Body Shell*, including *Bodywork*:
- (i) Each *Bodywork* and *Body Shell* panel/component must remain unmodified and must be of the same shape, material and thickness as the production vehicle on which homologation is based. An exception being that composite glass/fibreglass front guards may be fitted to any *Automobile*.
 - (ii) Specific modifications to the *Body Shell* panel/components are allowed only to the extent permitted under these regulations.
 - (iii) Only the parts listed in the Delete Panel list in the relevant homologation documents for each *Automobile* may be removed from the production *Body Shell*.
 - (iv) Any repair work must conform to all requirements in these regulations.
 - (v) Strengthening of the fully sprung components of the *Chassis* and *Bodywork* is permitted provided that the material used follows the original shape and is in contact with it.
 - (vi) Weld flanges may be removed from the front *Chassis* rails and the joint butt welded.
 - (vii) Reinforcement of the *Body Shell* using carbon fibre composites is restricted to internal *Cockpit* surfaces only, and the maximum thickness of any reinforcement in this area is 4 mm, excluding the thickness of the parent metal.
 - (viii) The area which can be reinforced is defined by: the inner surface of the front bulkhead, below a vertical line corresponding with the lower edge of the front windscreen and extending rearward to a lateral line across the floor of the *Automobile*, approximately in the centre of the front doors.
 - (ix) No body cavity may be filled with any substance that is deemed to increase the rigidity of the *Automobile*, save for the *Driver's* door, which may have the window glass and regulator removed and the resultant cavity filled with polyurethane foam.
 - (x) Notwithstanding the above, reinforcement of the floor by carbon fibre composites is prohibited.
 - (xi) Any non-metallic insulating and/or sound deadening material may be removed.
 - (xii) It is permitted to make the minimum modifications to the production *Body Shell* in and around the rear axle assembly only in order to provide sufficient clearance for the rear axle assembly to achieve maximum *Wheel* travel.

T39 EXTERIOR

- (a) Any homologated aerodynamic aid and exterior component, which may be of composite carbon fibre construction, must be identical to the samples held by the Chief Scrutineer, and be used exclusively and in their entirety.
- (b) For the purpose of providing clearance to front suspension components or the fuel tank, it is permissible to remove material from the front/rear under tray provided that the cut area is suitably reinforced.
- (c) The rear spoiler “wing” must be the same type and shape as was present when the *Automobile* was originally homologated.
- (d) The sealing of holes in the *Cockpit*, engine and luggage compartments and in the mudguards is permitted. The material and method used are free and any hole in the exterior *Bodywork* may be closed or sealed by the use of adhesive tape only.
- (e) Windscreen wiper motors, their position and the blades and mechanism are free subject to there being at least one windscreen wiper provided in the *Driver’s* line of vision. The windscreen washer device, the washer bottle and their location is free.
- (f) Any external decorative strip, the maximum vertical height of which is less than 25 mm, may be removed.
- (g) The fitting and use of pneumatic jacks and the necessary modifications for their fitment is permitted, but no “compressed air” bottle can be carried on board.
- (h) Each external air line fitting must be located in or near the “B” pillar and must be recessed so that it is not likely to cause injury, and the air jacks must always be manually operated from the pit garage side of the *Automobile* during any pit stop.
- (i) Each external light with a lense made of glass must be covered by a transparent film applied to the glass which must effectively prevent any broken glass from being spread onto the *Track*.
- (j) Headlamp covers may be fitted solely to protect the headlamp glass and must effect no improvement to the *Automobile’s* aerodynamic efficiency.
- (k) The registration plate mountings may be removed.
- (l) In order to comply with the requirements of Article T34(a)(i), the mudguard sheet metal may be “stretched” by the minimum amount necessary to give 10 mm clearance on the tyre whilst respecting the homologated body width.
- (m) Any component which acts as a vibration insulator (e.g. engine mount, gearbox mount, and *Cross Member* mount) may be replaced with a component of similar dimensions and free material.
- (n) Any original closing mechanism on the bonnet and boot lid must be rendered inoperative, and the fitting of at least 2 separate fasteners for the front bonnet and rear boot lid are compulsory, notwithstanding the hinging arrangements. Each fastener must be of adequate strength and limited extensibility which must simultaneously hold the bonnet and boot lid closed.
- (o) The front windscreen must be of laminated glass and the rear windscreen must be of toughened glass material, or alternately, the front and rear windscreens may be of polycarbonate material in accordance with the following requirements:

- (i) the thickness must be 6 mm $\pm$ 5% (the measurement does not include any tear off or base coat); and
- (ii) the shape must conform to that of the make and model of the base *Automobile*; and
- (iii) the front and rear windscreens must be connected to the *Chassis* by a minimum of:
 - (A) bonding using a suitable bonding agent; and
 - (B) 4 x M6 bolts, one in each corner of the windscreen; and
 - (C) A vertical brace in the centre of the front windscreen with tensioning capability.
- (p) If as a result of damage, it is necessary to remove the front windscreen a replacement front windscreen must be fitted. The fitment and retention of the replacement windscreen must be inspected by the TD prior to that *Automobile* being allowed to re-join the Circuit.
- (q) It is permitted to fit tear offs to the front windscreen.
- (r) It is permitted to fit a brace as detailed in the relevant VSD to the rear windscreen.
- (s) Any tool necessary for the removal of the front or rear bumper bar must be securely attached to the *Passenger* side anti intrusion bar.
- (t) Each *Automobile* must be equipped with at least one front and one rear towing eye and comply with Technical Appendix, Schedule B of the *Manual*.
- (u) Any window mounted "NACA Duct" must only be used for cooling the *Driver* and must therefore only have the effect of circulating air within the *Cockpit*.

T40 COCKPIT

- (a) Each *Seat* must be fitted in accordance with the requirements of Article 253 of Appendix J to the *Code*. The mounting of the *Seat/s* directly to the ROPS or dedicated integral replacement *Seat* anchorage points is highly recommended.
- (b) Any replacement *Driver's Seat* must be located as specified in the relevant VSD.
- (c) The *Driver's Seat* and any *Seat* used by a *Passenger* in any Rides session must be of a type homologated by the FIA to the 8855/1999 or 8862/2009 standard. The validity of the *Seat* will expire on December 31, 5 years after the expiry date shown on the *Seat*. The *Seat* must be inspected during the normal inspection process. Each *Competitor* must inspect and replace any damaged or worn *Seat* before any *Competition* as required.
- (d) Any carpet, padding, insulation material and lining may be removed from the *Cockpit*. The original interior door trim may be re-manufactured provided the external shape is similar. The interior door trim may be locally modified to permit the fitment of a safety cage.
- (e) The original heater and/or air conditioning unit may be removed together with its associated equipment.
- (f) Any pipe carrying fluid through the *Cockpit* must be of adequate strength and quality and must have no connections other than those on the front and/or rear bulkhead. Any pipe carrying fluids to authorised accessories, e.g. power steering, may have connections within the cabin.

- (g) The *Driver's* compartment must be sealed from both the engine and luggage compartments to prevent the passage of flame and/or fluids into the *Driver's* compartment in the event of any leakage. This sealing must include the *Automobile's* "C" pillars.

T41 DASHBOARD

- (a) Any component of the dashboard below a horizontal plane at the top of the glove box lid may be removed. Fascia panels containing instruments, switches, and controls may be replaced by others of free design.
- (b) The centre console may be removed.
- (c) Instruments are free, but only the minimum modifications necessary may be made to the dashboard to facilitate the fitting of instruments.

T42 DOORS

- (a) The side anti-intrusion bars may be removed from the doors subject to the safety cage structure providing lateral protection in the same general area.
- (b) Polyurethane foam may be added to the door cavity of the *Driver's* door. It is highly recommended that both front and rear doors located on the *Driver's* side are fitted with a side impact protection device as detailed in Schedule G3 of Division G of the Supercars Operations Manual.
- (c) The window regulator mechanism may be removed from each door.
- (d) The inner door panels may be removed from each door except for the *Driver's* door.

T43 REAR VISION MIRRORS

- (a) Each *Automobile* must be fitted with at least 2 rear vision mirrors which have a reflecting surface of at least 50 cm², and each mirror must provide an unobstructed view to the rear of the *Automobile*.
- (b) One such mirror must be fitted internally and at least one fitted externally on the *Driver's* side of the *Automobile*.

T44 TAIL SHAFT LOOPS

- (a) Each *Automobile* must be fitted with full circle tail shaft loops which must be constructed so that in the event of tail shaft breakage, the tail shaft, its components and mountings will be effectively prevented from contact with the ground.
- (b) Each tail shaft loop must be made of steel strap of 30 mm x 5 mm minimum and be securely attached to a reinforced area of the *Body Shell*.

T45 ADDITIONAL ACCESSORIES

- (a) Any accessory which has no influence on the *Automobile's* behaviour is permitted, for example equipment which improves the aesthetics or comfort of the *Automobile's* interior (lighting, heating etc). In no case may any accessory increase the engine power or influence the steering, transmission, brakes or road holding even in an indirect fashion.
- (b) The horn may be removed or replaced.
- (c) Other than the *Coachwork/Bodywork*, and the homologated aerodynamic aids, no part of the *Automobile* is permitted which, in the opinion of the Chief Scrutineer, actually or potentially increase down force, and no appeal or protest will lie against the written opinion of the Chief Scrutineer in this regard.
- (d) With the exception of clutch fluid reservoirs, windscreen washer bottles, *Driver* drink bottles and *Driver* cool suits, all fluid reservoirs must be mounted outside of the *Cockpit*.

T46 WINDOWS

Subject to freedoms permitted in these regulations, all windows must remain identical to those of the production vehicle upon which the *Automobile* is based, windows must not be coloured or tinted.

T47 FUEL TANK

- (a) Each *Automobile* must be fitted with a safety fuel cell conforming to the FIA specification FT3, FT3.5 or FT5.

Note: The validity of these fuel cells expires 5 years from the date of manufacture shown on the fuel cell. Additional 2 year extensions may be granted provided the fuel cell inspection is carried out as per Technical Appendix, Schedule N of the *Manual*.

- (b) A fuel tank may only be mounted either side, under or through the floor of the luggage compartment.
- (c) No part of the fuel tank may be situated forward of the rear axle centre line.
- (d) Any opening in the fuel tank must be located in the top surface of the tank.
- (e) The fuel tank must be vented externally of the *Bodywork*.
- (f) The total capacity of the entire fuel system must not exceed 120 litres.
- (g) Any gap between the fuel cell and its housing must be filled with semi rigid energy absorbing material such as polyurethane
- (h) A fuel collector pot of free design and material with a maximum capacity of 8 litres is permitted.
- (i) Each *Automobile* must be fitted with fuel lines made of suitable material which is of adequate strength and durability: e.g. metal tube or braided hose.
- (j) Each *Automobile* must be fitted with a system that cuts off the power supply to all fuel pumps after a maximum of 6 seconds absence of crankshaft revolution.

T48 SAFETY EQUIPMENT

- (a) Each *Automobile* must be fitted with a fire extinguisher system which complies with the requirements of Article 253 of Appendix J to the *Code*.
- (b) In addition to the following each fire extinguisher system must be:
 - (i) A minimum of 4.0 litres in capacity or 2.25 kg of gaseous extinguishant
 - (ii) Fitted as per manufacturer's instructions
 - (iii) Mounted in the following way:
 - (A) On the left hand side of the rear *Passenger's Seat* floor
 - (B) Between the tail shaft tunnel and the left hand rear upper trailing arm box
 - (C) No further forwards than the start of the horizontal section of the rear *Passenger's Seat* floor
 - (D) With the height being determined by the location of the fire extinguisher on the unmodified original panel.
- (c) Each *Automobile* must be fitted with a safety harness for each *Seat* fitted in the *Automobile*. The safety harness/s must comply at least with the requirements of Technical Appendix, Schedule I of the *Manual*.
- (d) The safety harness of any *Automobile* involved in any accident must be inspected by the Chief Scrutineer at the relevant *Event*. If appropriate, the Motorsport Australia Log Book will be endorsed with a requirement by the Chief Scrutineer that the safety harness be replaced. At the *Automobile's* next *Event*, the Chief Scrutineer must be satisfied that the safety harness has been replaced.
- (e) Each *Automobile* is required to have fitted a *Driver's* side window net, and where any *Automobile* is used to carry a *Passenger* while on the *Track*, the *Automobile* must be fitted with a *Passenger's* side window net. Each window net must comply with Technical Appendix, Schedule I of the *Manual*.
- (f) Each *Automobile* must be fitted with roll over (safety cage) protection in accordance with Technical Appendix, Schedule J of the *Manual*.

T49 AUTOMOBILE MARKINGS

- (a) Each *Automobile* must comply with Technical Appendix, Schedule K of the *Manual* and the following requirements:
 - (i) The *Automobile's* competition number must be displayed on the front windscreen, both rear side windows and the rear windscreen.
 - (ii) Display of the *Automobile's* competition number on each side of the *Automobile* as per Technical Appendix, Schedule K is optional.
 - (iii) Each *Automobile* must display the Series markings, appropriately attached, and positioned as shown in the Decal Placement diagram in Attachment 1.

ATTACHMENT 1

DECAL PLACEMENT

