



## 2016 Australian Production Car Series Sporting and Technical Regulations



Version 1

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**CONFEDERATION OF AUSTRALIAN MOTOR SPORT**



2016 Australian Production Car Series Sporting Regulations			
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# 2016 Australian Production Car Series

## Sporting Regulations

### S1 TITLE and JURISDICTION

#### S1.1 Title

This Series shall only be known as and referred to as the “2016 Australian Production Car Series.”

#### S1.2 Authority / Jurisdiction

- (a) Each event in the 2016 Australian Production Car Series (Series) shall be conducted under the provisions of the International Sporting Code of the Federation Internationale de l'Automobile (FIA); the National Competition Rules (NCR) and Race Meeting Standing Regulations (RMSR) of the Confederation of Australian Motor Sport Ltd (CAMS); the Sporting and Technical Regulations issued for the Series by CAMS; Supplementary and Further Regulations issued by the Organiser at each round; Bulletins issued by the Stewards of the Meeting and any Driver Briefing Notes issued by the Race Director or the Clerk of the Course at a meeting.
- (b) The Series has been sanctioned by CAMS as an Authorised Series.
- (c) Ontic Sports Pty Ltd has been appointed as the Category Manager (CM) by CAMS for the Series.

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### S2 ADMINISTRATION

#### S2.1 Personnel

The following personnel have been appointed to the Series by CAMS and/or the CM and have the authority to administer the various aspects of these regulations as detailed in the RMSR.

- (a) Race Director (RD) Paul Overell
- (b) Technical Commissioner (TC) Peter Kemp
- (c) Category Manager (CM) Iain Sherrin
- (d) Technical Advisor (TA) Frank Lowndes



### S3 COMPETITOR ELIGIBILITY

To be eligible to compete in the Series, each Competitor must hold a current CAMS Competitor's Licence and be a party to a current agreement with the CM.

### S4 AUTOMOBILE ELIGIBILITY

Each automobile must comply with the provisions of 2016 Australian Production Car Series Technical Regulations, and appear in the list of Eligible Automobiles below to be eligible to compete in the Series.

#### S4.1 Eligible Automobiles

The tables listed in S4.3 list each of the automobile makes/models that are eligible to compete in the Series.

#### S4.2 Eligibility Conditions

(a) An automobile not on the Eligibility List shall be considered upon application and be subject to approval by the CM and CAMS.

At all times the CM reserves the right to accept or reject any application for the inclusion of any make/model into the list of Eligible Automobiles for the Series.

**Please note:** Before investing in the purchase and/or modification or preparation of any make/model which is not detailed in the list of Eligible Automobiles, the Competitor should contact the CM regarding its eligibility.

(b) Individual classification of any make/model is subject to change at the joint discretion of the CM and TC prior to any Round of the Series.

(c) Any variation sought to a specific model of automobile must be approved, in writing, by CAMS prior to being permitted to compete at any Round.

### S4.3 List of Eligible Automobiles

CLASS A - Extreme Performance		
Make	Model	Designation
Audi	RS4	
Audi	TT	RS
BMW	M Coupe (1 Series)	E82
BMW	M135i Hatch	F20
BMW	M235i Coupe	F22
BMW	M3 Coupe	F80
BMW	M4 Coupe	F82
BMW	M3	E90/E92
Holden	VF MY14-HSV	GTS
Mercedes Benz	C63	204
Mitsubishi	Lancer Evo VIII	RS
Mitsubishi	Lancer Evo IX	RS & GSR
Mitsubishi	Lancer Evo X	RS
Mitsubishi	Lancer Evo VII	RS
Subaru	Impreza WRX STi	G-4
Subaru	Impreza WRX STi	G-3, V-1
Subaru	Impreza WRX STi	G-1



<b>CLASS B - High Performance</b>		
<b>Make</b>	<b>Model</b>	<b>Designation</b>
<b>BMW</b>	135i	E82
<b>BMW</b>	335i	E90/E92
<b>BMW</b>	M3	E46
<b>BMW</b>	M3	E36
<b>Ford</b>	FG FPV	GT-P, F6
<b>Ford</b>	FGX	XR8
<b>Ford</b>	BF2 FPV	F6
<b>Ford</b>	BA Mk I/II - FPV	GT/GT-P
<b>Ford</b>	BF Mk I/II - FPV	GT/GT-P
<b>Ford</b>	FG - FPV	GT
<b>Ford</b>	FG – Mk II	GT R-Spec
<b>Ford</b>	FG - FPV	F6
<b>Holden</b>	VY/VY2 - HSV	GTS
<b>Holden</b>	VZ - HSV	GTO Coupe, GTS Coupe
<b>Holden</b>	VZ - HSV	R8 Clubsport
<b>Holden</b>	VE/VE2 - HSV	R8 Clubsport
<b>Holden</b>	VE/VE2 - HSV	GTS
<b>Holden</b>	VX - HSV	GTS
<b>Holden</b>	VX - HSV	R8 Clubsport
<b>Mitsubishi</b>	Lancer Evo V, Vi	RS, TME
<b>Renault</b>	Megane	RS 275 Trophy R
<b>Subaru</b>	Impreza WRX STi	G-2

<b>CLASS C - Performance</b>		
<b>Make</b>	<b>Model</b>	<b>Designation</b>
<b>BMW</b>	130i	E87
<b>BMW</b>	228i	F22
<b>Ford</b>	BA Mk I/II - FPV	XR6 Turbo
<b>Ford</b>	BF Mk I/II	XR6 Turbo
<b>Ford</b>	FG	XR6 Turbo
<b>Ford</b>	FGX	XR6 Turbo
<b>Ford</b>	AU	XR8
<b>Ford</b>	BA Mk I/II	XR8
<b>Ford</b>	BF Mk I/II	XR8
<b>Ford</b>	FG	XR8
<b>Holden</b>	VY	SS/SV
<b>Holden</b>	VZ	SS/SV
<b>Holden</b>	VE	SS/SV
<b>Holden</b>	Astra Sri Turbo	AH
<b>Holden</b>	Astra HSV VXR	AH
<b>Mazda</b>	3 MPS	3A/3B
<b>Mazda</b>	6 MPS	6A
<b>Mazda</b>	RX-8	RX8A
<b>Renault</b>	Megane	RS 265
<b>Renault</b>	Megane	RS 265 Trophy R
<b>Renault</b>	Clio	RS200
<b>Volvo</b>	C30	T5
<b>VW</b>	Scirocco	R

<b>CLASS D - Production</b>		
<b>Make</b>	<b>Model</b>	<b>Designation</b>
<b>BMW</b>	328i	E36
<b>Ford</b>	Fiesta	XR4
<b>Honda</b>	Integra	Type R
<b>Honda</b>	Integra	Type S
<b>Kia</b>	Proceed	GT
<b>Mini</b>	Cooper S JCW	R53
<b>Mini</b>	Cooper S JCW	R56
<b>Renault</b>	Clio	197
<b>Subaru</b>	BZ	Z-1
<b>Toyota</b>	Celica	SX
<b>Toyota</b>	Corolla	Sportivo
<b>Toyota</b>	86 GT/GTS	ZN SER

<b>CLASS E - Compact</b>		
<b>Make</b>	<b>Model</b>	<b>Designation</b>
<b>Alfa Romeo</b>	Mito	1.4 Turbo
<b>Mazda</b>	2	
<b>Mini</b>	Cooper	R50
<b>Proton</b>	Satria GTi	BS
<b>Suzuki</b>	Swift Sport	RS416
<b>Suzuki</b>	Swift GTi	AA34S
<b>Toyota</b>	Echo	10 SER
<b>Toyota</b>	Yaris	YRX

CLASS F - Diesel		
Make	Model	Designation
BMW	123D	E87
BMW	220D	F22
BMW	123D	E82
BMW	330D	E90
Holden	Cruze CD	JG
Mazda	6 Diesel	

Class I - Invitational		
Make	Model	Designation
Mini	Cooper S JCW Challenge	R56

Subject to CAMS approval, the CM reserves the right to accept entries on a 'Round by Round' basis for automobile makes/models that are not included on the current list of Eligible Automobiles above. Automobiles in Invitational class may be subject to additional Balance of Performance (BoP) measures imposed at each round.

#### S4.4 Replacement Automobiles

Following the commencement of the first qualifying session of each round of the Series, any automobile that has been entered to compete at that round may not be replaced with another automobile.

## S5 DRIVER ELIGIBILITY

To be eligible to compete in Classes A or B in the Series each Driver must hold a current CAMS National Circuit Licence (NC) or higher and be registered for the Series with the CM.

To be eligible to compete in Classes C, D, E, F or I in the Series each Driver must hold a current CAMS Provisional Circuit Licence (PC) or higher and be registered for the Series with the CM.

**Please note:** A CAMS National Circuit Licence (NC) may be specified as the minimum level licence that is required for competition at specific circuits (eg. Mount Panorama).



### S5.1 Substitute Drivers

Prior to the commencement of the first qualifying session at each round of the Series, a Competitor may nominate a substitute Driver who may be permitted to compete in the remainder of the meeting subject to the approval of the Stewards of the Meeting and the CM.

### S5.2 Cross entering of Drivers

Cross entering of Drivers is not permitted.

## S6 SERIES ROUNDS / REGISTRATION

The Series shall be conducted over four (4) Rounds as detailed in the Series Calendar below. Each race conducted as a part of the Series shall count in determining the final results.

To be eligible to score points in the Series, each Competitor must register each Driver with the CM prior to the first Round of the Series in which they compete. Drivers must have competed at a minimum of 50% of the total Rounds to be eligible to be an outright or class winner/s.

## S7 SERIES CALENDAR

The Series shall be conducted over the following Rounds:

Round	Date	Circuit	Race Format	No. of Drivers
1	27 - 29 May	Phillip Island	1 x 4 hour	2-3
2	1 – 3 July	Sydney Motorsport Park	2 x 250 km	2
3	29 – 31 July	Queensland Raceway	1 x 300 km 1 x 250 km	2
4	11 - 13 November	Sydney Motorsport Park	1 x 4 hour	2-3

## S8 ROUND FORMAT

The number, length and format of track sessions shall be negotiated between the CM and the event organiser prior to a Round of the Series and shall be advised in the relevant Supplementary / Further Supplementary Regulations issued for a meeting.



Generally, the format for each Round of the Series shall be as follows:

- (a) Practice Three x 20-minute practice sessions
- (b) Qualifying One x 30-minute qualifying session
- (c) Warm up Warm up sessions may be scheduled prior to races where time is available
- (d) Races
  - Round 1 & 4: 1 x 4 hour race
  - Round 2: 2 x 250 km races
  - Round 3: 1 x 300 km race & 1 x 250 km race

#### **S8.1 Multiple Drivers**

If two (2) or more Drivers are entered to compete in an automobile at any Round of the Series, any or all Driver/s may compete in each race. If more than one Driver competes in any race, a driver change during that race shall be permitted.

#### **S8.2 Variations to Timetable**

The timetable may be varied at any time due to exceptional circumstances only with the prior approval of the Stewards of the Meeting.

### **S9 GRID DETERMINATION**

#### **S9.1 Grid Determination**

The grid for each race shall be determined as detailed in the RMSR – Progressive Grid.

The qualifying time achieved by the Driver nominated to start Race 1 (refer Art S12.8) shall be used to determine the grid position of that automobile for Race 1.

#### **S9.2 Driver Qualification**

Each Driver must meet the minimum qualifying criteria as detailed in the RMSR during the practice or qualifying sessions that constitute part of the meeting.

### **S10 START PROCEDURE**

The start procedure for each race shall be as detailed in the RMSR – Championship Start – Standing Start.

### **S11 AWARDS and POINTSCORE**

#### **S11.1 Prizes and Trophies**

Prizes, trophies and awards shall be as determined by the CM and shall be advised to each Competitor.

### S11.2 Series Conditions and Points

- (a) Outright – Each Driver who competes in the Series (excluding Class I) shall be awarded points based on their outright finishing position (excluding Class I) in each race. The Winner of the Australian Production Car Series shall be awarded to the Driver/s who scores the highest total number of outright points over all Rounds of the Series. Should multiple Drivers competing together in the same automobile for the Series score the same points at the conclusion of the Series, they shall be awarded joint Series winners (Outright).
- (b) Classes – Each Driver who competes in the Series shall be awarded points based on their finishing position relative to the other Drivers in their Class for each race. A Class award shall be presented to each Driver who scores the highest total number of points for each Class over all Rounds of the Series. Should multiple drivers competing together in the same automobile for the Series score the same points at the conclusion of the Series, they shall be awarded joint Class winners of the Series.

### S11.3 Point score

- (a) Points shall be awarded to Drivers for each race in each Round of the Series as follows:

1 Race Scheduled		2 Races Scheduled		3 Races Scheduled	
Finishing position	Points	Finishing position	Points per race	Finishing position	Points per race
1 <sup>st</sup>	120	1 <sup>st</sup>	60	1 <sup>st</sup>	40
2 <sup>nd</sup>	90	2 <sup>nd</sup>	45	2 <sup>nd</sup>	30
3 <sup>rd</sup>	72	3 <sup>rd</sup>	36	3 <sup>rd</sup>	24
4 <sup>th</sup>	60	4 <sup>th</sup>	30	4 <sup>th</sup>	20
5 <sup>th</sup>	54	5 <sup>th</sup>	27	5 <sup>th</sup>	18
6 <sup>th</sup>	48	6 <sup>th</sup>	24	6 <sup>th</sup>	16
7 <sup>th</sup>	42	7 <sup>th</sup>	21	7 <sup>th</sup>	14
8 <sup>th</sup>	36	8 <sup>th</sup>	18	8 <sup>th</sup>	12
9 <sup>th</sup>	30	9 <sup>th</sup>	15	9 <sup>th</sup>	10
10 <sup>th</sup>	24	10 <sup>th</sup>	12	10 <sup>th</sup>	8
11 <sup>th</sup>	18	11 <sup>th</sup>	9	11 <sup>th</sup>	6
12 <sup>th</sup>	12	12 <sup>th</sup>	6	12 <sup>th</sup>	4
13 <sup>th</sup>	6	13 <sup>th</sup>	3	13 <sup>th</sup>	2
All other finishers	3	All other finishers	2	All other finishers	1



- (b) Points shall only be awarded to the Drivers classified as finishers in the final results of each race.
- (c) To be classified as a finisher, an automobile must have crossed the finish line on the track (ie, not the pit lane or pit entry road) under its own power and been credited with having completed at least 75% of the distance completed by the winner of the event.
- (d) In each Round of the Series where more than one (1) Driver is entered to drive an automobile, each Driver who completes more than one (1) lap of a race shall score the number of points allocated to the finishing position of that automobile outright and in its class.
- (e) In addition to the above, two (2) points shall be awarded to each Driver in an automobile that achieves the fastest qualifying time within each Class of the Series at each Round.
- (f) The results for each Round of the Series shall be determined by the number of outright and class points scored by each Driver at that round respectively.
- (g) In the event of a tie at the end of any Round of the Series, the final positions for that Round shall be determined by comparing the results of each tied Driver in the final race of that Round. The higher place in the Round results shall be awarded to the Driver with the higher finishing position in the final race.
- (h) The winner/s of the Series shall be determined as detailed in S11.2.
- (i) In the event of any tie which may exist at the conclusion of the Series as detailed in these regulations, the final positions shall be determined by comparing the race results achieved by each tied Driver, with the Driver with the highest number of outright first places being awarded the higher Series position. If at this stage a tie still exists, it shall be resolved by comparing the number of second, third or fourth places (and so on) achieved by each tied Driver until all positions have been determined.
- (j) Any Driver/s that compete in the last round of the Series that have not competed in any Rounds prior to the last round will not be eligible to score series points (Outright or Class) However they are eligible to win or place at the round based on their finishing position (Outright or Class).

## **S12 EVENT OPERATIONS**

### **S12.1 Series Registration and Entry**

The Series shall operate under the CAMS Series Registration and Entry Process. Series Registration and Entry Forms shall be available from the CM with document checking being conducted by the CM prior to the first official track session at each Round of the Series.

### **S12.2 Scrutiny**

In addition to their automobile, each Competitor must have the following equipment inspected by the Chief Scrutineer or his nominee:

- (a) each Driver's apparel





- (b) each refueller's apparel
- (c) pit garage fire extinguishers
- (d) overhead fuel rigs

### **S12.3 Driver/Team Manager Briefings**

Each Driver and Team Manager (i.e. an appropriately authorised representative of the Competitor, other than the Driver) must attend the compulsory Drivers/Team Manager Briefing(s). The time and location of the briefing(s) shall be detailed in the Supplementary or Further Regulations for the meeting. The attendance sheet must be signed by the Driver and the Team Manager to confirm attendance. Other compulsory briefings may be convened as required and shall be advised to each Competitor accordingly.

### **S12.4 Fire and Re-fuellers Briefing**

All refuelling personnel nominated by the Competitor for each automobile, in accordance with Article S13.2 of these regulations, must attend the compulsory Fire and Re-fuellers Briefing. The time and location of the briefing shall be detailed in the Supplementary or Further Regulations for the meeting.

### **S12.5 Impound/Parc Ferme**

- (a) Each automobile, including those remaining in pit lane, must proceed directly to the designated impound/Parc Ferme area via the most direct route (or as directed by Officials of the Meeting) at the conclusion of each qualifying session without returning to the pit garage or paddock areas and without interference from any third party (other than an Official of the Meeting).
- (b) Each automobile completing each race must proceed directly to the designated impound/Parc Ferme area (or as directed by Officials of the Meeting) at the conclusion of the race, without returning to pit or paddock areas and without interference from any third party (other than an Official of the Meeting).
- (c) Automobiles may not be removed from impound/Parc Ferme except with the express permission of the TC or the Chief Scrutineer.

### **S12.6 Automatic Timing / Driver Identification**

- (a) Each automobile must be fitted with an automatic timing/electronic driver Identification system, as supplied by Timetronics (Ian Leech : 0428 436 073). This unit must be switched to identify the driver and remain fully operational at all times that the automobile is on the circuit.
- (b) Each automobile with a non-operational timing electronic driver Identification system shall be black flagged and not be permitted to continue until the problem is rectified or subject to the approval of the Stewards of the Meeting.
- (c) The Driver must be able to activate the driver identification system whilst driving.



### **S12.7 Practice and Qualifying**

- (a) Each lap of official practice and qualifying shall be timed. The times achieved during these practice and qualifying sessions shall be used to determine Driver qualification.
- (b) During qualifying, automobiles may not return to the pit garage/paddock area without the express permission of the TC or the Chief Scrutineer. If an automobile exits pit lane to the pit garage/paddock area during qualifying it shall not be permitted to re-join that session.

### **S12.8 Races**

- (a) For automobiles with more than one Driver, each Competitor must nominate the Driver to start Race 1 to the CM within one (1) hour of the completion of qualifying.
- (b) If the nominated Driver does not start the race a pit lane drive through penalty or other penalty may be applied by the Stewards of the Meeting.
- (c) For races where the duration is determined by time, the time of a race shall commence at the commencement of the formation lap.
- (d) If an automobile takes more than twice the time of the winner's fastest lap time in the race to complete the last lap of the race, this lap shall not be taken into account when determining the total race distance covered.
- (e) Any penalties requiring laps to be deleted shall be applied at the conclusion of each race.
- (f) The pushing of an automobile by the Driver or by another competing automobile along the track or pushing it across the finishing line is not permitted and shall entail immediate exclusion of the automobile(s) concerned.

### **S12.9 Pit Lane & Pit Crew Members**

- (a) Each Pit Crew member is required to sign a Pit Lane Indemnity Form prior to the first track session and to display identification as and if required by the meeting organiser at all times while in the Pit Lane.
- (b) It is the responsibility of the Competitor to ensure that each Pit Crew member associated with their automobile complies with S12.9 (a).
- (c) The Organiser reserves the right to refuse entry to the pit area to any persons considered to be unsuitably dressed or not correctly identified.
- (d) Non-essential personnel, such as sponsors, families, or other guests of the Team, are not permitted to access the front 50% of a garage that opens onto Pit Lane at any-time during on-track activity that involves automobiles from that garage.
- (e) The 'prescribed line' referred to in these regulations shall be defined by the Race Director at the compulsory Briefings.



- (f) A speed limit of 40kph shall apply in pit lane at all times. If the limit is exceeded at any time during the meeting the Stewards of the Meeting may issue a penalty. The designated pit lane speed limit area will be defined by the speed restriction and derestriction lines, marked by appropriate signs, at either end of the Pit Lane.
- (g) Competitors must not paint lines on any part of the pit lane surface.
- (h) No equipment is to be placed on the pit signalling wall at any time during the meeting
- (i) Only three (3) persons per competing automobile are allowed at the pit signalling wall during the meeting and are subject to the direction of officials. Persons at the pit signalling wall must stand back when not signalling in case of impact with the wall by an automobile.
- (j) Smoking is not permitted in Pit Lane, the pit lane garages and/or the paddock area at any time during the meeting.
- (k) No person under 16 years of age is permitted in Pit Lane unless entered as a Driver in one of the automobiles competing in that session.
- (l) No overhead booms or gantries are permitted in Pit Lane except to comply with Regulation S18.3(c) for use in night racing.
- (m) Each Competitor must appoint a Car Controller, who is nominated to the CM, for each automobile.
- (n) At all times a car is stationary in its pit bay it must remain under the control of the nominated Car Controller who must remain at the front of the car in clear view of the driver and is responsible for the safe conduct of the pit stop and departure of the car at the completion of any pit stop. The Car Controller is not permitted to assist in any way with a pit stop and will not count in any following regulation regarding the number of persons permitted to assist with a pit stop.

#### **S12.10 Major Repairs during Races**

- (a) Any automobile requiring extended servicing or repairs must be moved into the pit lane garage for this servicing/repairs to be completed. Once the automobile is moved into the pit lane garage the number of persons permitted to service the automobile is free.
- (b) In the event that an automobile requires repairs which cannot be carried out in the pit lane garage, subject to receiving the prior express approval of the TC or Chief Scrutineer, it is permitted for that automobile to be removed from the pit lane garage to the scrutiny bay or other suitable location approved by the TC or Chief Scrutineer. Once the repairs have been completed, the automobile must be returned to its allocated pit bay or pit lane garage before it rejoins the circuit. The removal and return of any automobile in these circumstances must be carried out under the supervision of and subject to the instructions of the TC or Chief Scrutineer or his nominee. A speed limit of 10km/h shall apply in the paddock area at all times.

- (c) Any repairs carried out on an automobile outside of the Pit Lane or other location approved by the TC or Chief Scrutineer must only be carried out by the Driver alone using only tools or parts transported in the automobile. Advice given to the Driver whether by electronic means or by voice, is not considered to contravene this regulation.
- (d) Replenishment of oil or water outside of the Pit Lane or other location approved by the TC or Chief Scrutineer is not permitted.
- (e) In the event that an automobile which has stopped on the circuit has been removed from the circuit by officials it shall, when appropriate, be taken to the scrutiny bay where the Competitor shall have the option to either:
  - (i) Carry out repairs in the scrutiny bay;
  - (ii) Move the automobile to the pit lane garage or another location approved by the TC or Chief Scrutineer for repairs; or
  - (iii) Withdraw the automobile from the meeting by supplying written notice to the Secretary of the Meeting.
  - (iv) If the affected automobile wishes to restart the race as a result of repairs carried out then it may only do so, with the permission of the Clerk of the Course, after having been rescrutinised by the TC or Chief Scrutineer.

#### **S12.11 Removal of Automobiles from the Circuit Precinct**

Following the commencement of the first practice session, it is not permitted to remove any automobile from the circuit precinct (prior to the release of all automobiles from the impound/Parc Ferme established following the final race of that Round of the Series) without the prior express written approval of the TC.

#### **S12.12 Radio Communication to/from Automobile**

Two way radio communications between the Driver and a member of the Pit Crew is compulsory at all times whilst the automobile is on the race track.

#### **S12.13 Race Management Channel (RMC)**

A minimum of one (1) senior team member for each competing automobile must monitor RMC, on a strictly listening basis only, at all times during practice, qualifying and racing. This team member must monitor the RMC from at least 15 minutes prior to the scheduled start time of each session or race during the event. All relevant track messages received on the RMC must be relayed to the Driver as well as the Team Manager. The RMC frequency shall be as advised by the CM.

## S13 PIT STOPS

### S13.1 General Procedures

Each pit stop shall be conducted in accordance with the following:

- (a) A Pit Stop may be carried out during any Safety Car deployment.
- (b) The use of reverse gear in pit lane is strictly forbidden. If a Driver passes their pit bay they may be pushed back to the pit bay by the pit lane service personnel.
- (c) Each Competitor must supply a minimum of two effective dry chemical powder type extinguishers in each garage under their control with a minimum capacity of 4.5kg each. One 9kg extinguisher is not acceptable.
- (d) Except for electric cooling fans and battery powered hand tools, the use of any spark generating device or high temperature device is prohibited in the pit garage or in pit lane
- (e) The use of any device to artificially heat tyres and/or wheels is not permitted.
- (f) Each team must use solid incompressible components capable of supporting the automobile in the event of a jacking system failure. These must be positioned under the automobile at all times while persons are working on the automobile and have any part of their body under any part of the automobile. This requirement does not apply to wheel changing operations and brake pad changes.
- (g) The use of an onboard jacking system is not permitted at any time during the meeting. Each automobile must only be lifted by the use of commercially available standard trolley jacks as approved by the TC or Chief Scrutineer.
- (h) A suitable pit stop sign must be provided by each Competitor for the car controller of each automobile to display when their automobile is entering pit lane during a race. The automobile's competition number must be clearly displayed on the sign. Other detail such as team name or sponsor name may be added to the sign
- (i) A pit stop procedure can be made up of either of the following activities:
  - refuelling the automobile (refer S13.2)
  - servicing the automobile (refer S13.3);
- (j) Refuelling the automobile must be the first activity performed. These activities cannot be performed at the same time. Refuelling must be completed before the second activity is started.
- (k) All crew (except the Car Controller) and equipment (except any wheel chock that is used exclusively to prevent the automobile from rolling) must return behind the prescribed line before the activity can be considered completed. Only then can a new activity start or an automobile be released from its pit bay by the Car Controller. If the wheel chock is not removed, it must be restrained.



- (l) A Driver change may take place during either activity.
- (m) If an automobile's dry break fuel coupling/s is mounted forward of the A-pillar (leading edge of the front doors), the Car Controller must be attired as per the personnel carrying out the re-fuelling procedure.
- (n) A maximum of three (3) persons and their equipment may cross the prescribed line to assist with a pit stop by working on the automobile. This number of personnel does not include the tyre technician (employed by or contracted to a tyre manufacturer), TV technician, any signal persons at the pit wall, Driver entering the automobile, Driver Assistant (if used) and Car Controller who must carry out their functions exclusively. If a tyre technician is working near the fuel coupling/s they must be attired as per the personnel carrying out the refueling procedure. Any TV technician/s adjusting in car equipment must be attired as per the personnel carrying out the refueling procedure.
- (o) Any person who crosses the prescribed line and/or assists during the pit stop by passing or moving tools and/or components from the pit lane garage over the prescribed line into pit lane, shall be deemed as working on the automobile.
- (p) Any person receiving components or tools rolled or passed from pit lane over the prescribed line into the pit lane garage shall not be deemed as working on the automobile.
- (q) All personnel, except the Car Controller, and equipment must remain behind the prescribed line until the automobile has come to a complete stop in its allocated pit bay.
- (r) The Car Controller may only cross the prescribed line into pit lane one (1) lap prior to the commencement of the pit stop.
- (s) Each automobile must come to a complete stop in its allocated pit bay prior to the Driver safety harness being unfastened.
- (t) During any pit stop all equipment including wheels, spare parts, wheel changing tools etc must be under the complete control of the persons permitted to work on the automobile.
- (u) An automobile which is driven over any equipment in pit lane or makes contact with any other automobile or personnel in pit lane may receive a pit lane drive through penalty or other penalty as determined by the Stewards of the Meeting.
- (v) During any pit stop, engines may be left running. When the automobile is ready to rejoin the circuit the automobile must only be re-started by on-board means without any outside assistance.
- (w) The Driver's safety harness must be fastened before the automobile leaves its allocated pit bay.
- (x) The Car Controller must be behind the prescribed line before the automobile exits the pit lane.



### **S13.2 Refuelling the automobile**

- (a) At all times during each race, re-fuelling of each automobile with a dry break coupling must only be carried out on the pit lane apron and in accordance with Schedule N Part 2 of the CAMS Manual of Motor Sport and the following regulations.
- (b) Each person involved in refuelling the automobile must wear apparel which complies with Schedule N Part 2 of the CAMS Manual of Motor Sport.
- (c) Three (3) persons, as detailed in Article S 13.2 (d), must assist with refuelling each automobile, excluding the Car Controller, the Driver Assistant and others identified in Article S13.1(n) of these regulations.
- (d) Each Competitor must nominate one person to carry out each of the following refuelling roles for each automobile to the Secretary of the Meeting no later than 5pm on the day preceding the race meeting.
  - (i) The fuel hose operator.
  - (ii) The fire extinguisher operator.
  - (iii) The dead man handle operator.
- (e) At all times during any refuelling of an automobile, each member of the refuelling crew must not carry out any activity other than that required for their specific nominated refuelling role. The fire extinguisher operator must be, positioned near the refuelling with an operational fire extinguisher of not less than 4.5kg capacity.
- (f) While in Pit Lane, the fuel delivery hose must at all times be held by the fuel hose operator.
- (g) Each refuelling tower must comply with the requirements of Articles S16 of these regulations
- (h) No refuelling may occur from the 3 minute signal prior to the race start until after the automobile has completed one (1) racing lap.
- (i) An automobile which has the refuelling aperture on the non-garage side of the automobile may enter the garage to refuel subject to the following procedure:
  - (i) The adjoining garages on either side of the pit bay being used must be informed of the intended refuelling pit stop one (1) lap prior.
  - (ii) The garage where the refuelling is to occur must be evacuated of all people except the refuelling personnel, prior to the pit stop.
  - (iii) The automobile must enter the pit bay garage nose first with that area of the automobile where the fuel filler aperture is located remaining outside of the garage.
  - (iv) The automobile's engine must be turned off prior to the commencement of refuelling.
  - (v) Each person involved in refuelling the automobile must wear apparel which complies with Schedule N Part 2 of the CAMS Manual of Motor Sport.



- (vi) When refuelling is completed the crew must then push the automobile from the garage to its pit bay prior to release by the Car Controller.
- (j) An automobile fitted with its standard fuel filler aperture that does not have dry break fittings may refuel in its pit bay utilising hand operated pumping equipment subject to the following requirements:
  - (i) Equipment must have inbuilt earthing and petrol compliant fittings.
  - (ii) The pump and nozzle assembly may be installed in a 205 Litre Race Fuel Drum.
  - (iii) Drums must be tethered along with an earth cable to the pit building.
  - (iv) Each person involved in refuelling the automobile must wear apparel which complies with Schedule N Part 2 of the CAMS Manual of Motor Sport
- (k) The following equipment, or similar as approved by the TC, must be used for an automobile fitted with its standard fuel filler aperture:
  - (i) A Macnaught Rapidflow hand operated pump fitted to a 2.5 metre Maximus dedicated fuel hose (Ref No RWPS09-025) that incorporates inbuilt copper earth wire and non-kink wire coiling. *Note:* Some automobiles may require a longer hose.
  - (ii) A Topgun filler nozzle with cut off handle that controls fuel flow.

### **S13.3 Servicing the automobile**

- (a) The maximum number of persons permitted to assist with servicing the automobile is three (3), excluding the Car Controller, Driver Assistant and others identified in Article S13.1 (n) of these regulations.
- (b) A maximum of two (2) wheels may be jacked above the ground at any time during a Pit Stop.
- (c) The maximum number of powered tools (hand or otherwise) used to loosen or re-tension the wheel nuts is one (1) per automobile.
- (d) During a race it is forbidden to change the cylinder block (crankshaft case and cylinders) or the chassis/body unit under penalty of exclusion.

### **S13.4 Driver Change**

- (a) A Driver change may only take place on the pit lane apron under supervision of pit lane officials, even if an automobile has been moved to the pit garage for an extended repair period.
- (b) A Driver change may be carried out at any time during a pit stop.
- (c) A Driver must not cross the prescribed line into pit lane before the automobile has come to a complete stop in its pit bay.
- (d) The Driver who has exited the automobile must be behind the prescribed line before the automobile is released from its pit bay at the conclusion of a pit stop.





- (e) The Driver exiting the automobile, if assisting the driver entering the automobile, is not deemed to be working on the automobile. Teams are permitted to use a Driver Assistant, in place of the exiting Driver. This Driver Assistant may assist with the driver change and/or connect a cable to an automobile's Data/ECU system only. In these cases the exiting Driver or the Driver Assistant will not be counted as one of the persons who are permitted to assist with the pit stop.

### **S13.5 Compulsory Pit Stops (CPS)**

- (a) At a Round of the Series where a scheduled race time is 1 hour each automobile must complete one (1) CPS in each 1 hour race.
- (b) The CPS must be commenced during the prescribed pit stop window in each race.
- (c) The prescribed pit stop window shall open when a nominated number of laps of the race has been completed by the leader and close when a nominated number of laps have been completed by the leader (The nominated Open and Closed lap number is to be detailed in the Supplementary and Further Regulations issued by the Organiser at each CPS round).
- (d) The CPS may be conducted during a Safety Car period that occurs within the CPS Window.
- (e) An automobile shall be deemed to have commenced a CPS when the automobile enters pit lane and has crossed the speed limit line.
- (f) An automobile shall be deemed to have completed a CPS when the automobile exits pit lane by crossing the speed delimit line and re-joins the track.
- (g) Each CPS shall be conducted in accordance with Article S13.1 of these regulations and the following:
  - (i) Each automobile must complete a driver change at their allocated pit bay. For each automobile with a single Driver, the Driver must exit the automobile, close the door and then re-enter the automobile before the automobile may proceed at the direction of the Car Controller.
  - (ii) No refueling or other work may be carried out on the automobile during the CPS.
- (h) The minimum penalty for failing to conduct the CPS as specified shall be two (2) laps deducted at the completion of the race.

## **S14 MAXIMUM DRIVING TIME**

- (a) The number of Drivers permitted for each automobile in each race is specified in Article S7 of these regulations.
- (b) For each 1 hour race of the Series, there is no maximum drive time.
- (c) For each 250km and 300km race of the Series, the maximum total driving time for each Driver shall be 1 hour and 45 minutes. These limitations shall remain in place if the race is shortened for any reason.



- (d) For each 3 hour race of the Series, the maximum total driving time for each Driver shall be 2 hours and the maximum continuous driving time for each Driver shall be 1 hour and 45 minutes. These limitations shall remain in place if the race is shortened for any reason.
- (e) For each 4 hour race of the Series, the maximum total driving time for each Driver shall be 2 hours and 30 minutes and the maximum continuous driving time for each Driver shall be 2 hours. These limitations shall remain in place if the race is shortened for any reason
- (f) The driving time for each Driver shall be measured from the start of the formation lap and then subsequently from the first time a Driver crosses the control line, on the track (not in Pit Lane), after exiting Pit Lane, until the last time the Driver crosses the control line, on the track, before entering Pit Lane to change Drivers or until the Driver crosses the control line at the end of the race.
- (g) Each Driver must also have a minimum rest time of 30 minutes between driving sessions, with this time measured as above.
- (h) The following penalty (or another penalty as determined by the Stewards of the Meeting) shall be placed on each automobile where a Driver does not comply with the maximum driving/minimum rest times permitted:
  - (i) If detected during the race, the automobile may be shown a black flag and the automobile shall be held in its pit bay area for a duration equivalent to the amount of time that the maximum driving time permitted was exceeded and/or the amount of time less than the minimum rest time. One (1) lap shall also be deducted from that automobile's lap count at the completion of the race.
  - (ii) If detected after the race the penalty shall be the addition of the amount of time that the maximum driving time permitted was exceeded and/or the amount of time less than the minimum rest time. One (1) lap shall also be deducted from that automobile's lap count at the completion of the race.
  - (iii) The sum total of penalty laps shall be deducted from the automobile's total number of laps completed at the end of the race, prior to the results being published.

## **S15 FUEL**

- (a) Each automobile must only use the fuel as supplied by the official fuel supplier at the event, as nominated by the CM.
- (b) Prior to the commencement of Qualifying at each round of the Series, each Competitor must purchase a minimum of 60 litres of fuel per automobile entered, from the official fuel supplier.
- (c) Fuel samples may be taken from competition automobiles at any time.

- (d) Each Competitor is responsible for fuel samples being able to be obtained safely and promptly upon request by the TC or Chief Scrutineer.
- (e) All fuel sampled shall be compared with that provided by the onsite supplier. Any discrepancy shall be reported to the Stewards of the Meeting by the TC or Chief Scrutineer.
- (f) Series fuel/s, a specification analysis, and distribution details shall be available on request from the CM.
- (g) Refueling and defueling is not permitted during qualifying sessions, or before the completion of post qualifying or post-race scrutiny unless authorised by the TC or Chief Scrutineer.
- (h) Returning unused fuel to the official fuel supplier for refund must be completed by 75% race distance of the final Series race for the weekend. No fuel shall be accepted after this time and will be the Competitor's responsibility and cost.

#### **S15.1 Fuel Storage**

- (a) All areas in which fuel is being stored must be:
  - (i) Adequately ventilated and have unimpeded access; and
  - (ii) Be clean and free of potentially flammable materials e.g., paper, rags, oily fabrics etc.
- (b) All fuel must only be stored or transferred at a temperature within 10 degrees Celsius (plus or minus) of ambient temperature.
- (c) The maximum amount of fuel to be stored in each pit lane garage shall be advised in the event Supplementary or Further Regulations. The fuel storage allowance does not include the fuel contained within the refueling tower. A pit lane garage is defined as the area provided by the Organiser as a single pit lane garage hire for one (1) automobile.
- (d) Any fuel in excess of the pit lane garage allowance must be stored in the bunded fuel storage area.
- (e) At least 2 x 4.5kg dry chemical fire extinguishers, in working order, must be provided by the Competitor for each of their competing automobiles.

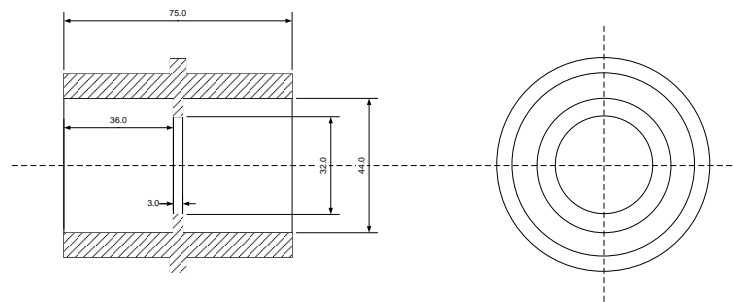
## **S16 REFUELLING TOWER**

### **S16.1 Tower construction**

Each refuelling tower must conform to the following:

- (a) All refuelling equipment must comply with Schedule N Part 2 of the CAMS Manual of Motor Sport.
- (b) Each refuelling tower must be positioned within the walls of the Pit Lane garage.
- (c) Each refuelling tower must be constructed and assembled in such a way that it can and must be securely fixed to the Pit Garage structure at all times and must not be moved once filled.

- (d) The refuelling system (including the refuelling tower, tank, hoses, valves and dry break fittings) must all be electrically connected to one of the grounding connections in the Pit Garage for the duration of the on-track activities.
- (e) The automobile must also be connected, at least momentarily, to one of these grounding connections before refuelling can commence.
- (f) Each refuelling tower must display the relevant automobile's competition number on a forward facing surface of the refuelling rig. This number must be in Helvetica Bold font and must be at least 150mm high.
- (g) Each refuelling tower must have a restrictor fitted between the exit of the refuelling rig hose and within 150mm of the dry-break coupling through which all fuel being transferred to the automobile must pass. The restrictor must be 75.0 mm long, be circular in section and have a maximum internal diameter of 32.0 mm. The 32.0 mm restriction must be maintained for a distance of 3.0 mm. The minimum internal diameter either side of the restriction is 44.0 mm, maintained for at least 36.0 mm. This restrictor must comply with the following drawing.



- (h) The maximum height of the top surface of the tower is two metres above the Pit Lane; only non-fuel holding connections and vents are permitted above this height.
- (i) All towers must be fitted with a ball cock or similar fast action cut-off valve, which must work on the "deadman handle" principle. The cut-off valve must be attached directly to the fuel reservoir and must close immediately, stopping the flow of fuel from the reservoir, when pressure on the handle of the cut-off valve is released. The closing principle of the cut-off valve must not rely on the action of gravity alone.
- (j) The emergency cut-off valve Attendant ("deadman's handle Attendant") must only hold the valve open for the duration of a refuelling operation.
- (k) Towers must only incorporate a "siamese" filler/vent configuration which is to be operated by a single refueller/vent attendant and returns all displaced fumes from the automobile's fuel tank to the ullage space in the reservoir of the refuelling tower.
- (l) A single fuel delivery hose, which must be of a flexible rubber or a fuel resistant reinforced plastic material, must be connected to the emergency cut-off valve. The flexible part of the hose must be at least 3.5m in length and of an internal diameter no greater than 50mm (2 inch).



- (m) The vent hose used to direct the expelled fumes from the automobile to the refuelling tower must remain open at all times. No device may restrict the flow of these fumes for the duration of the refuelling operation.
- (n) The reservoir must be vented via an explosion safe shielded vent. This vent must be open at all times and only atmospheric pressure may be exerted on the fuel in the main reservoir. No artificial pressurisation of the reservoir is permitted.
- (o) A filling orifice (maximum inside diameter of 50mm) may be fitted to the main reservoir.
- (p) Any device or substance, which changes the temperature of the fuel from the ambient air temperature, is prohibited.
- (q) All refuelling equipment must be maintained in good working order:
  - (i) O-rings must be regularly inspected and replaced if there are any signs of expansion or damage; and
  - (ii) Springs and tracks must also be regularly inspected and kept lubricated during those times the refueling valves are not in operation.
- (r) All installations and equipment must be specifically approved by the TC prior to any Event during which refuelling is permitted in Pit Lane.

#### **S16.2. Use of the Refueling Tower**

- (a) The use of a refuelling tower is only permitted during a race when the automobile is in pit lane.
- (b) It is permitted to practice Pit Stops with the refuelling tower in Pit Lane, outside of track activity, provided that there is no fuel in the tower or the refuelling hose.
- (c) Fuel Drums must comply with AS2906.
- (d) Teams are not permitted to place any type of cover or shield over the Refuelling Tower during a race.
- (e) The refilling of a refuelling tower is not permitted during refuelling of an automobile from that refuelling tower.
- (f) Any refilling operations to the main reservoir must be carried out bearing in mind State or Territory Occupational Health and Safety regulations.
- (g) At all times when emptying or refilling a refuelling tower in the pit lane garage all personnel must be fully attired in the apparel as per Schedule N Part 2 of the CAMS Manual of Motor Sport. Each Competitor must also ensure that a similarly attired attendant, with a fire extinguisher in working order, is present.

## S17 TYRES

- (a) From the commencement of qualifying, the maximum number of tyres that are permitted to be used on each automobile at each round of the Series shall be as below. The maximum number of tyres may include new and previously marked 2016 Series season tyres only.

Round	Maximum number of tyres
1	12
2	12
3	12
4	12

- (b) Each automobile must only be fitted with Hankook Z221 tyres of size and compound listed below.

Size	Compound
195/55R15	Medium
215/45R17	Medium
225/45R17	Medium
235/45R17	Medium
235/40R18	Medium
245/40R18	Medium
265/35R18	Medium
285/30R18	Medium
295/30R18	Medium

- (c) Each tyre must be purchased from the control tyre supplier listed below:

Gary's Motorsport Tyres  
 Unit 3/ 13 Penny Place  
 Arndell Park NSW 2148  
 Contact: Gary Harrison  
 Ph: (02) 9676 8655

- (d) With the exception of wear resulting from normal usage, each tyre must remain unmodified.
- (e) A maximum number of tyres (as detailed above) shall be marked for each automobile by the TC or his nominee at each Round of the Series and these marked tyres are the only tyres permitted to be used on that automobile during any qualifying session or race at that Round.

- (f) Within one (1) hour from the completion of the final practice session at each Round of the Series, each Competitor must present all tyres for marking at the front of their respective garage/paddock bay
- (g) Each Competitor is responsible for ensuring that all tyres are marked or re-marked as appropriate. If the tyres are not marked for any reason or the markings become illegible, the Competitor must notify the TC or his nominee immediately.
- (h) Competitors are permitted to replace one marked tyre per automobile, if the TC is satisfied that due to exceptional circumstances, the tyre in question can no longer be used. The TC shall ensure that the tyre to be replaced has been rendered unusable and that the replacement tyre is of the same specification and of similar wear to the tyre being replaced.
- (i) Should a Competitor be permitted to replace a marked tyre, the automobile concerned must start the next race at that Round of the Series from the rear of the grid.
- (j) The use of any tyre heating, heat retention device or chemical treatment is prohibited.
- (k) It is prohibited to use any device that automatically controls the tyre pressure of each fitted tyre.
- (l) If qualifying and/or racing are scheduled on more than one (1) day at any Round of the Series, the TC may impound any tyres overnight at his sole discretion.
- (m) At no time may any tread wear indicator be exposed, or in the case of tyres that have dimpled tyre wear indicator, the tyre must not be worn below the indicator. With the exception of the shoulder of a tyre, in each area of a tyre where there is no tread wear indicator, the standard tread pattern must be clearly visible.

**Please note:** The TC is sole arbiter with regard to the interpretation and application of these tyre regulations and any decision made by the TC in this regard shall not be the subject of any protest or appeal.

## S18 AUTOMOBILE MARKINGS

### S18.1 Automobile Markings and Series identification

In addition to the requirements detailed below and in Appendix 1 of these regulations, each automobile must comply with Schedule K of the CAMS Manual of Motor Sport:

- (a) The front and rear windscreen strip of each automobile is to be left vacant for the Series sponsor. 200mm from bottom of strip to top of windscreen – decals to be supplied by the CM. Note: The windscreen banner must be placed on the windscreen glass (not the metal roof space above the windscreen).
- (b) Side number panels are to be white panels 300 mm high x 380 mm wide and placed 10mm to 20mm back from the front door line.



- (c) The competition numbers are to be black - 220 mm high x 300mm wide and in Helvetica Bold Italic.
- (d) The class of the automobile entered should be placed on the bottom right hand side of the number panel – 80mm high and in black Helvetica Bold Italic. For Example “A”.
- (e) A panel above the side number panel is to be left vacant for the Series commercial partners. 102mm high x 380 mm wide – to be supplied by the CM.
- (f) The front and rear number plates are to be left vacant for class commercial partners. 130mm high x 400 mm wide – to be supplied by CM.
- (g) Front windscreen number and class letter – day glo Helvetica Bold. 150mm high for number, 80mm high for class letter – to be placed 25mm from the left side of the windscreen and 25mm below the bottom of the windscreen strip.
- (h) Rear windscreen number and class letter – day glo Helvetica Bold. 150mm high for number, 80mm high for class letter – to be placed 25mm from the bottom of the rear windscreen strip and 25mm from the right hand side.

### **S18.2 Competition Numbers**

The allocation of a competition number for each automobile is solely the responsibility of the CM, which shall maintain a register of all competition numbers allocated to, or reserved for, any automobile. The Number “1” shall be reserved for the outright Series winners from the previous year.

### **S18.3 Night Racing Requirements**

- (a) Door numbers must either be of reflective material or illuminated by door panel lighting.
- (b) Door handles, battery isolation and kill switches as well as window net release mechanism must be highlighted with reflective tape.
- (c) Pit Booms can be utilised for lighting of the pit bay area only.

## **S19 PRESSURE MONITORING DATA LOGGER**

- (a) Each automobile fitted with a forced induction engine must be fitted with a pressure monitoring data logger as detailed in the 2016 Production Car Series Technical Regulations
- (b) Each pressure monitoring data logger must be installed in accordance with all instructions issued by the pressure monitoring data logger supplier and the TC and must remain fully operational to record the inlet manifold pressure of the automobile for the duration of all practice sessions, qualifying sessions and races.
- (c) Access to the logged data recorded by the pressure monitoring data logger must be provided to the TC at any time upon request.
- (d) Downloading of logged data by a Competitor, or their representative, is not permitted until thirty (30) minutes have elapsed from the completion of a practice session, qualifying session or race.





- (e) The pressure monitoring data logger detailed in the 2016 Australian Production Car Series Technical Regulations is the only device that will be used to determine the compliance of each forced induction automobile with the maximum inlet manifold pressure detailed in its CAMS Vehicle Recognition Document - APCS.
- (f) The TC is the sole arbiter with regard to the interpretation of any data recorded by the pressure monitoring data logger and the determination of compliance of each automobile. Any non-compliance shall be reported to the Stewards of the Meeting with a recommendation of exclusion from the relevant session.
- (g) The TC can exchange the competitor's pressure monitoring data logger unit for one owned by the CM at any time.

## **S20 TESTING RESTRICTIONS**

Any driver associated with the Series is not permitted to drive on any circuit that is hosting a Round of the Series in any automobile entered in the Series after midnight on the Friday of the week preceding the commencement of the relevant Round of the Series unless authorised in writing by the CM. The CM shall be the sole arbiter as to whether an automobile or Driver is associated with the Series.

## **S21 SEALING OF AUTOMOBILES/COMPONENTS**

- (a) The engine fitted to each automobile must have been sealed by the TC or a nominated sealer approved by the CM, prior to the commencement of qualifying at each round of the Series.
- (b) The TC may seal drive train and engine parts during an event for inspection between events.
- (c) No seal may be removed without the prior express permission of the TC.
- (d) Where a sealed component has been determined to be ineligible by the Stewards of the Meeting, the Stewards of the Meeting may, at their discretion, exclude the automobile from the results of all previous rounds of the Series in which the sealed component was identified as having been used on that automobile.
- (e) It is the responsibility of the Competitor to have appropriate holes in relevant components to enable the fixing of seals.

## **S22 VIDEO CAMERA & RECORDING DEVICE**

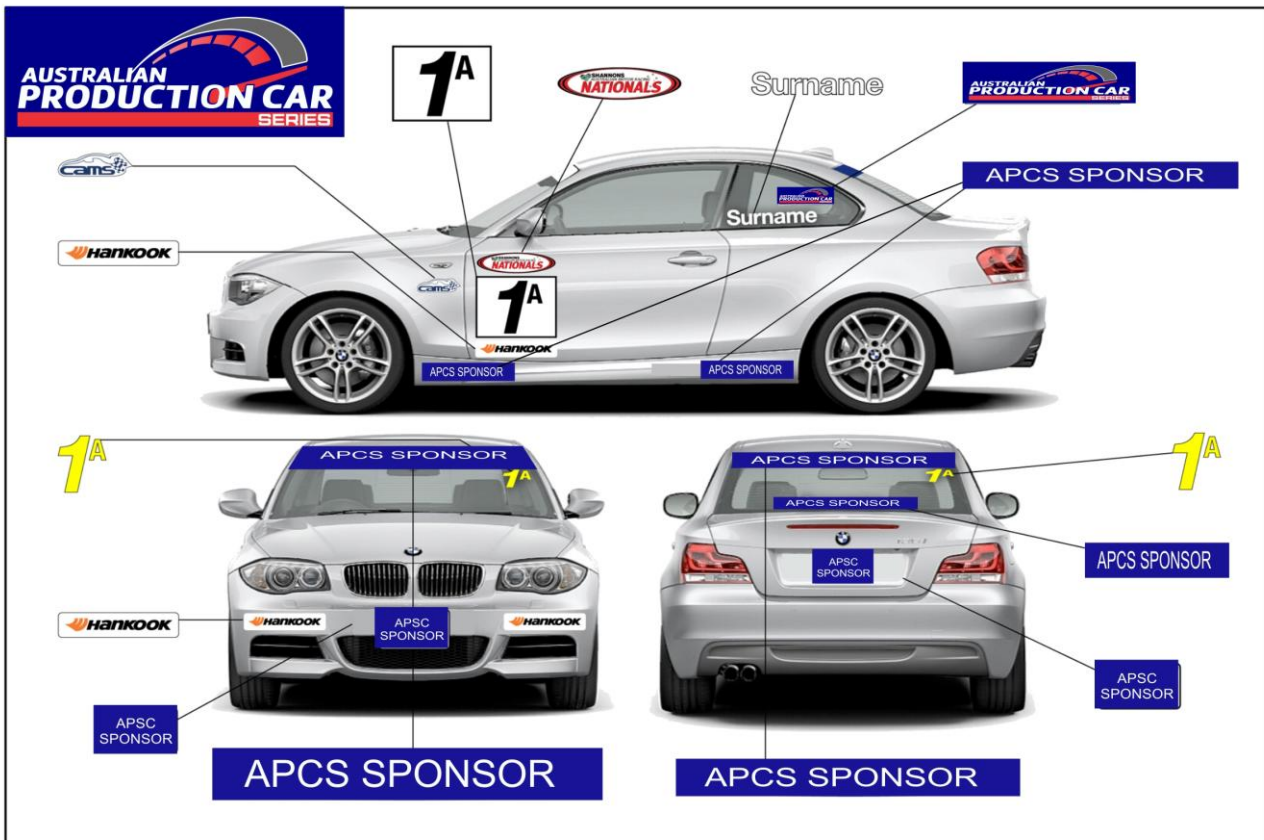
- (a) Each automobile entered in the Series must be fitted with a fully operational digital video camera and recording device and any associated camera equipment to ensure the full functionality and recording capability of the camera in all practice/qualifying sessions and races.
- (b) The camera system must be supplied by the Competitor and authorised by the CM.



- (c) The camera and its associated equipment shall be installed in the automobile with the camera pointed in a forward direction with a field of vision sufficiently wide to record clearly, and without obstruction at all times, the Drivers view of the race track ahead.
- (d) Each Competitor shall be required to ensure that the camera is switched on and functioning in the correct manner prior to the automobile entering the Circuit for all practice/qualifying sessions and races.
- (e) Access to the camera must be provided to personnel appointed by the CM at any time upon request.
- (f) No person other than personnel authorised by the CM shall interfere with the camera, for 30 minutes after the conclusion of any track activity
- (g) Each Competitor is permitted access to the video images recorded by the cameras, however the footage is "strictly for private internal purposes"; that is, it cannot be sold, licensed, broadcast ,published, commercially exploited or otherwise publicly displayed or distributed, including in any case via internet or social media.
- (h) When requested, each Competitor must immediately provide the flash card to the RD, TC or Stewards of the Meeting.
- (i) The fitment of any other camera and/or recording device to an automobile is subject to the prior express approval of the CM and the installation of this/these units is subject to the approval of the TC.

# Appendix 1

## Automobile Marking





# 2016 Australian Production Car Series

## Technical Regulations

### **T1 PREAMBLE**

The intent of these regulations is to allow each competitor entered in the Series to appropriately prepare a production automobile for competition. The specific purpose of each of the freedoms granted within these regulations is to provide for safe and cost effective competition by increasing serviceability and reducing maintenance costs whilst maintaining the inherent strengths or weaknesses of individual makes/models.

#### **T1.1 Definition**

The Series is an Authorised Series sanctioned by CAMS for appropriately modified production cars that the average Australian household may aspire to own. Each make/model of automobile that is eligible to compete in the Series must be representative of the normal everyday cars that appear on Australian roads.

#### **T1.2 Permitted Modifications**

Each automobile must remain unmodified, in compliance with all aspects of its CAMS Vehicle Recognition Document - APCS and identical in all respects to the standard production make/model as supplied by the original vehicle manufacturer except for the freedoms permitted by these regulations. Any modification or tuning practice which is not specifically permitted by these regulations is expressly forbidden.

In addition to the above, the only work which may be carried out on the automobile is that necessary for normal servicing, or for the replacement of worn or damaged parts by standard parts.

The use of carbon fibre, carbon/Kevlar® composites, ceramic materials or titanium alloys, is not permitted unless such component/material was fitted/used as a standard part by the manufacturer, or its use is otherwise specifically permitted in these regulations.

In all circumstances the primary function of any component, even if all or part of its design is free, is the overriding factor in determining its compliance with these regulations. Any secondary function/s that are not specifically permitted by these regulations are not permitted.



## T2 ELIGIBILITY

### T2.1 Eligible Models

Only makes/models that are detailed on the list of Eligible Automobiles contained in the 2016 Australian Production Car Series Sporting Regulations are eligible to compete. Applications for a make/model to be considered for inclusion into the list of Eligible Automobiles for the Series must only be made to the CM and each application must satisfy any criteria applied by the CM and confirm compliance with the following:

Each make/model must;

- Be a closed automobile with a minimum seating capacity for four (4) adults.
- Be available for purchase to members of the Australian public through the normal commercial distribution network of the original vehicle manufacturer (or their authorised Australian distributor, as approved by CAMS) there is no limitation on capacity or number of cylinders but the vehicle price must be less than AUD\$150,000. The price being defined as the Manufacturer Suggested Retail Price (MSRP) before on-road costs as provided on [www.redbook.com.au](http://www.redbook.com.au).
- Be certified for road use in Australia and listed on the Road Vehicle Certification System (RVCS) published by the Department of Transport and Regional Services (DOTARS).
- Have RVCS certification which has been achieved by the original vehicle manufacturer (or their authorised Australian distributor, as approved by CAMS).
- Each automobile must be homologated with CAMS once RVCS compliance has been demonstrated or otherwise as detailed above. Homologation shall cover the detail necessary to describe an automobile without reference to workshop manuals, dealer bulletins or similar documents. Relevant FIA Group N homologation papers shall be accepted where they apply to an eligible automobile described above

At all times CAMS and the CM reserves the right to accept or reject any application for the inclusion of any make/model into the list of Eligible Automobiles for the Series for any reason.

Optional components shall only be considered for approval for use on a specific make/model if the component is a legitimate manufacturer option that complies with one of the following requirements:

- the component is listed on the relevant automobile's Road Vehicle Descriptor (RVD) as published by DOTARS, or;
- The component is listed and authorised by the manufacturer in official sales literature and to which a manufacturer's warranty applies.

All approved manufacturer options shall be listed in the relevant automobile's CAMS Vehicle Recognition Document - APCS.



### T3 GENERAL

#### T3.1 General Compliance

Each automobile must comply with the provisions of Schedules A, B, and C of the CAMS Manual of Motor Sport at all times.

#### T3.2 Racing Weight

Each automobile must comply with the racing weight specified in its CAMS Vehicle Recognition Document - APCS.

This shall be calculated by:

- (i) Deducting a percentage of weight from the automobile's tare mass as detailed on the automobile's RVD in accordance with the table below, rounded  $\pm 2\text{kg}$ , and;
- (ii) Adding 85kg.

Tare Mass (kg)	Reduction (%)
1299 or less	2
1300 – 1349	3
1350 – 1399	4
1400 – 1449	5
1450 – 1499	6
1500 – 1549	7
1550 – 1599	8
1600 – 1649	9
1650 – 1699	10
1700 or greater	11

#### T3.3 Non-Genuine Parts

The use of non-genuine parts is permitted for all fasteners, belts, gaskets, seals, flexible hoses, liquid carrying pipes, mechanical cables, bearings, clamps, spark plugs, spark plug leads, filters, batteries, battery cables, globes and LEDs, fuses and electro mechanical relays and windscreen glass provided the non-genuine parts are mechanically identical to the standard part and that no modifications are required to facilitate the fitment of the non-genuine part.

#### T3.4 Substitute Components

The use of a substitute component on a specific make/model is permitted only if it has been approved for use in the Series by CAMS and the substitute component is detailed in the relevant automobile's CAMS Vehicle Recognition Document - APCS. The application form for a substitute component to be approved is available from the CM. Applications shall only be accepted up to four (4) weeks prior to the first round of the Series or introduction of a new make/model.



## **T4 CHASSIS/MONOCOQUE**

### **T4.1 Safety Cage**

Each automobile must be fitted with a full safety cage which must be in compliance with Schedule J of the CAMS Manual of Motor Sport.

## **T5 ENGINE**

### **T5.1 General**

Unless specified otherwise in these regulations, the tolerances for machining, finishing and weighing of engine components shall be in accordance with 'Definitions – Technical, Measuring Tolerances' in "General Requirements for Cars and Drivers" of the CAMS Manual of Motor Sport.

All plastic shrouding located in the engine bay, the sole purpose of which is aesthetic, may be removed.

Soundproofing material and trim fitted to the underside of the bonnet that is not visible from the outside may be removed.

### **T5.2 Engine Mounts**

The dampening material of the engine mounts is free provided the location, position and orientation of the engine and the attachment of the mount/s to the engine and body/cross-member remains standard.

### **T5.3 Cylinder Block**

It is permitted to increase the cylinder block bore diameter up to a maximum of 0.6mm over the standard bore size. It is permitted to re-sleeve the cylinder bores of a sleeved block, or to fit a sleeve to a unitary block, provided that in each case the material used to sleeve the cylinder bore is either the same as the standard bore or is cast iron.

It is also permitted to remove material from the head gasket contact face of the cylinder block up to a maximum of 0.25mm provided the engine's compression ratio remains in compliance with these regulations.

### **T5.4 Cylinder Head/s**

It is permitted to remove material from the head gasket contact face of the cylinder head up to a maximum of 0.25mm provided the engine's compression ratio remains in compliance with these regulations. It is also permitted to re-cut valve seats provided that the cutting process does not remove any of the cylinder head casting.

### **T5.5 Crankshaft**

The maximum amount of material permitted to be removed from any crankshaft journal diameter is 0.25mm.



### **T5.6 Balancing of Engine Components**

It is permitted to balance rotating or reciprocating components of the engine (by the removal of metal only) but at all times, a minimum of one of the respective components (or individual aspects of the component being balanced) must remain standard and have no material removed.

### **T5.7 Connecting Rods**

Each connecting rod of a reciprocating engine may be replaced provided the replacement is of a solid ferrous magnetic steel construction. Each replacement connecting rod shall:

- (i) Have the same dimensional distance between the centre lines of the big and small end as the standard connecting rod;
- (ii) Shall be equal in weight to the original connecting rod +/- 2%

Note: the connecting rod weight is inclusive of the small end bush, big end bearings and bolts and nuts.

### **T5.8 Pistons**

Each piston may be replaced provided the replacement piston:

- (i) has an identically shaped crown to that of the standard piston;
- (ii) the distance between the gudgeon pin centre line and the highest point of the piston crown remains the same as the standard piston;
- (iii) shall be equal in weight to that of the standard piston, including the rings and gudgeon pin and retainer +/- 2%

Has no part of the parent material coated by another material unless the standard piston supplied is coated by a material as standard equipment.

### **T5.9 Piston Rings**

Each piston ring maybe replaced provided the number of rings, including compression and oil rings, remain the same as the standard piston, the number of components per ring remains the same as the standard piston rings (i.e., single piece compression rings may not be replaced by two piece 'gapless' rings) and the face of each piston ring (the part of the ring which is in contact with the cylinder wall) must not be less than that of the standard ring.

### **T5.10 Camshaft/s**

The timing of the camshaft in relation to the crankshaft is free. The camshaft drive components and the method of operation must remain standard.

### **T5.11 Lubrication**

The removable portion of the oil sump is free provided any additional material added to the oil sump is the same as that of the standard oil sump and no additional modifications are made to facilitate the fitment. It is permitted to modify the oil pickup and to add an oil separator tank to the crankcase breather line.





### **T5.12 Throttle**

Where an automobile is fitted standard with an electronically controlled throttle valve/s, it is permitted to replace the electronic control assembly of the throttle valve/s with a mechanical assembly provided the replacement throttle valve/s respects the exact shape and dimensions of the standard assembly in all areas that come in contact with the engine intake air.

In this instance it is permitted to replace or modify parts of the throttle pedal assembly, the sole function of which is to operate the replacement throttle control valve, as well as fit a throttle cable, associated mounting brackets and a replacement or additional throttle position sensor. It is permitted to fit a duplicate throttle cable and associated mounting brackets.

Cruise controller units may be disconnected and/or removed.

### **T5.13 Pulleys**

Each pulley that drives engine ancillaries (i.e., water pump, alternator, etc) is free and the crankshaft drive pulley is free. Each associated belt may be replaced provided it respects the standard type and width.

### **T5.14 Forced Induction Engines**

Each automobile fitted with a forced induction engine must comply with the maximum inlet manifold pressure as listed in the relevant automobile's CAMS Vehicle Recognition Document – APCS.

The maximum inlet manifold pressure specified in an automobile's CAMS Vehicle Recognition Document - APCS is in addition to atmospheric pressure which at all times is deemed to be 101 kPa (1010 millibars).

It is permitted to replace or modify the boost pressure or vacuum controlled, boost control mechanism fitted before the wastegate actuator to achieve compliance with the maximum inlet manifold pressure provided such modification is expressly approved by the TC. Each wastegate actuator fitted to a turbocharger shall remain standard.

Each automobile with a forced induction engine must be fitted with a pressure monitoring data logger manufactured after 1 January 2012 as detailed below:

*Make/model: Motor Sport Electronics – BM2012 Boost Monitor*  
*Supplier: Motor Sport Electronics Pty Ltd*  
*22 Deep Pool Way, Mount Annan*  
*NSW 2567*  
*Ph: 02 4648 0030*  
*Sales@msedata.com.au*  
*Mob: 0402 102 553*  
*www.msedata.com.au*



Each pressure monitoring data logger must be installed under the bonnet of the automobile in a location accessible to officials and in accordance with instructions issued by the pressure monitoring data logger supplier and the TC. The hose must be as short as possible and without interruption. The TC can exchange the competitor's MSE unit for one owned by the CM at any time.

#### **T5.15 Electronic Engine Control Unit**

- (a) Electronic engine control units are free provided that no modifications are made to the standard automobile wiring harness (including all connectors) and that only the standard sensors and actuators are used to control the engine. At any given time the standard electronic engine control unit must be capable of being fitted to the automobile and performing its original functions.
- (b) It is permitted to fit an additional engine coolant temperature sensor, air intake temperature sensor and manifold pressure sensor, provided they are wired separately to the main wiring harness. The signals generated by these sensors must not be used to control the engine and may only be recorded by a data logging system.
- (c) The use of traction control/launch control is prohibited, unless the system is standard. In this case, the traction control/launch control system may only be operated by the original electronic control unit utilising the manufacturer's standard software with standard calibration settings.
- (d) It is permitted to use a Pit Lane Speed Limiter for the purpose of limiting the automobile speed in Pit Lane only..

#### **T5.16 Cooling System**

Radiators may be replaced provided the width, height and position of the replacement radiator is the same as the standard radiator and no modifications are required to facilitate the fitment of a replacement radiator other than the complete removal or modification of the plastic fan shroud.

Water pumps are free provided they are mechanically identical to the standard pump.

The thermostat, its operation and method of control is free as is the method of operation of the standard engine cooling fan/s and the manner in which the radiator pressure is maintained.

It is permitted to fit a protective screen mounted in front of the radiator provided no additional modifications are made to facilitate its fitment.

It is permitted to fit an engine, transmission, final drive and/or power steering oil cooler provided that the sole purpose of the cooler is to reduce the oil temperature within the respective assembly. The direction of flow of oil within the engine must remain unchanged. All coolers and associated components must remain inside the external bodywork of the automobile. The only modification permitted to facilitate the fitment of coolers and associated components is the relocation of the oil filter and the drilling of holes for mounting purposes.



### **T5.17 Exhaust**

The exhaust system of normally aspirated automobiles is free downstream of the final junction of the exhaust manifold.

The exhaust system of forced induction automobiles is free downstream of the exit of the exhaust turbine housing of the turbocharger. No part of the replacement exhaust system may protrude upstream of this mating surface.

If a catalytic converter is an integral part of any retained standard exhaust manifold, it is permitted to remove the internal components of the catalytic converter.

No additional modifications are permitted to facilitate the fitment of a replacement exhaust system and the exit point/s of the exhaust gasses from a replacement exhaust system must remain standard. If the standard exhaust system has multiple exit points, any replacement exhaust system must utilise at least one of the standard exit points for the exhaust gasses.

For naturally aspirated vehicles that have been modified to compete in the NSW Production Touring Cars Championship prior to and including 2016 or the 2016 Bathurst 6 Hour the exit points of the exhaust gasses from a replacement exhaust system must be located rearward of the midpoint of the wheelbase.

### **T5.18 Air Conditioning Components**

Any components solely associated with the air conditioning system of the automobile may be removed from the engine compartment.

## **T6 TRANSMISSION**

### **T6.1 Mounts**

The dampening material of the transmission mounts is free provided the location, position and orientation and the attachment of the mount/s to the transmission and body/cross-member remains standard.

### **T6.2 Gearbox**

Shift forks, shift hub keys and shifter bushes are free provided no additional modifications are made to facilitate their fitment. It is also permitted to fit an extension to the transmission breather using a short length of tubing.

### **T6.3 Flywheel**

The flywheel may be replaced provided the outside diameter is identical to the standard flywheel, it is made of a steel construction and the weight is within 2.0% of the standard flywheel.



#### **T6.4 Clutch**

The clutch driven plate/s is/are free provided the number of plate/s remains standard and the plate/s are not made from a carbon fiber material. The pressure plate may be replaced but the replacement assembly must be mechanically identical to the standard assembly.

#### **T6.5 Differential and Final Drive Assembly**

The action of all final drive differential units, including those within AWD transfer cases, is free. The rear cover plate of the final drive assembly may be replaced by another mechanically identical unit.

#### **T6.6 Electronic Transmission Control Units**

The use of electronically or automatically controlled/adjusted transmission systems are prohibited, unless such a system is fitted as standard. In this case, the system must only be operated by the standard electronic transmission control unit utilising all standard components and wiring. The configuration and calibration settings of these systems may be modified.

### **T7 SUSPENSION**

#### **T7.1 General**

The adjustment of suspension geometry within the range of adjustment provided for by the manufacturer, or as achieved by such modifications which are permitted within these regulations, is free.

#### **T7.2 Coil Springs**

The length, wire diameter and external diameter of each coil spring is free, as is the type (ie, linear or progressive) provided that each spring is made from a ferrous material. The use of a keeper spring in series with the primary spring is permitted.

#### **T7.3 Leaf Springs**

The length, width, thickness, number of leaves and vertical curvature of a leaf spring is free.

#### **T7.4 Torsion Bars**

Where a Torsion Bar is used as the primary automobile load bearing mechanism, each torsion bar is free provided no additional modifications are made to facilitate the fitment of a replacement and it is made from a ferrous material. A torsion bar is not permitted to be replaced by another type of load bearing spring medium, eg, a coil spring.

#### **T7.5 Spring Seat**

Each coil spring seat, which is not permanently attached to the chassis/body work, is free. Each permanently attached spring seat is permitted to have an adaptor added to facilitate ride height adjustments, provided no material is removed. Each coil spring seat shall remain concentric with the standard seat.



### **T7.6 Suspension Dampers**

Each suspension damper is free provided that the number, type, working principle and the attachment points on the suspension/bodyshell remain unchanged.

An external hydraulic canister may be fitted to the suspension dampers provided that no additional modifications are required to facilitate their fitment, except for the drilling of holes for mounting purposes.

Rubber bush/es utilised in the mounting of the suspension dampers may be replaced by a 'Uniball' joint/s.

Where a standard suspension damper forms an integral part of the attachment of the wheel hub assembly to the chassis/body work, (eg, MacPherson strut), the suspension damper assembly, in its entirety, is free. No additional modifications are permitted to facilitate the fitment of the replacement suspension damper assembly. The resulting replacement suspension damper assembly must be fully interchangeable with the standard unit.

### **T7.7 Attachment Points**

In the case of independent suspensions it is permitted to relocate in a horizontal and lateral plane, the mounting point/s of the lower and upper control arms to a maximum distance of 25mm each side. In this case the track of the modified axle is free.

In the case of MacPherson struts, it is permitted to replace the upper insulating/bearing block with another of free design provided that the standard attachment points on the bodyshell are utilised and remain unmodified.

Reinforcing of each suspension attachment point is permitted, provided the material used follows the standard shape and is in contact with the standard attachment point.

### **T7.8 Suspension Bushes**

Each elastomeric suspension pivot point bush and subframe mounting bush may be replaced by a mechanically identical bush made from another elastomeric material.

In the case where a suspension bush incorporates an outer metal shell and/or a central crush tube, these components shall be regarded as part of the bush. Each outer shell or central crush tube must respect the dimensions of the standard bush.

In the case where a suspension bush is integrated with a secondary component, such as a suspension arm, only the elastomer material shall be regarded as the bush.

### **T7.9 Ride Height**

Each fully sprung part of the automobile must be at least 100mm above the ground when measured at any point within the wheelbase. The automobile ride height shall be measured without the driver.



### **T7.10 Steering**

It is permitted to add components to the steering tie-rods in order to continue to provide adjustment of the toe angle. Tie-rods may also be shortened if necessary.

The locking system of the anti-theft steering lock may be rendered inoperative.

It is permitted to replace the steering wheel provided the rim of the replacement steering wheel remains within 50mm of the location of the rim of the standard steering wheel.

### **T7.11 STABILISER BARS**

The stabilizer bar must remain standard however the bushes may be replaced by another elastomeric material. Stabiliser links are to remain standard, however if the link connects to the suspension dampers then the stabiliser link may be replaced by another link of fixed length.

## **T8 WHEELS**

Each wheel is free, subject to compliance with the maximum diameter, maximum width and offset as listed on the relevant automobile's RVD.

In addition to the above:

- Each automobile with a Racing Weight of 1650kg or greater may utilise a wheel with a width one (1) inch wider than the maximum width listed on the relevant automobile's RVD.
- Each automobile with a maximum wheel width listed on the relevant RVD that ends with a measurement of 0.5 of an inch may increase that wheel width by 0.5 inches.
- Each automobile with a maximum wheel diameter listed on the relevant RVD that does not allow fitment of one of the control tyres (refer Article S17) may increase the maximum wheel diameter by up to 1.0 inch or reduce the maximum wheel diameter by as much as is required to allow the fitment of one of the control tyres, subject to the prior express approval of the TC.
- A single metallic spacer may be used on each wheel provided the offset of the wheel and the width of the additional spacer respect the offset +/- 12.5mm as stated on the relevant automobile's RVD.

Wheel attachment studs are free provided the number of studs remain the same, the diameter of the replacement stud is equal to or greater than the standard studs and no additional modifications are made to facilitate the fitment of the replacement studs.

Wheel attachment bolts may be replaced with studs and nuts provided that the number of attachment points remains standard and the diameter of the thread is not less than that of the replaced bolt.

Any device, system, procedure, construction or design the purpose and/or effect of which allows the wheel nuts or bolts to be retained within the wheel during the process of the wheel being fitted to or removed from the car is forbidden.



The design of wheel nuts is free provided that they are of ferrous material and the outer end is not enclosed.

A system that solely monitors tyre pressure may be fitted.

It is prohibited to use any device that automatically controls or changes the tyre pressure of each fitted tyre.

## **T9 BRAKES**

### **T9.1 Anti-Lock Brakes (ABS)**

ABS may be rendered inoperative by using one of the following methods:

- The removal of electrical power to the electronic operating system. If this method is utilised it is permitted to mount a driver operated switch to perform this function;
- the replacement of the main ABS actuating system with the fitment of a junction block. No modification to the brake lines is permitted;

### **T9.2 Electronic Brakeforce Distribution (EBD)**

Where an automobile is fitted with EBD, it is permitted to either replace the standard master cylinder with a mechanically identical unit incorporating a mechanical proportioning valve, or add a mechanical proportioning valve to the rear brake line; such valve must not be adjustable by the driver from within the cockpit.

### **T9.3 Power Assisted Braking**

The vacuum assist of the braking system may be rendered inoperative. It is permitted to modify the servo unit by replacing the internal valve system, diaphragms and pushrods with a solid rod linking the unmodified brake pedal to the master cylinder.

The fitment of an additional vacuum reservoir tank is permitted provided that the tank is mounted under the floor pan of the automobile. No additional modifications are permitted to be made except for the drilling of holes for mounting purposes and the addition of a one-way valve and vacuum line.

### **T9.4 Brake Pads**

Brake pads are free.

### **T9.5 Brake Rotors**

Each brake rotor and mounting hat is free provided it complies with the following:

- The diameter of each brake rotor must not be greater than that of the standard brake rotor;
- The width of each brake rotor must be within +5mm, -2mm of the width of the standard brake rotor;
- Each brake rotor must be made exclusively from a ferrous material.



### **T9.6 Brake Calipers**

Where the standard front brake caliper contains less than four pistons per caliper, it is permitted to fit a replacement brake caliper provided the maximum number of pistons per caliper is four.

Where the standard front brake caliper contains four or more pistons per caliper, it is permitted to fit a replacement brake caliper provide the maximum number of pistons remain the same as the standard brake caliper.

Where the standard rear brake caliper contains less than two pistons per caliper, it is permitted to fit a replacement brake caliper provided the maximum number of pistons per caliper is two.

Where the standard rear brake caliper contains two or more pistons per caliper, it is permitted to fit a replacement brake caliper provide the maximum number of pistons remain the same as the standard brake caliper.

When utilising a replacement caliper the maximum permitted number of calipers per wheel is one, the caliper must be mounted using the standard mounting points (an adapter bracket may be utilised) and the caliper pistons must be round in section.

### **T9.7 Park Brake**

It is permitted to render the park brake inoperable via the removal of components, the sole purpose of which is to operate the park brake.

### **T9.8 Backing Plates**

The backing plate may be removed.

### **T9.9 Brake Cooling**

It is permitted to remove any blanking plates, covers or fog lights (and associated hardware) located in the lower section of the standard front bumper bar, solely for the purpose of providing additional cooling air to the front brakes.

### **T9.10 Brake Ducts**

It is permitted to fit a single duct to the braking system of each front wheel of an automobile, solely to direct ambient air from an existing unmodified opening in the standard front bumper bar to the front brake rotor. Blanking plates, covers or fog lights (and associated hardware) located in the lower section of the standard front bumper may be removed to provide cooling air for these ducts. These brake ducts must be wholly contained within the external shape of the standard bodywork and must not be visible when viewed from the front of the automobile (except through any opening in the front of the duct). Each duct must not exceed 80mm inside diameter at a point no more than 150mm from the external surface of the standard front bumper bar or within 80mm of the brake rotor.





## T10 FUEL SYSTEM

### T10.1 Fuel Tank

The fitment of a single replacement fuel tank is permitted, provided the replacement fuel tank complies with FIA FT3-1999 standards. The replacement fuel tank shall be either in the same general location as the standard tank, or in the luggage compartment. No additional modifications are permitted to facilitate the fitment of a replacement tank other than the drilling of holes of the minimum necessary dimensions, for mounting purposes and for the passage of fuel lines.

The entire fuel system shall be at all times isolated from the cockpit unless supplied otherwise as standard.

Should a fuel tank be installed in the luggage compartment and the rear seats removed, a fireproof and liquid proof bulkhead must separate the cockpit from the fuel tank. In the case of twin-volume automobiles it is permitted to use a non-structural partition wall made from transparent, non-flammable plastic between the cockpit and the fuel tank.

When using a standard tank, an additional tank, highly recommended to be of FT3-1999 specification, up to a maximum of 30 liters capacity is allowed as long as it is within a sealed compartment separate to the driver's compartment and providing the fuel capacities for the vehicle as listed in Table 1 are not exceeded.

The maximum capacity of the fuel tank must be in accordance with the following Table:

Effective Engine Capacity (cc)	Maximum Fuel Tank Capacity (litres)
1000 or under	50
1001 – 1600	60
1601 – 2000	70
2001 – 3000	80
3001 – 4000	90
4001 and over	100

**Please note:** Effective Engine Capacity shall be calculated in accordance with NCR 13 of the CAMS Manual of Motor Sport

### T10.2 Fuel Pump/s

When using a replacement fuel tank, it is permitted to utilise a replacement external fuel pump and fuel pressure regulator provided the fuel pressure remains standard.



When using a standard fuel tank fitted with an internal electric fuel pump, it is permitted to utilise a replacement external fuel pump and to fit one anti-surge container provided the fuel pressure remains standard. In each case the fuel pump and anti-surge container must be adequately mounted and protected from damage and not within the driver's compartment.

When using a replacement fuel tank, it is permitted to fit one anti-surge container and a maximum of two (2) additional electric fuel pumps (the sole purpose of which is to supply fuel to the anti-surge container). All components, including the additional fuel pump and anti-surge container, can be mounted outside the replacement fuel tank, but within a sealed compartment separate to the driver's compartment.

### **T10.3 Dry-Break Fittings**

When utilising a replacement fuel tank it is recommended to fit dry-break refueling couplings. If the standard tank is retained, it may be modified to accept a dry-break refueling coupling.

The filling and vent points may either be located inside the luggage compartment, on the boot lid or rear hatch, on the rear valance panel or on the rear quarter panels.

In each case the filling and vent fittings must be mounted as close as practical to the fuel tank. All associated plumbing must be no greater than the outside diameter of the exit of the dry-break fittings. The route of the filler and vent bottle pipes must be as short as practical.

## **T11 ELECTRICAL EQUIPMENT**

The use of data storage devices including multi-display dashes with the ability to store car data is permitted.

The only inputs which are permitted are as follows:

- G force (3-axis);
- 2 x wheel speed;
- trigger device for lap timing;
- brake light;
- engine RPM;
- 2 x exhaust gas oxygen sensors;
- temperature inputs used solely for the purpose of measuring fluid temperatures of engine and drive line components, exhaust temperatures and intake air temperature;
- pressure inputs used solely for the purpose of measuring fluid pressures of engine and drive line components;
- throttle position/s;
- manifold pressure;
- fuel usage;



- steering angle;
- engine operating parameters.

The software for the data storage device must not show any pin allocations set up to read sensors other than those permitted above. The use of any form of real time telemetry or the transmission of any data other than a lap trigger signal to or from the car is prohibited.

## **T12 BODYWORK**

### **T12.1 Exterior**

It is permitted to reform the wheel arch beading against the inside of the wheel arch and remove the plastic inner guard liners. Plastic shrouds fitted under the body of the automobile (licked by the air flow) may be removed.

Protective headlight covers may be fitted provided that they have no influence on the automobile's aerodynamics.

### **T12.2 Jacking**

The jacking points may be strengthened by the addition of metal plate/s, relocated and/or increased in number provided that each jacking point does not exceed a surface area of more than 150mm x 150mm and follow the contours of the standard structure.

On-board jacking systems are strictly prohibited.

### **T12.3 Interior**

The driver's seat must be replaced by one that complies with the FIA 8855/99 or FIA 8862 - 2009 standards. The seat may be made from carbon fibre or carbon/Kevlar® material : The use of a seat that complies with the FIA 8862 – 2009 standard, or a seat that complies with the FIA 8855/99 standard and which incorporates side head support structure, is strongly recommended.

The driver must use a safety harness that complies with Schedule I.

Each automobile is to have a window net covering the driver's door window opening forward to the centre of the steering wheel in accordance with Schedule I of the current CAMS Manual of Motor Sport. The net may be modified to preserve the driver's view of the external mirror. It must be fitted with a quick release system that the driver can operate with one hand.

The following components may be removed from the cockpit:

- (i) Roof padding and lining;
- (ii) Carpets and insulating material;
- (iii) Front passenger and rear seats;
- (iv) Components solely associated with the air conditioning system;
- (v) Restraint systems and supplementary restraint systems;



(vi) Boot lining, spare wheel and wheel changing equipment.

(vii) Information and entertainment systems and associated wiring.

The removal of above items is permitted, provided that no additional modifications are made to facilitate their removal and any void that is created as result of the removal of a component (ie, sound systems) is replaced by a suitable panel. Door trims may be replaced with trims made from different material.

The only components which can be added in the cockpit are:

- (i) Safety equipment and structures;
- (ii) Tool kit;
- (iii) Additional instruments;
- (iv) Electronic equipment;
- (v) Driver cooling system;
- (vi) Ballast;
- (vii) Driver ventilation equipment.
- (viii) Driver drink system
- (ix) Radio system for car to pit communication
- (x) Driver identification light and transponder

None of the above items may hinder cockpit exit or driver's visibility or increase the engine power or influence the steering, transmission, brakes, or road holding of the automobile in a direct or indirect manner.

Each control must retain its standard function although it is permitted to adapt each control to facilitate their use and accessibility (ie, a longer handbrake lever, an additional flange on the brake pedal etc.).