2021 Touring Car Masters Series
Sporting and Technical Regulations

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A capitalised and italicised word in this document is defined in the *NCR* or the Technical Appendix, Definitions - Technical.

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

2021 TOURING CAR MASTERS SERIES

Sporting Regulations

S1 TITLE AND JURISDICTION

S1.1 Title

This *Series* will only be known as and referred to as the "Gulf Western Oil Touring Car Masters".

S1.2 Authority / Jurisdiction

(a) Each *Event* in the 2021 Touring Car Masters Series (*Series*) will be held under the FIA International Sporting Code including Appendices; the National Competition Rules (NCR) and Circuit Race Standing Regulations (CRSR) of *Motorsport Australia*; the Sporting and Technical Regulations issued for this *Series* by *Motorsport Australia*; *Supplementary Regulations* issued by the *Organiser* for each round; any Bulletin issued by the Stewards and any Driver Briefing Notes and instructions issued by the Clerk of the Course at an *Event*.

(b) The Baskerville *Event* listed in Article S7 is a stand-alone *Event* and not a *Round* of the *Series*, however, it will be conducted in accordance with these regulations.

(c) This *Series* has been sanctioned by *Motorsport Australia* as an Authorised Series.

(d) TCM Racing Pty. Ltd has been appointed as the Category Manager (CM) by *Motorsport Australia* for this *Series*.

Contact Details: TCM Racing Pty Ltd
Level 2, 2 Richardson Place, North Ryde NSW 2113
Name: Liam Curkpatrick
Phone: 0438 033 246
Email: liam@australianracinggroup.com

S2 ADMINISTRATION

S2.1 Personnel

(a) The following personnel have been appointed to the *Series* by *Motorsport Australia* and/or the CM and have the authority to administer the various aspects of these regulations as detailed in the CRSR.

(i)	Technical Delegate (TD)	~~Fred Severin~~ **Scott McGrath**
(ii)	Category Administrator (CA)	~~Paul Taylor~~ **Liam Curkpatrick**
(iii)	Technical Advisor (TA)	~~Paul Taylor~~ **Scott McGrath**
(iv)	Driving Standards Advisor (DSA)	TBA

S3 *COMPETITOR* ELIGIBILITY

To be eligible to compete in the *Series*, each *Competitor* must hold a current Motorsport Australia Competitor Licence and be a party to the 2021 Touring Car Masters Terms of Participation Agreement and Series Entry Contract.

S4 *AUTOMOBILE* ELIGIBILITY

(a) Each *Automobile* must comply with the provisions of the 2021 Touring Car Masters Series Technical Regulations and the List of Eligible Automobiles below and be registered for the *Series* with the CM as per the Series Entry Contract to be eligible to compete in the *Series*.

(b) Each newly constructed *Automobile* must be inspected by the Category Technical Advisor and must be approved as being in compliance with the *Series* technical regulations, Motorsport Australia Recognition Document, Motorsport Australia Sporting Variants and Motorsport Australia Option Variants for the make/model prior to it being accepted for *Competition.*

(c) The CM, with the prior approval of *Motorsport Australia*, may impose a restriction on the total number of any make/model which is eligible to compete in the *Series*.

(d) The CM may nominate invited *Automobiles* at their discretion. Each invited *Automobile* must comply with any condition placed upon it by the CM at all times. Any *Driver* of an invited *Automobile* is not eligible to be awarded *Series* points.

(e) List of Eligible Automobiles

Model	Year
Ford Falcon Sprint / Mercury Comet	1963-1966
Ford Falcon GT XT, XW, XY	1967-1971
Ford Falcon 4-door/Coupe XA, XB, XC	1972-1978
Ford Falcon Sedan XD	1979-1980
Ford Mustang	1964-1970
Ford Mustang (Fox Body)	1987-1980
Ford Capri (Perana)	1969-1975
Chevrolet Camaro	1967-1980
Holden Monaro 2-door/4-door	1969-1977
Holden Torana	1970-1979
Holden Commodore VB/VC HDT	1979-1980
Valiant Pacer	1971
Valiant Charger	1973
AMC Javelin	1971-1973
Chevrolet Monza	1975-1978
Pontiac Firebird	1970-1971
Porsche 911 (must retain Porsche engine)	1974 IROC 911

S4.1 *Automobile* Classes

(a) Each *Automobile* and *Driver* combination will be allocated into one of the following Classes by the CM and will compete throughout the *Series* with each of the *Automobile* and *Driver* combinations within the same Class:

(i) Pro Masters

(ii) Pro Am

(iii) Pro Sport

(iv) IROC (Porsche)

(v) Trans Am*

*** Note:** Trans Am Class *Automobiles* will compete as a stand-alone *Series* with dedicated Sporting and Technical Regulations.

S4.2 Replacement *Automobile*

Prior to the commencement of the first qualifying session at each round of the *Series*, a *Competitor* may nominate a substitute *Automobile* that will be permitted to compete in the remainder of the *Event* subject to the approval of the Stewards and the CM.

S5 *DRIVER* ELIGIBILITY

(a) To be eligible to compete in the *Series*, each *Driver* must be a minimum of 17 years of age and hold a current Motorsport Australia Circuit Licence with Provisional endorsement or higher and be registered for the *Series* with the CM.

(b) To be eligible to compete in any round of the *Series* conducted at Mount Panorama, Bathurst, each *Driver* must hold a current Motorsport Australia Circuit Licence without Provisional endorsement or higher.

(c) Each *Driver* must be party to the 2021 Touring Car Masters Terms of Participation Agreement.

(d) The CM reserves the right to prohibit any *Driver* from competing in any round of the *Series* if, in the sole opinion of the CM, the *Driver's* previous actions have resulted in the category being brought into disrepute.

S5.1 Registered *Driver*

(a) A Registered Driver is a *Driver* who is registered with the CM to compete in all rounds of the *Series* and has paid the *Series* entry fee to the CM.

(b) Only a Registered Driver is eligible to be awarded *Series* points.

(c) Any *Driver* who has nominated to compete at selected rounds of the *Series* is not eligible to be awarded *Series* points.

S5.2 Substitute *Driver*

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 *Event* subject to the approval of the Stewards and the CM.

S5.3 *Driver* Classification/Status

(a) A *Driver* will be classified as a Seeded Driver at the discretion of the CM.

(b) A *Driver's* classification may be changed at any time and will be advised by the CM.

(c) Each Seeded Driver will be subject to a performance adjustment applied to their *Automobile* of up to 500 rpm reduction to the Maximum Revs and/or up to 50 kg addition to the minimum *Racing Weight* of their *Automobile* as listed on the 2021 TCM Weights and RPM Register (refer Article S16.1). The CM will determine the performance adjustment based on the *Driver*/*Automobile*/performance combination and will apply the adjustment at their discretion.

Note: Any Success Adjustment (refer Article S16.2) will be in addition to the performance adjustment.

S5.4 Guest Driver

The CM reserves the right to permit Guest Drivers to participate in any round of the *Series*. Each Guest Driver must comply with any condition placed upon them by the CM at all times. A Guest Driver is not eligible to be awarded *Series* points.

S6 *SERIES* ROUNDS

The *Series* will be conducted over 6 rounds as detailed in the *Series* Calendar below.

S7 *SERIES* CALENDAR

The *Series* will be conducted over the following rounds:

Round	Date	*Circuit*
1	24 – 26 January	Symmons Plains
NS*	29 – 31 January	Baskerville Raceway
2	~~TBA~~ **26 – 28 February**	~~TBA~~ **Mount Panorama**
3	30 April – 2 May	Sydney Motorsport Park
~~4~~	~~25 – 27 June~~	~~Morgan Park~~
~~5~~	~~17 – 19 September~~	~~Sandown~~
~~6~~ **4**	~~TBA~~ **30 November – 3 December**	Mount Panorama

* Baskerville Non-*Series* Exhibition

Note: The above calendar is subject to change dependant on any restriction that may be imposed due to the COVID-19 pandemic. The *CM* will advise each *Competitor* of any change.

S8 ROUND FORMAT

The number, length and format of *Track* sessions will ultimately be negotiated between the CM and the *Organiser* prior to a round of the *Series* and will be advised in the relevant *Supplementary Regulations* issued for an *Event*.

S8.1 Round Format

(a) Generally, the format for each round of the *Series* will be as follows:

(i) Practice - A minimum of 1 x 20-minute practice session.

(ii) Qualifying - A minimum of 1 x 20-minute qualifying session.

(iii) Races - A minimum of 3 Series Races and 1 Trophy Race (each expressed as a number of laps).

Note: Series Races will be known as Race 1 through to Race 18

(b) The scheduling of any practice or qualifying session or race should allow for a minimum of 2 hours between each session and/or race.

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.

S9 GRID DETERMINATION

(a) The grid for the first Series Race at each round will be determined from the fastest qualifying lap time of each *Automobile* as detailed in the CRSR – Progressive Grid.

(b) The grid for the second Series Race at each round will be determined from the results of the first Series Race at that round as detailed in the CRSR – Progressive Grid.

(c) The grid for the third Series Race at each round will be determined from the results of the second Series Race at that round as detailed in the CRSR – Progressive Grid.

(d) The grid for the Trophy Race will be determined from the fastest qualifying lap time of each *Automobile* as detailed in the CRSR – Progressive Grid except that the top 45% to 55% as determined by the CM will be reversed and placed at the rear of the grid.

(e) If for any reason the Qualifying session is not conducted or the qualifying lap times are not able to be published, each grid position for the first Series Race and the Trophy Race will be determined by the fastest lap time achieved by each *Automobile* in the practice sessions or other method as determined by the Stewards in consultation with the CM.

S10 *START* PROCEDURE

(a) The *Start* procedure for each race will be a Championship rolling start as detailed in the CRSR except that pit crew may not access the grid and only the 1-minute board will be displayed. This will be displayed when the first *Automobile* stops on the grid at the end of the observation lap. The green flag will be displayed by the Starter to commence the formation lap when the last *Automobile* stops on the grid.

(b) In exceptional circumstances, at the request of the CM and only with the prior approval of the Stewards, a standing *Start* with same exception to the CRSR procedure as above may be utilised.

S11 AWARDS AND POINTSCORE

S11.1 Prizes and Trophies

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

S11.2 *Series* Pointscore

(a) *Series* points will be awarded to each Registered Driver, based on their outright finishing position for each Series Race as follows:

Finishing position	Points	Finishing position	Points	Finishing position	Points	Finishing Position	Points
1st	60	11th	27	21st	11	31st	2
2nd	56	12th	24	22nd	10	32nd	2
3rd	52	13th	21	23rd	9	33rd	2
4th	48	14th	18	24th	8	34th	2
5th	45	15th	17	25th	7	35th	2
6th	42	16th	16	26th	6	36th	1
7th	39	17th	15	27th	5	37th	1
8th	36	18th	14	28th	4	38th	1
9th	33	19th	13	29th	3	39th	1
10th	30	20th	12	30th	2	40th	1

(b) *Series* points will only be awarded to the Registered Drivers classified as finishers in the final results of each of the 3 Series Races conducted at each round of the *Series* unless specified otherwise in the *Supplementary Regulations* at any round of the *Series*.

(c) In addition to the above, each Registered Driver will be awarded 10 points for each Trophy Race that they *Start*.

(d) In addition to the above, each Registered Driver will be awarded 10 points for each Trophy Race that they finish.

(e) The results for each round of the *Series* will be determined by the number of points scored by each Registered Driver in each Class at that round.

(f) The Registered Driver gaining the highest points total from 16 of the Series Races and 6 of the Trophy Races will be declared the winner of the *Series.*

(g) The Registered Driver gaining the highest points total from 16 of the Series Races and 5 of the Trophy Races in each Class will be declared the winner of that Class.

(h) In the event of a tie at the end of any round of the *Series* the final positions for that round will be determined by comparing the results of each of the tied Registered Drivers in the final race of that round with the Registered Driver with the higher finishing position being awarded the higher round position.

(i) In the event of a tie at the end of the *Series*, the final positions will be determined by comparing the race results achieved by each tied Registered Driver, with the Registered Driver with the highest number of first places in Class being awarded the higher *Series* position. If at this stage a tie still exists, it will be resolved by comparing the number of second, third or fourth places (and so on) in Class achieved by each tied Registered Driver until all positions have been determined.

S12 *EVENT* OPERATIONS

S12.1 *Series* Registration and Entry

The *Series* will operate under the *Motorsport Australia* Series Registration and Entry Process. Series Registration and Entry Forms will 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 *Driver* and Team Manager Briefings

(a) Each *Driver* and Team Manager must attend the compulsory *Drivers'* briefing.

(b) The time and location of this briefing will be detailed in the *Supplementary Regulations* for each *Event*.

(c) The attendance sheet must be signed by each *Driver* and Team Manager to confirm attendance.

(d) Other compulsory briefings may be convened as required and will be advised to each *Competitor* accordingly.

S12.3 *Parc Fermé*

(a) Each *Automobile* and *Driver*, including those remaining in pit lane, must proceed directly to the designated *Parc Fermé* area via the most direct route (or as directed by Officials) at the conclusion of qualifying, without returning to pit or paddock areas and without interference from any third party (other than an Official).

(b) Each *Automobile* and *Driver* completing each race must proceed directly to the designated *Parc Fermé* area (or as directed by Officials) at the conclusion of the race, without returning to pit or paddock areas and without interference from any third party (other than an Official).

(c) An *Automobile* may not be removed from *Parc Fermé* and any third party is prohibited to enter the *Parc Fermé* except with the express permission of the TD or the Chief Scrutineer.

S12.4 Qualifying

(a) The order in which *Automobiles* pre-grid for a qualifying session will be determined by the fastest lap time achieved by each *Automobile* in the practice session at the *Event*.

(b) During qualifying, an *Automobile* may not return to the paddock/garage area without the express permission of the TD. If an *Automobile* exits pit lane to the paddock/garage during qualifying it will be prohibited from re-joining that session.

S12.5 Pit Lane

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 *Organiser*.

S12.6 Removal of *Automobile* from the *Circuit*

Following the commencement of the first practice session, it is prohibited to remove any *Automobile* from the *Circuit* prior to the release of all *Automobiles* from the *Parc Fermé* established following the final race of that round of the *Series* without the prior express written approval of the TD.

S12.7 *Driver* leaving the *Circuit*

Any *Driver* leaving the *Circuit* prior to 1 hour after the completion of the last *Track* session for the *Series* for that day must notify the CM or a TCM official.

S12.8 Radio Communication to/from *Automobile*

(a) Two-way radio communications between the *Driver* and a member of the pit crew is mandatory at all times whilst the *Automobile* is on the *Track*.

S12.9 Race Management Channel (RMC)

(a) A minimum of one (1) team member for each competing *Automobile* must monitor RMC at all times during practice, qualifying and racing.

(b) This team member must monitor RMC from 15 minutes prior to the time *Automobiles* are released from the pit/paddock area to the marshalling area.

(c) Each *Track* related message must be relayed to each *Driver*.

S12.10 Safety Car Restart Procedure

(a) The Safety Car will be utilised as detailed in the CRSR except for the following:

  (i) When the Safety Car lights are extinguished to indicate the end of the deployment, each *Automobile* will form up in race order in a 2 x 2 formation with the race leader on the pole position side of the *Circuit*.

  (ii) After the display of the green flag

    (A) An *Automobile* may overtake another *Automobile* from the same row before crossing the *Start Line*.

    (B) An *Automobile* may not overlap another *Automobile* from the row in front until after crossing the *Control Line*.

(b) Any variation to this procedure as determined by consultation between the CM and the Clerk of the Course will be advised at the *Driver* Briefing prior to each round.

S13 TYRES

(a) For the duration of each *Event*, each *Automobile* must only be fitted with Hoosier tyres as detailed in the following tables:

Dry Tyres		
Size	**Type**	**Wheel diameter**
205/50-15	D.O.T. Radial	15"
215/60-15	D.O.T. Radial	15"
225/50-15	D.O.T. Radial	15"
245/40-15*	D.O.T. Radial	15”
245/50-15	D.O.T. Radial	15"
275/35-15*	D.O.T. Radial	15”
275/50-15	D.O.T. Radial	15"

* IROC Class only

Wet Tyres		
Size	**Type**	**Wheel diameter**
205/50R-15	Sports Car Radial Wet	15"
225/55R-15	Sports Car Radial Wet	15"

(b) Each tyre detailed on the list above must only be supplied by the *Series* tyre supplier and/or their approved agent:

Hoosier Racing Tire Australia (Max Dumesny Motorsport)
17 Blind Road,
Nelson NSW 2765.

Phone: 02 9679 1990

Fax: 02 9679 1187

Mobile: 0407 108 946

(c) Except for a Holden Commodore *Automobile* where the maximum width is 245 mm front and rear, the maximum width for each front tyre is 245 mm and for each rear tyre is 275 mm.

(d) With the exception of wear resulting from normal usage, each tyre must remain unmodified save for cleaning. Any cleaning conducted outside of an *Event* may be by use of a heat gun or similar device/s.

(e) Except for each *Automobile* in Pro Sport Class which may have an unlimited number of dry tyres, a maximum of 6, 8 or 10 dry tyres and 8 wet tyres will be marked for each *Automobile* by the TD at each round of the *Series*. The dry tyres marked must be comprised of a combination of new tyres and tyres which have been used in practice, qualifying and/or racing at a previous round of the 2019, 2020 or 2021 *Series* which must also have been previously marked, as detailed in the table below. The wet tyres marked must be comprised of a combination of a maximum of 4 new tyres and wet tyres which have been used in practice, qualifying and/or racing at a previous round of the 2019, 2020 or 2021 *Series*. These marked tyres are the only tyres permitted to be used on that *Automobile* during any qualifying session or Series Race at that round.

Total No. of Dry Tyres	No. of New Dry Tyres	No. of Used/Previously Marked Dry Tyres
6	4	2
8	2	6
10	0	10
Unlimited	2	Unlimited

(f) Within 1 hour from the completion of the final practice session at each round of the *Series*, each *Competitor* must present a minimum of 4 tyres for marking at the front of their respective garage/paddock bay. The balance of tyres may be marked during the *Event*. Tyre marking will cease from the commencement of the final race at each round.

(g) Each *Competitor* is responsible for ensuring that each tyre is marked or re-marked as appropriate. If a tyre is not marked for any reason or the markings become illegible, the *Competitor* must notify the TD or their nominee immediately.

(h) Each *Competitor* is permitted to purchase an additional 2 new dry tyres for each *Automobile* at the first round of the *Series* in which they compete. These tyres will be deemed to be previously marked and must be used during the first round of the *Series* in which they compete.

(i) Each *Competitor* is permitted to replace a marked tyre if the TD is satisfied that due to exceptional circumstances the tyre in question can no longer be used. The TD will 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.

(j) The use of any tyre heating, heat retention device or chemical treatment is prohibited.

(k) From the commencement of the *Event*, through to the conclusion of the *Event*, a tyre may not be buffed. Any tyre may be cleaned but the use of a heat gun or similar device/s for cleaning is prohibited during the *Event*.

(l) If qualifying and/or racing is scheduled on more than 1 day at any round of the *Series*, the TD may impound any tyre overnight at their sole discretion.

(m) If the *Track* is declared wet by the Clerk of the Course, each *Automobile* must be fitted with wet tyres only.

(n) Each tyre fitted to an *Automobile* for a Trophy Race may be marked or unmarked.

(o) The minimum pressure for dry tyres is 19 psi.

Please note: The TD will be the sole arbiter with regard to the interpretation and application of these tyre regulations and any decision made by the TD in this regard will not be the subject of any protest.

S14 FUEL

(a) For the duration of an *Event*, each *Automobile* must only use commercially available 98 octane or Elf Race 102 fuel.

(b) Fuel additives are permitted in accordance with *Schedule* G of the *Manual*.

S15 *AUTOMOBILE* MARKINGS

S15.1 General

In addition to the requirements detailed in Attachment A of these regulations, each *Automobile* must comply with *Schedule* K of the *Manual*.

S15.2 Competition Number

The allocation of a competition number for each *Automobile* is solely the responsibility of the CM, which will maintain a register of all competition numbers allocated to, or reserved for, any *Automobile*. First preference for a competition number request will be given to *Competitors* who have registered for all rounds of the *Series* and paid the *Series* entry fee to the CM.

S15.3 Class Identification

The Class that each *Automobile* is competing within must be displayed by placing a “PRO MASTERS”, “PRO AM”, “PRO SPORT” or “IROC” identification at the base of the windscreen below the competition number of the *Automobile*. This identification must be in capitals no more than 50 mm high as supplied by the CM.

S16 PERFORMANCE SPECIFICATIONS AND ADJUSTMENTS

S16.1 Performance Specifications

(a) The minimum *Racing Weight* and maximum Revs for each *Automobile* will be recorded in "The 2021 TCM Weights and RPM Register". This register will be maintained by the CM/TD/TA and be advised to each *Competitor* prior to a round.

(b) Any application of performance adjustment (refer Article S5.3(c)) and/or Success Adjustment (refer Article S16.2) will be in addition to the values recorded in the 2021 TCM Weights and RPM Register and when applied must not exceed the limits recorded in the Register.

(c) At each round of the *Series* each *Automobile* will be issued with a Performance Specification Label displaying the minimum *Racing Weight* and maximum Revs as listed on the 2021 TCM Weights and RPM Register that the *Competitor* must affix to the left-hand side rear window glass prior to the commencement of the qualifying session.

(d) Each engine must be fitted with a TCM approved ignition system.

S16.2 Success Adjustment

(a) A Success Adjustment as detailed in the table below will be applied to the *Automobile* of each *Driver* based on the outright results of each Series Race.

No. of 1st Places	Total Reduction (rpm) below maximum Revs specified in current "TCM Weights and RPM Register"		Total increase (kg) above minimum Weights specified in current "TCM Weights and RPM Register"		
	Engine Capacity				
	Up to 5200cc	Over 5200cc	TCM (6 litre)	Up to 5200cc	Over 5200cc
1	100	100	0	0	0
2	200	200	0	0	0
3	200	300	20	0	0
4	300	400	40	0	0
5	400	500	60	0	0
6	400	600	80	0	0
7	500	700	100	0	0
8	500	700	120	50	50
9	500	700	140	75	75
10	500	700	160	100	100
11	500	700	160	130	125
12	500	700	160	130	150

(b) As per the above table, this Success Adjustment will be cumulative and will be adjusted by the removal of the most recent Success Adjustment applied when the *Driver* is placed fourth or lower outright in a Series Race, subject to the maximum revs and/or minimum weight allowed for that *Automobile* in the current "TCM Weights and RPM Register".

(c) There will be no Success Adjustment based on the results of a Trophy Race.

(d) The Success Adjustment will be applied to the *Automobile* for each race (including a Trophy Race).

(e) Any Success Adjustment will be carried forward to future rounds.

S17 IN-CAR CAMERAS

(a) Each *Automobile* must be fitted with an in-car camera system as detailed in the 2021 Touring Car Masters Series Technical Regulations.

(b) The in-car camera system must be switched on and remain fully operational to record video images for the duration of each practice session, qualifying session, *Passenger* ride session and race.

(c) It is the responsibility of each *Competitor* to ensure that each camera is in operational condition and is turned on prior to each *Track* session and turned off following each *Track* session. If video images are not recorded during any *Track* session, a penalty of 5 *Series* points will be imposed if the *Automobile* has a Registered Driver and the loss of 2 grid positions in the next Series Race if the *Automobile* has a non-Registered Driver.

(d) Each in-car camera must be installed and aligned by the *Competitor* in accordance with the requirements of the CM. It is not permitted to adjust the alignment of any camera once set by the CM, TA or DSA.

(e) Access to the video images recorded by the in-car camera system must be provided to the CM, TD, DSA or TA at any time upon request.

(f) The video images recorded by any in-car camera system must not be viewed, distributed or used for any purpose without the prior express approval or release by the CM or TA.

(g) An SD card must not be removed from any camera until authorised by the CM, TD, DSA or TA.

S18 DATA LOGGING

Any data recorded by a data logging instrument as detailed in Article T5(w) must be provided to the TD and/or TA and/or DSA at any time upon request.

From the commencement of each *Event*, any data recorded by a data logging instrument and/or GPS activated system must not be erased without the prior express approval of the TD and/or TA and/or DSA.

S19 RAIN LIGHT

The rain light fitted to each *Automobile* must be illuminated at all times whilst the *Automobile* is fitted with wet weather tyres and is being driven on the *Track* or as otherwise directed by Race Control.

S20 SCALES OF FACT

(a) The CM will provide a set of scales for the purpose of weighing of *Automobiles* for the entire *Series*.

(b) These scales will be the Scales of Fact for regulatory control.

S21 INSTRUMENTS OF FACT

(a) The CM and/or TA will provide measuring devices as Instruments of Fact for regulatory control of the following:

(b) Engine capacity

(c) Rev limits

(d) Camber of front and rear wheels

(e) Tyre pressure

(f) Body width

ATTACHMENT A

Signage Requirements for 2021 Touring Car Masters Series

(a) Each *Competitor* must leave exclusive space on their *Automobile* for *Series* sponsor signage as follows:

(i) Area 1: Front windscreen strip: A strip 140 mm in height as supplied by the CM and extending across the entire upper portion of the front windscreen.

(ii) Area 2: Competition Number Panel: A panel, 480 mm high x 340 mm wide, as supplied by the CM must be fixed to each front door of each *Automobile*. The competition number must be in accordance with *Schedule* K of the *Manual* and be a minimum height of 220 mm.

(iii) Area 3 & 4: Number Plate Panel front and rear: A rectangle 150 mm high x 320 mm wide, as supplied by the CM, must be affixed to supple material and attached to the *Automobile* in the original number plate position.

(iv) Area 5: Bonnet: A banner on the forward most leading section of the bonnet or nose panel with a minimum size of 750 mm wide x 140 mm high as supplied by the CM. No other signage may be affixed forward of this area.

(v) Area 6: Lower Rear Quarter: A panel 350 mm high x 400 mm wide, as supplied by the CM, to be affixed to each lower rear quarter panel.

(vi) Area 7: Headlights: Reserved for a *Series* sponsor as supplied by the CM. Where an *Automobile* has 4 or more headlights the outer headlights are reserved for a *Series* sponsor and the inner lights must not contain any signage.

(vii) Area 8: Front Guards: A panel 150 mm high x 300 mm wide, as supplied by the CM, to be affixed to the upper front of each front guard. Due to the position of signage on certain *Automobiles* being impractical, the location of this area may be varied at the discretion of the CM.

(viii) Area 9: Body Sill: The area below Area 2 and/or the sill (subject to *Automobile* configuration) and located between the leading edge of the front door and the leading edge of the rear wheel arch below the door line must be reserved for *Series* sponsorship as supplied by the CM.

(ix) Area 10: Forward face of rear *Spoiler*: The forward-facing area of the rear *Spoiler* is exclusively reserved for *Series* sponsorship signage as supplied by the CM.

(x) Area 11: Roof panel above front door openings: *Driver* name (mandatory) with text in “Brush Script” font with 60 mm for Capitals and 30 mm for non-Capitals.

(xi) Area 12: Front Windscreen: Competition number in ‘Dayglo’ Yellow (mandatory. 150 mm high, refer *Schedule* K of the *Manual*) non *Driver* side with Class identification no larger than 50 mm high as supplied by the CM at the base of the windscreen.

(xii) Area 13: “C” Pillar: A rectangle 200 mm x 200 mm reserved for *Series* sponsorship signage as supplied by the CM.

(xiii) Area 14: Roof panel above the windscreen: Must be reserved for *Series* sponsorship signage as supplied by the CM.

(xiv) Area 15: Centre roof panel: An area 600 mm x 600 mm must be reserved for *Series* signage as supplied by the CM.

(b) Any other signage must comply with the requirements of *Schedule* K of the *Manual*.

2021 TOURING CAR MASTERS SERIES

Technical Regulations

T1 PREAMBLE

(a) The Touring Car Masters Series will be a *Series* for Touring Cars manufactured between 01 January 1963 and 31 December 1980, and IROC Porsche Class *Automobiles*, as approved by *Motorsport Australia*, which have been modified in accordance with the current Touring Car Masters Series Technical Regulations.

(b) Allowable modifications specific to an individual model will be documented in the relevant Motorsport Australia Recognition Document.

(c) A representative selection of touring cars from the defined period is required and limitations on the total number of individual makes and models will be determined by the Category Manager (CM) and *Motorsport Australia*.

T2 GENERAL

T2.1 Modifications

(a) Each *Automobile* must remain unmodified, in compliance with all aspects of its Motorsport Australia Recognition Document and identical in all respects to the production make/model as supplied by the original vehicle manufacturer except for the freedoms permitted by these regulations.

(b) Any aspect relating to the construction, modification and/or preparation of the *Automobile* including the location, fitment/mounting of any ancillary component that is not specifically authorised in the present regulations and the associated Motorsport Australia Recognition Document, Motorsport Australia Sporting Variants or Motorsport Australia Option Variants is prohibited.

T2.2 Eligible Models

(a) Eligible models of *Automobiles* are listed in the current Touring Car Masters Series Sporting Regulation S4(e) List of Eligible Automobiles.

(b) Additional models of *Automobile* may be added to the List of Eligible Automobiles upon recommendation by the CM and subsequent approval by *Motorsport Australia*.

(c) Each *Automobile* must be the subject of a completed Motorsport Australia Recognition Document where applicable.

(d) The CM may invite other *Automobile* makes/models at their discretion. Any invited *Automobile* will be subject to any conditions stated by the CM.

T2.3 Homologation Requirements

(a) In all cases, when interpreting the present regulations, any component on an *Automobile* eligible to compete must be original equipment supplied by the manufacturer unless otherwise specified in the relevant Motorsport Australia Recognition Document, Motorsport Australia Sporting Variants (SV) or Motorsport Australia Option Variants (VO).

(b) Any component shown in Option Variants (VO) may be used at the discretion of the *Competitor*.

(c) Any component shown in Sporting Variants (SV) must be used of necessity in its entirety.

(d) Nuts and bolts: Throughout the *Automobile*, any nut, bolt, screw may be replaced by any other nut, any other bolt, any other screw and have any kind of locking device (washer, lock nut etc).

T2.4 Materials

(a) Unless specifically authorised in these regulations, the use of carbon fibre or carbon Kevlar® *Composite Materials* is prohibited.

(b) The use of carbon fibre or carbon Kevlar® *Composite Material* in the production of any GRP component detailed in Article T4(ee) is permitted.

(c) Any race *Seat*, safety intrusion component, door trim, front air dam, panel replacement, bumper bar and brake scoop is permitted to utilise GRP/carbon fibre/carbon Kevlar® *Composite Materials*.

T2.5 Newly Constructed *Automobile*

Each newly constructed *Automobile* must be inspected by the TA and must be approved as being in compliance with the *Series* technical regulations, Motorsport Australia Recognition Document, Motorsport Australia Sporting Variants or Motorsport Australia Option Variants for the make/model prior to it being accepted for *Competition.*

T3 WEIGHTS AND DIMENSIONS

T3.1 *Racing Weight*

The *Racing Weight* for an *Automobile* at any time must be equal to or greater than the minimum *Racing Weight* as listed for that *Automobile* in the 2021 TCM Weights and RPM Register.

T3.2 *Ballast*

Ballast may be used to achieve the *Racing Weight* requirement, and if used must comply with *Motorsport Australia* requirements.

T4 *CHASSIS* AND *BODYWORK*

(a) Except where freedom is provided in these regulations, or where detailed in the Motorsport Australia Recognition Document, *Bodywork* must be of the original material, design and appearance.

(b) *Bodywork* including any subsequent repair of damage must be to a tradesman-like standard and must permit the *Automobile* to be presented in as near to original condition as possible.

(c) It is permitted to remove the following components:

(i) External body trim or decoration.

(ii) Unused brackets and supports for items not required to be retained. (eg battery tray, exhaust mounting brackets etc).

(d) Where the edge of any mudguard panel protrudes inside the wheel housing, it may be folded back against the outer panel.

(e) Provided that the maximum width specified in the relevant Recognition Document is respected, the external shape of the *Coachwork* around the wheel arch opening may be reformed. Such reformation must be done in such a way as to retain the general original external appearance and profile of the *Automobile*.

(f) Unless recognised in the Recognition Document/VO, any add-on flare is prohibited.

(g) Providing the overall width does not exceed the dimensions prescribed in the Recognition Document/VO for the *Automobile,* any mudguard may be modified or flared to allow clearance of the wheel/tyre assembly.

(h) The inner guard panel of the wheel arch may be modified or replaced to provide clearance for the complete wheel assembly.

(i) Provided that sufficient frame remains for attachment of hinges/locking devices, it is permitted to modify the bonnet by removing the additional strengthening from its underside. Hinges may be replaced by locking devices, ie. pins/clips.

(j) Providing sufficient frame remains for attachment of hinges/locking devices, it is permitted to remove the strengthening from the underside of the boot/tailgate. Hinges may be replaced by locking devices, ie. pins/clips.

(k) It is permitted to replace the bonnet with a bonnet available as an option for the model as specified in the VO. For each *Automobile* that does not have an original bonnet scoop with an air scoop or "shaker" it is permitted to fit the TCM Bonnet Scoop (PN: SC001TRA). Each Original Manufacturer (or Supplier) fitment position and dimension must be respected.

(l) Save for the fitment of bonnet/boot restraints/pins in accordance with *Schedule* B, and as permitted in Article T4(i) and (j), where applicable, the original hole/opening dimensions and location must remain unmodified.

(m) The *Body Shell*, *Sub-frame* and sub-*Chassis* may be reinforced by the addition of metal.

(n) Each *Sub-frame* isolation bush may be replaced by a bush of rigid material.

(o) The front suspension *Cross Members*/*Sub-frame* may be modified and reinforced to the minimum amount necessary to facilitate the fitment of the sump, oil pump and fittings, exhaust and steering systems including any shaft, linkage and power steering component.

(p) It is permitted to add *Chassis* reinforcement tubes as follows:

  (i) Bars between the front firewall and front suspension tower, or alternatively to the *Chassis* rails.

  (ii) Between the front suspension towers (a strut brace) or between the rear suspension towers.

  (iii) Other gussets as permitted or as required.

(q) The front and rear *Chassis* rails may be locally modified to facilitate the fitment of additional locating arms, watts link/panhard bar.

(r) The modification of front and rear *Chassis* rails to allow additional ride height clearance is prohibited.

(s) The radiator support panel may be modified by the removal of metal to allow the passage of any air ducting and fluid line and relocation of the radiator.

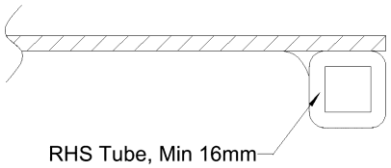
(t) Holes may be drilled for the passage of any fuel, oil or brake line, or electric cable.

(u) The floor of the boot/trunk may be modified by the removal of metal to facilitate:

  (i) The fitment of a replacement *Fuel Tank* and mounting/spill tray. Any cut edge must be reinforced by an RHS tube of minimum dimension 16 mm stitch welded to the edge as per Drawing 1.

  (ii) the fitment of a watts link/panhard bar

  (iii) clearance of the differential housing



Drawing 1

(v) The transmission tunnel may be modified to facilitate the fitment of any replacement gear box, gear shift system and/or starter motor, or tailshaft.

(w) Each *Automobile* must be fitted with a full safety cage in compliance with *Schedule* J of the *Manual*. The safety cage may extend forward of the front firewall and rearward of the rear firewall.

(x) The minimum clearance of the front air dam to the ground is 120 mm measured when the *Automobile* is fitted with "dry weather tyres". Save for mounting brackets, fasteners and brake cooling scoops, metal is prohibited in the construction of the air dam. Only one central adjustable external brace may be fitted.

(y) Where the *Automobile* was not homologated with a front air dam, it is permitted to fit a front air dam to the dimensions of part No. 69C.

(z) Where the *Automobile* is fitted with a front air dam, the "underside return section" (undertray) must not exceed 100 mm in length, rearward, from the front leading edge of the air dam.

(aa) The pinch weld beneath the sill panel may be folded flat, or removed, in the immediate area around the exhaust outlet for the purpose of clearance. Sills may be modified to provide clearance for exhaust pipes.

(bb) Provided it is not visible with the door trim in place, the lightening of any door by removal of metal is permitted. The fitting of anti-intrusion materials is recommended.

(cc) Additional ventilation holes/ducts are permitted in the front air dam and front valance panel below the bumper for cooling.

(dd) The floor pan may be modified to allow for muffler boxes.

(ee) Provided that such replacement meets the "substitution criteria" approved by the CM and that the panel is made from GRP/*Composite Material,* a body panel may be manufactured of alternative material.

(ff) Unless removal is permitted in VO document, each bumper must be retained but is permitted to be lightened and modified for air ventilation and/or replaced with GRP/*Composite Material* components of the same size and design.

(gg) An on-board jacking system approved by the CM is permitted. Use of an on-board jacking system is restricted to the paddock area. Use of an on-board jacking system in pit lane during any practice session, qualifying session or race is prohibited.

T5 INTERIOR

(a) Any carpet, centre console, underfelt and body deadening material may be removed.

(b) The *Driver's Seat* may be replaced by another in compliance with *Schedule* C of the *Manual* and may be made from carbon/Kevlar® composite. The position of the *Driver's Seat* must be in the same general location as per the manufacturer's original specifications. This may be further restricted in homologation SV.

(c) The front *Passenger's Seat* may be replaced by one similar to the *Driver's Seat* or removed.

(d) The rear *Seat* may be re-trimmed in a similar material or replaced by another *Seat* of similar appearance or removed.

(e) The steering wheel may be replaced.

(f) It is permitted to add a steering wheel boss, possibly incorporating a quick release mechanism to enable the fitment of a replacement steering wheel.

(g) The steering column length and mounting face for the steering wheel must remain within 80 mm of the manufacturer specification.

(h) The steering column may be replaced but must meet *Motorsport Australia* safety standards. A collapsible column is recommended.

(i) Where an *Automobile* is changed from left to right-hand drive, the steering column location must be mirrored about the *Automobile* centreline.

(j) The steering column may be relocated in the horizontal plane toward the centre of the *Automobile* and in the vertical plane.

(k) The dashboard crash-pad and instrument panel must remain in place. The dashboard crash-pad and any door trim may be distorted or cut to facilitate the passage of any safety cage tube.

(l) The headlining may be removed and any door/rear side trim panel may be replaced by another of a non-flammable material.

(m) The window regulator and associated mechanisms may be removed from each front and rear door, opening quarter panel window and front quarter window.

(n) The front and rear door glass, the front and rear quarter window glass and the rear windscreen glass may be replaced with clear polycarbonate material of no less than 3 mm thickness. The fitting of ventilation ducting is permitted. The rear window glass may only be replaced by polycarbonate material provided it is additionally secured.

(o) The front windscreen glass may be replaced with clear polycarbonate of no less than 6 mm thickness.

(p) The *Driver's* window may be removed. The *Driver's* window, if fitted, must only be retained with "christmas tree clips" (Fastex Fasteners PN: 266-029) and must have a "handle" hole in the upper rear corner. The *Driver's* window must be able to be removed by an Official at any time if required.

(q) A *Driver's* window safety net must be fitted in accordance with *Motorsport Australia* regulations

(r) A 'dead' pedal or footrest may be fitted to the left of the clutch pedal.

(s) The accelerator, clutch and brake pedal pads are free.

(t) The *Cockpit* must be effectively sealed against fire, fluid and fumes at the firewall, floorpan and rear parcel shelf/bulkhead. The rear parcel shelf may be replaced by one made from metal.

(u) Provided that demisting of the front windscreen is assured, the heater assembly, including controls, may be removed. The addition of heating elements to the front screens is permitted. Any resultant opening in the firewall must be closed by a metal panel. Any resultant control panel opening must be closed.

(v) The original instrument cluster may be replaced by a panel incorporating analogue gauges. Where an analogue gauge is not available (e.g.: Lambda Gauge), an alternative gauge may be fitted. Additional analogue instruments may be added to a separate panel or panels, preferably integrated into the existing dashboard structure. Where the original instrument cluster is retained, a tachometer, possibly incorporating a shift light, may be added to the steering column.

(w) Providing that no under car camera is fitted, any type of data logging instrument, equipment and/or "GPS" activated system and camera is permitted. The display unit must be approved by the CM. Digital/Data "dashes" are permitted.

T6 SUSPENSION AND STEERING

(a) Where an *Automobile* utilises a double wishbone front suspension, the stub axle assembly/upright may be replaced. Each such replacement stub axle assembly/upright must be of single piece forged or cast construction of ferrous material and be of similar design to the original, incorporating the stub axle and attached to the top and bottom arms in the same manner as the original.

(b) Fabricated uprights are prohibited.

(c) Where an *Automobile* utilises a McPherson Strut front suspension, the strut may be replaced provided that the strut is either of original design or as allowed in the relevant Motorsport Australia Recognition Document.

(d) Provided that the stub axle assembly/upright is of a one-piece design, incorporates the stub axle, cast or forged from ferrous material and attached to the bottom arm in a similar manner as original, separate strut tubes are permitted.

(e) Provided that they are of a similar design to the original, are of ferrous material and retain the inner and outer wheel bearings, front wheel hubs are free. Stub axles may be reinforced.

(f) Each suspension pivot point attached to the *Body Shell*/*Chassis* may be relocated within a 50 mm radius of the original. Metal may be added for this purpose.

(g) Provided the same type of joint is maintained (ie, ball joint may not be replaced by spherical joint), each suspension joint that is attached to an unsprung component may be replaced. The original or replacement joint may be relocated on the suspension control arm to which it is mounted. Suspension control arms and uprights may be locally modified to facilitate such replacement/relocation.

(h) Any demountable steering arm and tie rod end is free.

(i) Front suspension:

  (i) Any elastomeric suspension bush may be replaced by a spherical bearing, threaded rod end (rose joint) or other *Elastomeric Bushing*.

  (ii) The effective length of the suspension arm may be altered and be adjustable. This applies only to the body/*Chassis*/*Sub-frame* attachment end for the front suspension.

  (iii) Provided the original dimensions are respected, each front suspension arm may be reinforced/remanufactured and/or replaced with fabricated components.

(j) Rear Suspension:

  (i) A rear spring may only be replaced with the same type ie, coil/coil, leaf/leaf.

  (ii) Any rear hanger and front leaf spring bush is free.

  (iii) Each leaf spring must be rigidly mounted to the rear axle housing. The number of spring leaves are free.

  (iv) Rear coil spring diameter is free and may have adjustable spring seats. The upper spring seat must be within 50 mm of the original position. The lower spring seat must be as close as possible to the original position with respect to freedom of the rear axle housing.

  (v) Each rear spring must be made of ferrous material.

  (vi) Any additional rear spring is not permitted unless specified in a VO.

  (vii) Torsion bar suspension may be made adjustable.

  (viii) The maximum negative camber permitted is 2 degrees.

(k) Front Suspension:

(i) Provided that both sides of the *Automobile* are equal, it is permitted to change coil springs to those of different dimensions/weight.

(ii) Upper and lower spring seats may be made adjustable, and the removal /addition of material for this purpose is permitted.

(iii) Providing the shock absorber/damper mountings are modified to accept increased loads, coil spring upper seats may be attached to the shock absorber/damper (ie. coil over units). The upper coil and shock absorber/damper mounting position must be within 100 mm radius of the original.

(iv) Providing it remains within the confines of the arm to which it is attached (ie. lower or upper arm), the position of the lower spring seat/shock absorber/damper may be relocated. The mounting position may be adjustable. The addition or removal of material is permitted to allow for this (refer Article T6(i)(iii)).

(v) If provided for in the VO, any additional spring may be fitted.

(vi) Torsion bar suspension may be made adjustable.

(vii) The maximum negative camber for front wheels is 6 degrees. ~~The maximum variation from side to side is half of a degree.~~

(l) Suspension dampers:

(i) Any suspension damper mounting point may be repositioned within a 50 mm radius, in all directions, of the original. Metal may be added for this purpose.

(ii) The original number of suspension damper units fitted to the front and rear of the *Automobile* must remain as per the manufacturer's original specification.

(iii) Each suspension damper (shock absorber) is limited in its operation in that it has a maximum of one external adjustment for "bump" and a maximum of one external adjustment for "rebound".

(iv) No facility for electronic control or adjustment from within the *Cockpit* is permitted.

(v) If listed in the relevant Motorsport Australia Recognition Document, external "gas canisters" are permitted.

(m) The steering box or rack may be replaced by another of similar design of either type. Steering shafts, couplings, idler and pitman arms are free, and the use of steering quickeners is permitted. An *Automobile* may be converted from left- to right-hand drive.

(n) The *Automobile* may be fitted with a power steering system of either hydraulic or electric actuation.

(o) Front and rear sway bars may be of one or three piece construction including blade type. Material is free. Remote adjustment is prohibited. Sway bar connection links to the *Chassis*/body and suspension/differential housing may be adjustable. Any hydraulic or rocker device/connection is prohibited.

(p) Additional locating arms of rigid ferrous material may be added to the front or rear suspension providing the locating arms do not protrude into the interior of the *Automobile* unless specified in the VO save for modification of the rear tunnel for the fitment of a central upper control arm. Provided it is documented in the VO for the make and model, local modification of the body/floor pan is permitted for the mounting of any additional arm. Bushings for these arms can be spherical bearings, rod end or elastomeric type. The original upper and/or lower rear suspension link arms may be removed/replaced.

(q) Any rear suspension/leaf spring bush may be replaced by another of free design. A replacement bush may be welded into the arms. The location of the pivot point of any leaf spring bush may be relocated within a 50 mm radius of the original. Metal may be added for this purpose. Lowering blocks between the rear axle housing and the spring are permitted.

(r) Suspension bump stops are free, and any device to limit suspension droop is permitted.

(s) Any facility for control or adjustment of any suspension mechanism (eg. Roll-centre) is prohibited from within the *Cockpit.*

(t) A suspension control arm may be reinforced by the addition of metal or alternatively fabricated.

(u) Additional suspension pivot point mountings may be added to the *Body Shell*/*Chassis*.

T7 BRAKES

(a) Each front brake must be a disc brake of ferrous material with maximum dimensions as detailed in the table below.

Wheel Rim	Diameter	Thickness
15”	305 mm	35 mm

(b) Each disc rotor may be grooved, but not drilled.

(c) Disc mounting bells are free.

(d) Wheel hubs are free but must be made from ferrous material. Refer to T6(e) for front hubs.

(e) Bearings and wheel studs are free.

(f) Each brake calliper can have a maximum of 4 pistons and must be of a type that was manufactured as a four-piston calliper. Any calliper originally manufactured with more than four pistons is prohibited.

(g) Brake calliper mounting brackets are free.

(h) Only 1 calliper per rotor is permitted.

(i) Only 2 brake pads per calliper are permitted.

(j) Each rear drum brake may be either original or be replaced by another drum or disc brake. If disc brakes are used, they must reflect the maximum dimensions shown in the table above.

(k) Rear slave cylinders are free.

(l) Any brake master cylinder or power booster may be removed or replaced.

(m) It is permitted to fit a brake proportioning system including the adjustment mechanism from the *Cockpit* by cable/mechanical linkage only.

(n) Brake pedal boxes are free, as is their location. The firewall, floor and dash may be locally modified to facilitate the fitment of replacement brake boxes.

(o) The brake system must be dual circuit with separate systems for the front and rear brakes.

(p) It is permitted to add flexible pipes to carry air to the brakes at each wheel.

(q) Brake protection shields/ducting on unsprung suspension components may be added, removed or replaced.

(r) Provided they do not each exceed 300 mm in combined width per side and 100 mm in combined height per side, front brake scoops are permitted. Where practical, front brake scoops should be either:

  (i) Incorporated in the front air dam/*Spoiler* save that the front surface of the front air dam/*Spoiler* must remain in the same plain as original. Brake scoops must not protrude through the front face of the air dam/*Spoiler* and cannot be fitted to either side or below the front air dam/*Spoiler* unless documented in the VO for the make and model.

  (ii) through the radiator support panel into the area behind the grill; and

  (iii) Where possible, replace park lights, indicator lights and/or driving lights.

(s) The brakes may be cooled only by air.

(t) Any flexible brake hose and rigid line may be replaced with another of suitable material.

(u) The hand brake and all associated components, linkages, brackets and cables may be disconnected removed or replaced with other components.

T8 WHEELS AND TYRES

(a) Each *Automobile* must use a wheel of 15 inches diameter.

(b) The maximum wheel rim width for an *Automobile* in Pro Masters, Pro Am or Pro Sport Class is 8 inches.

(c) The maximum wheel rim width for a rear wheel on an Automobile in IROC (Porsche) is 10.0 inches.

(d) Each wheel must be either a single homogenous casting of aluminium alloy or of welded two piece construction. Three-piece (composite) rims are permitted on an *Automobile* in IROC (Porsche) Class only. Wheels of a period appearance are encouraged.

(e) Each tyre must be in compliance with the current Touring Car Masters Series Sporting Regulations.

T9 ENGINE

T9.1 Recognition Document Engine

Each engine listed in a Motorsport Australia Recognition Document must comply with the following specifications:

(a) The *Cylinder Block* and head/s must either be those supplied as standard for the model, or as otherwise shown in the VO. Internal components of the engine are free.

(b) The cylinder bore and stroke must be as listed in the Recognition/VO documents for each *Automobile* except that the reconditioning (re-bore) of the *Cylinder Block* is permitted up to a maximum of 2.03 mm (0.080”). It is prohibited to overbore engines utilising “barrels”.

An existing engine (which must have been used in a TCM *Series* prior to 2021) may be permitted to exceed the maximum bore size (specified above) by the CM, and will be subject to any conditions specified by the CM.

(c) Subject to any restrictions imposed in the present regulations, all reciprocating and rotating components within the engine are free.

(d) A cylinder head may be modified only by the addition or removal of material. Providing the replacement cylinder head or heads are as listed in the VO document for each *Automobile,* a replacement cylinder head/s of alloy material is permitted for each engine.

(e) Valves material is free. The valve size, number and location must be as per original specification or that allowed in the relevant VO.

(f) Internal camshaft timing chains may be replaced by external belt drives or gears. Camshafts must remain in their original position and number.

(g) Bearings, *Seals* and gaskets are free.

(h) Rocker, camshaft and timing covers are free.

(i) The oil system, including the sump and pump, is free. The use of external oil lines, oil pressure accumulators and dry sump systems is permitted. Dry sump tanks/accumulators may be mounted in the *Cockpit* provided they are in a secured sealed container as per *Schedule* A of the *Manual*.

(j) The crankcase/dry sump oil tank must be ventilated to a catch can.

(k) The engine must be mounted utilising the original mounting points on both the engine block and crossmember/bodyshell.

(l) Engine mounts, being those assemblies between the *Cylinder Block* and crossmember/bodyshell are free in construction.

(m) The location of the engine, as defined by the centreline of the crankshaft and the centreline of the number one cylinder bore, must remain unchanged.

(n) The crankshaft 'phasing' must remain the same as the original engine.

(o) The engine must have provision for engine sealing via the timing cover, cylinder head/s and inlet manifold. The engine may be sealed by the TD, CM or an approved representative of the CM.

(p) Each *Automobile* on the List of Eligible Automobiles (refer Article S4(e)) that is in the Pro Masters, Pro Am and Pro Sport may use the TCM Engine. This engine must be compliant with the TCM Engine specification in Article T9.2. For clarification a TCM Engine may not be fitted to a Porsche 911.

T9.2 TCM Engine

Each TCM Engine must comply with the following specifications:

(a) Engine: TCM (LS derived) 6 Litre V8.

(b) *Cylinder Block*: Alloy, Cast iron, dry sleeve cylinder bores.

(c) Cylinder Heads: TCM Alloy LS2/L77 standard port volume, standard combustion chamber capacity.

(d) Compression ratio: not to exceed 10.5:1

(e) Crankshaft material must be of ferrous material.

(f) Providing the stroke remains within 0.025" of standard, the original crankshaft may be replaced.

(g) Providing they are of ferrous material, connecting rods may be replaced.

(h) Provided the compression ratio remains as specified, pistons may be replaced.

(i) Camshaft: TCM 77/54 or TCM 77/60 supplied by the CM/TCM.

(j) Allowed modifications: Camshaft followers/lifters, valves, valve rockers. double row timing chain and pullies, pushrods.

(k) Inlet manifold: Edelbrock Victor JR LS3/L92 45d.

(l) Carburettor: 850 CFM Ultra Black / Silver H100-80804BKX.

(m) Ignition: Fast, MSD LS Ignition System, Motec L Series. No ignition distributor is required.

(n) Engine timing must be by sensor.

(o) It is permitted for engine components to be machined and balanced.

T9.3 Master Engine Build Sheets

Each *Competitor* must submit a "Master Engine Build Sheet" to the TA listing all specified engine components including the manufacturer, part number(s) and casting identification. (Attachment B)

T10 TRANSMISSION AND DRIVETRAIN

(a) The gearbox must either be that supplied as standard for the model, or an alternative gearbox providing it is manufactured as a 4 forward speed unit only plus reverse.

(b) 5/6 speed housings are prohibited.

(c) The use of "DOG" engagement is permitted.

(d) Operation of the gearbox must be exclusively manual, with gear selection effected only the *Driver* to the exclusion of all automatic and semi-automatic mechanisms.

(e) Unless shown otherwise in the recognition document or VO, the maximum number of forward ratios is four.

(f) The gearbox must provide a reverse gear.

(g) Provided that the shift remains non-sequential “H-pattern”, the shifter mechanism, including the location of the lever is free,. Redundant standard shift components may be removed.

(h) The rear crossmember may be modified or replaced to accommodate a replacement gearbox, where permitted. The powertrain rear mount is free.

(i) The tailshaft assembly is free. A central bearing may be incorporated, whereupon a mounting system may be added to the floorpan/tunnel. Local modification to the tunnel is allowed for the fitting of the tailshaft/centre bearing mount.

(j) The final drive assembly may be modified or replaced by an item of the same configuration of an *Automobile* with a live rear axle.

(i) The differential housing may be replaced providing it is constructed of ferrous material.

(ii) Full floating stubs and hubs must be fitted and be constructed of ferrous material.

(iii) The maximum number of axles is 2 with 1 per side of the differential centre.

(iv) Camber/toe adjustment may only be achieved by means of setting/shimming of the stub/hub. The maximum rear camber permitted is 2.0 degrees.

(v) The use of CV or universal type joints in the final drive assembly is prohibited.

(vi) The drive plate must be in direct contact with the outer axle spline.

(vii) The use of spline or ball type couplers is allowed.

(viii) “Barrel End” axle splines are permitted on the outer spline only.

(k) Provided that it is passive, the differential is free.

(l) Where the differential has a removable centre, the centre is free providing it is of ferrous or alloy material.

(m) Save that it is not electronically controlled/actuated, the clutch and its method of actuation is free. Clutch material is free.

(n) The pressure plate assembly is free.

(o) Save that it must be made completely of ferrous metal, the flywheel is free.

T11 INDUCTION SYSTEM

(a) On each V8 engine, only one carburettor with maximum of 4 venturis is permitted. Carburettors must be entirely mechanical in operation, save for an electric choke. The inlet manifold on carburettor engines is free.

(b) Any air cleaner or air box contained within the engine bay are free. Ducting may be added to direct air to the induction system.

(c) Any bonnet scoop (including ‘shakers’) must be of the original size and design specified by the manufacturer for that model and must be located in the original position or as specified in the VO for the make and model.

T12 IGNITION SYSTEM

(a) Provided that it is interchangeable with the original, the distributor may be replaced by another. The ignition timing in relation to crankshaft position may only be varied by a mechanical system based on engine rotational speed and/or manifold vacuum. The spark trigger system for the ignition must be contained wholly within the distributor.

(b) Each *Automobile* must have fitted a MSD 6AL/MSI 6ALN CDI unit and rev limiter which is sealed. The maximum allowable engine rotational speed limits must be as listed in Sporting Regulation S16.1.

(c) The wiring from the MSD unit to the distributor must be as specified by the CM and be direct and separate from the *Automobile* wiring harness. All wiring associated with the MSD must remain as specified by the CM. The MSD unit must be placed on or near the *Passenger* side of the transmission tunnel with the rev chip facing upwards so that rev chips are able to be easily checked/removed and/or the unit removed with the wiring harnesses. The plugs connecting the MSD unit must remain as specified by the CM.

(d) Spark plugs and spark plug leads are free.

(e) Other than the rev limiter required by article T12 (b) above, the fitment of any device, the effect of which is to interrupt or enhance the ignition system, is prohibited. The fitment of any device associated with the ignition system other than as specified in Article T12 (b) of these regulations is prohibited.

(f) The TCM Engine must be fitted with a sealed ignition system as specified in the TCM Engine specifications (refer T9.2(m)) and be accessible only under instruction from the CM.

T13 ELECTRICAL SYSTEM

(a) The alternator is free.

(b) The battery and its location is free.

(c) All fuses, wiring, relays and switches are free.

(d) All electrically operated systems may be removed save for the following:

(i) either high or low headlight beam.

(ii) tail lights

(iii) stop lights

(iv) engine starting system

(v) windscreen wipers

(e) Each *Automobile* must be fitted with an operational, rearward facing, red, rain light of a minimum 220 cd (straight ahead) and 15 x 10 mm multi-chip LED's and must be mounted proud of the surface on an external panel as far practicable to the rear of the *Automobile*. The light must be individually switched direct to a power source.

(f) A 'Keene Stall Light' manufactured by Motorsport Electrics may be fitted to each *Automobile*, located at in the rear window facing rearwards. It must be permanently wired and be activated at any time the ignition switch is on and the motor is not running and extinguish when the motor is running. The activation of the stall light must only be triggered by the tachometer signal from the MSD ignition module.

T14 FUEL AND FUEL SYSTEM

(a) Fuel must be in accordance with the Touring Car Masters Series Sporting Regulations.

(b) Fuel pumps are free. Electrically-operated pumps may replace mechanical ones and their location is free.

(c) Fuel lines and filters are free. Fuel lines may pass through the *Cockpit* but there must be no joins save at the firewalls.

(d) Electric fuel pumps must be fitted with an engine stall power cut off in accordance with *Motorsport Australia* regulations.

(e) The *Fuel Tank* may be replaced by one of safe design and preferably with certification. An *FIA* Approved (FT3 Spec) is recommended.

(f) Where the standard tank is retained or the replacement tank is not an FIA Safety Tank, it must be fitted with anti-spray foam in conformity of *Schedule* N.

(g) Any bladder/replacement tank that protrudes outside the *Body Shell*, (i.e. drop tanks) must be fitted in a protective housing of either alloy or ferrous material in accordance with T4 (u) of these regulations.

(h) Where an internal filler is fitted within the boot/trunk, a splash/overfill tray draining to the outside of the *Automobile* must be fitted.

T15 FIRE EXTINGUISHER SYSTEM

It is recommended that each *Automobile* be fitted with an *FIA* approved on-board fire extinguisher system of either manual or electronic activation.

T16 POWERTRAIN COOLING

(a) The water pump is free.

(b) Provided that it is mounted in the same general location, the radiator is free.

(c) Engine oil coolers may be added freely.

(d) Cooling systems, possibly incorporating pumps, may be added for the purpose of cooling the oil within the transmission and final drive assemblies. The radiators/heat exchangers must be mounted outside of the *Cockpit*.

T17 IN-CAR CAMERAS

(a) Each *Automobile* must be fitted with a complete in-car camera system as specified by the CM.

(b) It is permitted to fit additional cameras including those that utilise GPS systems subject to approval of the CM.

(c) Unless the camera or remote lens has been installed by the CM or by the *Series* telecaster, it is prohibited for any camera or remote lens to be fitted outside the *Cockpit*.

(d) Any *Competitor* installed camera must not interfere with the vision or operation of any camera installed by the CM or the *Series* telecaster.

(e) The fitting of each camera must be approved by the Chief Scrutineer (or their nominee) prior to the *Automobile* proceeding on to the *Track*.

ATTACHMENT B

2021 Touring Car Masters Series Master Engine Build Sheet

Competitor:	
Vehicle Make:	
Vehicle Model:	
Log Book No.:	
TCM Chassis Plate No.	
Engine Seal No's	

Component.	Engine Block
Manufacturer	
Part No.	
Casting No.	
Casting Reference	
Bore (Finished) Size	
Deck Height (Finished)	

Component.	Crankshaft
Manufacturer	
Part No.	
Manufacturer Code	
Weight (Kg)	
Stroke	
Journal Size - Mains	
Journal Size - Big Ends	

Component.	Connecting Rods
Manufacturer	
Material	
Part No.	
Length	
Big End Size	
Small End Size	

Component.	Pistons
Manufacturer	
Part No.	
Size	
Pin Size	
Component.	Inlet Manifold
Manufacturer	

Part No.	
Casting No.	
Casting Reference	

Component	Cylinder Head
Manufacturer	
Part No.	
Casting No.	
Casting Reference	
Material	
Valve Angle	

Component	Engine Valves
Manufacturer	
Part No.	
Material	
Size: Exhaust	
Size: Inlet	

Component	Rocker Arms
Manufacturer	
Part No.	
Ratio	

NAME: _____

DATE: _____

SIGNTATURE: _____