

TOURING CAR CHALLENGE

Presented by McHitch

Sporting and Technical Rules

Administered by
Touring Car Challenge

*TOURING CAR
CHALLENGE*

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A category of the
Independent Race Series



iRace

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Introduction

The Touring Car Challenge is Touring Car racing the way it is meant to be. Featuring cars with similar outright performance, but with subtly different strengths and weaknesses meaning that while anyone has the chance to win, there will be plenty of action along the way, and plenty of overtaking to boot.

The Touring Car Challenge began life in 2003, pitting ex-V8 Supercars against Super Tourers, Future Tourers and Group A cars. Each car had a different strength, for example the Supercars with bulk power, performed very well in a straight line, but the Super Tourers, with amazing handling, less weight and superb brakes, were at their best under braking and in the corners. These differences set the scene for some epic battles, and some outstanding racing.

And it is this concept that is the backbone of the evolution. The cars will have similar outright performance, but will be different, in build philosophy and in their strengths and weaknesses.

Ex-V8 Supercars are welcome, and provide a ready, competitive source of well-built racecars, to allow competitors the chance to get up to speed quickly.

The V8 Giants contingent allows for V8 powered Touring Cars with a variety of engine capacities, and each capacity carries a different minimum weight – the less powerful cars are allowed to be lighter, thus equalising the performance. All major manufacturers produce a car eligible to be a V8 Giant, and the engine must be from a manufacturer with a recognised relationship. A Ford V8 could be fitted to a Mazda for example.

As if that wasn't enough scope for differences, into the mix is thrown the Gran Turismo class.

Gran Turismo is the new generation. Allowing for cars with a variety of configurations, including 4WD with upto 3-litre turbo engines, the Gran Turismo cars are the scalpel where the V8 Giants are the axe.

With such diversity, equalising the outright performance of all the cars is not going to be easy, but the category provides for parity adjustments to be made to minimum weight, rpm limit, ride height, aerodynamics in order to fine tune the balance should one particular group stray too greatly from the rest of the field. The handicap racing format also means that at the end of the day, it's the most consistent driver that wins.

1. Sporting Rules - General

1.1 Title

1.1.1 The 2010 McHitch Touring Car Challenge is a National Championship. The Championship will be run as part of the 2010 Independent Race Series (iRace).

1.2 Officials

1.2.1 Series Competitor Liaison : Mr Rod Dale
1.2.2 Category Director : Mr Rod Dale
1.2.3 Category Public Relations : Mr Sam Dale

1.3 Other Relevant Documents

1.3.1 The McHitch Touring Car Challenge will be run as part of the 2010 Independent Race Series. Meeting Rules, and Further Rules, promulgated for each round of the Championship will contain information relevant to Muscle Division competitors and personnel.

1.3.2 The McHitch Touring Car Challenge will be run as part of the Independent Race Series. The 2010 iRace competition rules will be in force at all events.

1.3.3 Race meeting, and race procedures will be in accordance with the procedures and regulations outlined here, as modified by the documents listed at paragraphs 1.3.1 and 1.3.2

1.3.4 It is the responsibility of the competitor to obtain and be familiar with all relevant documents as described here, and promulgated from time to time.

1.3.5 Special bulletins may be issued throughout the year. Bulletins will either be delivered to competitors at race meetings, or promulgated via the official iRace website: www.irace.net.au/admin/

1.4 Registration

1.4.1 There is no stand-alone registration fee. To be considered registered for Touring Car Challenge and eligible for points, competitor giveaways available from time to time, and trophies and other awards, competitors must complete a 2010 iRace Driver form, available from the Admin section of the iRace website: www.irace.net.au/features/drivers/profilesubmission/

1.4.2 Competitors must be registered to accumulate points in the Touring Car Challenge Championship. Provided the competitor holds a suitable circuit racing licence, iRace vehicle logbook and has registered with the Category, membership of any other group, association or club is not compulsory.

1.4.3 The Category Director reserves the right to refuse entry to any competitor and/or vehicle without explanation.

1.4.4 Entry on a round-by-round basis may be accepted for vehicles not in strict compliance with the technical rules. Such vehicles would not be eligible for round or series points.

1.5 Calendar

1.5.1 The 2010 McHitch Touring Car Challenge Calendar is as follows:

ROUND 1	Oran Park GP, NSW	15-16 January 2010
ROUND 2	Morgan Park, QLD	20-21 March 2010
ROUND 3	Eastern Creek, NSW	9 April 2010
ROUND 4	Lakeside, QLD	12-13 June 2010
ROUND 5	Eastern Creek, NSW	9 July 2010
ROUND 6	Queensland Raceway, QLD	14-15 August 2010
ROUND 7	Eastern Creek, NSW	16 October 2010

1.6 Pointscore

1.6.1 **Outright Round Points.** Round points will be awarded for each competitor as follows:

1.6.1.1 **Non-handicapped races** – outright position - points awarded from TABLE 1.

1.6.1.2 **Handicapped races** – outright position – points awarded from TABLE 2.

1.6.2 **Class Round Points.** Class point score will be determined by the allocation of points according to outright position as per para 1.6.1. Competitors will be ranked in classes from their outright points to determine the class placegetters.

1.6.3 TABLE 1 (Non-handicap races)

Place	Points	Place	Points	Place	Points
1	10	6	5	11+	1
2	9	7	4		
3	8	8	3		
4	7	9	2		
5	6	10	1		

1.6.4 TABLE 2 (Handicap races)

Place	Points	Place	Points	Place	Points
1	20	6	10	11+	1
2	18	7	8		
3	16	8	6		
4	14	9	4		
5	12	10	2		

1.7 Awards

1.7.1 Awards will be at the discretion of the Category Director.

1.7.2 Unless otherwise determined by the Category Director, awards will be given for the top three outright placings. Where the number of competitors in a particular sub-category is three or greater, a separate award for the round winner of that sub-category will be presented. Where the number of competitors in a sub-category is six or greater, awards will be presented for first, second and third placings for the round for that sub-category.

1.7.3 Awards for the season outright and sub-category pointscores will be given to the championship placegetters in accordance with paragraph 1.7.2.

1.8 Championship

1.8.1 The Outright pointscore for the Touring Car Challenge Championship will be determined by adding the points for each round. The competitor with the highest number of points will be awarded first place in the Championship. In the event of a tie, the higher position will be awarded to the competitor with the greater number of wins (or if number of wins is the same, to the competitor with the greater number of second places, or third places and so on). If the positions are still tied, the higher position will be awarded to the competitor with the better finishing position in the last event.

1.8.2 Class pointscores will be determined in accordance with the procedure outlined at para 1.8.1

2. Sporting Rules – Race meetings and Race procedures

2.1 Scrutineering

2.1.1 Scrutineering paperwork must be completed before the vehicle is scrutineered. An approved circuit racing licence and iRace Vehicle Logbook must be provided for inspection.

2.1.2 Scrutineering of vehicles will take place on Friday, Saturday and/or Sunday mornings. The exact timing and location of vehicle scrutineering will be advised in meeting rules.

2.1.3 All vehicles must be fitted with a functioning Dorian transmitter for all on track activities.

2.2 Driver's Briefing

2.2.1 The Clerk of Course will conduct a driver's briefing at each round of the Championship. Attendance at the briefing is compulsory, and non-attendance may attract a fine or other penalty.

2.3 Practice Starts

2.3.1 Practice starts may only be conducted at the exit of pit lane.

2.4 Official Practice

2.4.1 Official practice will normally be scheduled during the first morning of the event at each round of the Championship. Official practice will normally consist of a minimum of 1 x 15 minute (or greater) session.

2.5 Official Qualifying

2.5.1 Official qualifying will normally be scheduled after official practice on the first day of the event at each round of the Championship. Official qualifying will normally consist of a minimum of 1 x 15 minute (or greater) session.

2.6 Grid Allocation

2.6.1 **Race One.** Grid positions for Race 1 will be allocated according to times set in qualifying. The fastest lap time recorded will be allocated position 1, 2nd fastest lap time position 2, etc until the grid is complete. Any competitors who failed to record a qualifying time may start Race 1 from rear of grid at the discretion of the Clerk of Course.

2.6.1.1 The grid sheet for Race 1 will be generated and issued by the Chief Timekeeper at each round.

2.6.2 **Handicap Races.** Grid positions for handicap races will be determined by times recorded in Qualifying or the lap time nominated (Point 2.6.3) and/or any known driver/car/circuit performance and will be at the sole discretion of the Category Handicapper.

2.6.2.1 The grid sheet for handicap races will be generated by the Category Handicapper and issued by the Chief Timekeeper at each round. Each handicap grid sheet will include the following information.

2.6.2.1.1 Vehicle number and driver name.

2.6.2.1.2 Grid position each vehicle is to start from.

2.6.2.1.3 Indicate if the vehicle or group is to start from scratch or a number indicating the handicap group allocated.

2.6.2.1.4 The number of seconds handicap each group will be held following the commencement of race start for the scratch group.

2.6.3 Laptime Penalty (Two Percent Rule). Any competitor whom improves his/her race lap time by 2% or greater from qualifying will be penalized a minimum of 30 seconds. If the circuit is wet for qualifying but is dry for any of the races, no penalty will be imposed. Any driver who fails to qualify or has difficulty during the qualifying session may nominate a time for the purpose of the handicap races. At the discretion of the organizers, allowances may be made for rookie competitors.

2.7 Safety Car

2.7.1 A safety car may be used during all races in accordance with the 2010 iRace rules. Where possible and safe to do so, the safety car will maintain not less than 80km/h on the straights.

2.8 Race Format

2.8.1 A normal race weekend will consist of the following (where a race duration is specified, the length of the race, in number of laps, will be nominated in the event schedule by the organisers):

2.9.1.1 **Race One** – scratch race, 5 laps duration.

2.9.1.2 **Race Two** – handicap race, approximately 15 minute duration.

2.9.1.3 **Race Three** – handicap race, approximately 15 minute duration.

2.8.2 An alternate race format may be used at selected rounds at the discretion of the Category Director. The alternate race weekend may consist of the following:

2.8.2.1 ONE RACE Endurance Format:

a. Race One – scratch grid, 35 – 40 minute duration race.

2.8.2.2 TWO RACE Double feature Format:

a. Race One – scratch grid, 15 minute duration race.

b. Race Two – handicap grid, 22 minute duration race.

2.8.2.3 THREE RACE Standard Format: as per para 2.8.1

2.8.2.4 FOUR RACE Quad Format:

a. Race One – scratch grid, 5 lap race.

b. Race Two – handicap grid, 12 minute duration race.

c. Race Three – handicap grid, 12 minute duration race.

d. Race Four – scratch grid, 5 lap race.

2.9 Start Procedures

2.9.1 Scratch Races. Scratch race starts will be a standing start as per 2010 iRace National Competition Rules for Standing Starts except that the 2 minute, 1 minute and 30 second boards will be displayed in the marshalling area or pit lane exit . Once the vehicles proceed onto the circuit, 1 warm up lap will be completed. Following the warm up lap all vehicle must stop on the allocated grid positions for the race start. Once the grid is set, the 5 second signal will be shown followed by lights on / off and race start.

2.9.2 Handicap Races. Races designated Handicap Races will be a HANDICAP START with grid positions allocated as per Point 2.6.2

2.9.2.1 The start procedure will be as per 2010 iRace Rules for Handicap Starts except that the 2 minute, 1 minute and 30 second boards will be displayed in the marshalling area or pit lane exit. Once the vehicles proceed onto the circuit, 1 warm up lap will be completed. Following the warm up lap all vehicle must stop on the allocated grid positions for the race start.

2.9.2.2 From the edge of the circuit a large number board extended on a pole will be displayed indicating the group number for the race start. The first group after scratch will be Group 1, the second group will be Group 2, etc.

2.9.2.3 Once the grid is set, the 5 second signal will be shown followed by lights on / off for the scratch group.

2.9.2.4 Following the start for the scratch group, each group will be held for the designated time as indicated on the grid sheet. The number board will be displayed in front of the foremost vehicle in each group. **Once each group commences racing the number board for the following group will be raised. This is the indication that the following start procedure is for that group.**

2.9.2.5 Unless otherwise advised during the drivers briefing, the start for each subsequent group will be indicated by use of lights. The lights for each group will be on approx 3-5 seconds prior to race start for that group. Once the lights are extinguished this shall be the race start signal for that group.

2.9.2.6 The Clerk of Course may, for safety reasons, release the final group(s) prior to the designated handicap time. No penalty, adjustments or discussions regarding the early release will take place.

2.9.2.7 It may be necessary for 1 or more handicap groups to commence the race 1 or more laps behind others, due to lap times, race distances, etc. If this handicap is required, it will be indicated on the grid sheet, and automatically adjusted by the timekeeper.

2.10 Oversubscribed Grid

2.10.1 In the event of entries exceeding approved track density, registered competitors will receive priority. Order of preference will then be determined by qualifying positions, with excess cars held as reserves.

2.10.3 If deemed appropriate (regarding number and makeup of entries) by the Category Director, the field may be split into two divisions. The split point would be based on a laptime cutoff, with the faster cars placed in Division 1 and the slower cars in Division 2.

2.11 Parc Ferme

2.11.1 At the completion of any official qualifying session or race, at the direction of the Chief Scrutineer and/or Technical Commissioner, vehicles may be required to attend Parc Ferme. When directed, all vehicles must attend the Parc Ferme area, and not be accessed by any pitcrew, and must not be removed from the area unless authorised by the Chief Scrutineer. Failure to comply with Parc Ferme procedures may result in exclusion from the event or other penalty.

3. Technical Rules

3.1 Introduction

3.1.1 Any modification or change not expressly permitted by these rules should not be carried out before consulting the Category Director.

3.1.2 Eligibility of vehicles not specifically mentioned in the following rules will be determined by, and is at the sole discretion of, the Category Director. Due regard will be given to the history of the car and its compatibility with other competing cars.

3.2 General Description

3.2.1 The Touring Car Challenge is for competitors driving Touring Cars of mass-produced (or, in special cases, limited production runs) origin, in a medium to large sedan or coupe configuration with not less than four (4) original seating positions.

3.2.2 Vehicles are split into three divisions:

3.2.2.1 V8 Giants – specific requirements are explained in section 3.3

3.2.2.2 Gran Turismo – specific requirements are explained in section 3.4

3.2.2.3 Ex-V8 Supercars – specific requirements are explained in section 3.5

3.2.3 Common requirements are explained in section 3.6, and all remaining sections of this document.

3.3 V8 Giants

3.3.1 Examples of suitable vehicles include (not an exhaustive list):

Toyota	Camry and Aurion
Holden	Commodore and Monaro
Ford	Falcon
Mitsubishi	380
BMW	Series 3, 5 and 7
Mercedes-Benz	S500
Chrysler	300C
Mazda	6
Hyundai	Sonata
KIA	Optima

3.3.2 Engine.

3.3.2.1 The normally aspirated V6 or V8 engine fitted shall have a past or present association between the brand of vehicle and brand of engine. The association may be that one company either owned another, or produced vehicles for the other. In the case of an existing vehicle that has previously competed as a Future Tourer, the requirement for an association between vehicle and engine manufacturer is waived.

3.3.2.2 Examples of associations include (not an exhaustive list):

Toyota, Holden with Chevrolet
Mitsubishi, Hyundai with Chrysler
Jaguar with Ford
Ford, Mazda with Jaguar
Volvo, Ford with Jaguar
KIA with Ford

3.3.2.3 The engine shall be fitted in front of the original firewall. The only firewall modification permitted is for the transmission tunnel to allow for the bellhousing and transmission.

3.3.3 Gearbox.

3.3.3.1 No restriction applies to the make of gearbox, however it shall be directly attached to the engine in a north-south configuration in the proximity of the original position for the vehicle. The rear of the gearbox may not be fitted further back than the centreline of the wheelbase of the car.

3.3.4 Front Suspension.

3.3.4.1 The choice of front suspension K frame is free. The front suspension may be McPherson strut or Double wishbone. Dampers are free.

3.3.5 Rear Suspension and Differential.

3.3.5.1 Suspension and differential configuration shall be as available from the vehicle manufacturer, ie; live rear axle or independent rear end must be retained. Live axle cars may be fitted with a 4-link, cambered rear end, with a rear trailing arm of not greater than 912mm in length. Independent rear end cars may use rear trailing arms of not greater than 912mm in length.

3.3.5.2 The outside casing of the differential may not be altered, but may be strengthened. A 9 inch alloy differential centre may be fitted to both live and independent rear ends.

3.3.6 **Wheels.** Wheels will be 17", 18" or 19" diameter, with a maximum width of 11".

3.3.7 **Aero Package.** The rear wing must be mounted such that the most rearward point of the wing element is not further rearward than the rear most point of the rear bumper, and the lateral extremities of the wing (and any associated endplates) do not extend beyond the silhouette of the car as viewed from above. The wing must not be higher than the roof line at any point when viewed from behind.

3.3.7.2 The front undertray must be mounted in such a location that the most forward point is not further than 1200mm ahead of the centreline of the front wheels. The leading (front) edge of the undertray must not extend any further than 100mm forward of the notional shadow of the existing front panelwork (bumper) of the car when viewed from above. The undertray is not permitted to extend beyond the shadow of the bumper at the sides. The design of the

undertray must be such that the when measured on the underside, the trailing (rear) edge of the undertray is not more than 100mm higher than the leading (front) edge. The thickness of the undertray at the trailing edge must not be greater than 20mm.

3.3.8 Equivalency table. The overriding authority in determining acceptable engine capacity, rpm limit, and minimum weight is the following table. The table also specifies engine configuration due to the potential impact on power output:

Division	Capacity (up to)	Valves/Cyl (Other req)	RPM Limit	Minimum Weight
1	7000cc	2(Pushrod)	6500rpm	1500kg
	6400cc	4(OHC)	7500rpm	1500kg
2	6000cc	2(Pushrod)	7000rpm	1400kg
	5400cc	4(OHC)	7000rpm	1350kg
3	5000cc	2(Pushrod)	7500rpm	1300kg
	4600cc	4(OHC)	7500rpm	1250kg
4	5000cc	2(Pushrod) (4 barrel carburettor or 4 barrel fuel injection only)	7500rpm	1250kg
	4000cc	4(OHC)	7500rpm	1200kg

3.3.8.1 Engine capacities specified are a maximum capacity.

3.3.8.2 Unless specified, engine induction may be any method of natural aspiration (eg; carburetted or fuel injected). Valves per cylinder means the total number of valves allowing entry and exit of air-fuel mixture into each engine cylinder.

3.3.8.3 RPM limit is a hard limit. Competitors have the option of providing the Technical commissioner access to ECU engine logs, or installing a MSE rpm logger.

3.3.8.4 Minimum weight is measured without driver, and with whatever fuel remains in the vehicle at the completion of the race.

3.3.8.5 Adjustments to this table may be notified via bulletin in the interests of maintaining parity.

3.4 Gran Turismo

3.4.1 To be issued.

3.5 Ex-V8 Supercar

3.5.1 Vehicles must comply with the regulations relevant to the vehicle in it's final year of competition in the relevant category, or the current regulations. Competitors must nominate which regulations they intend to comply with, and maintain a copy of those regulations to be produced on request of the scrutineers, technical personnel or Category Director.

3.6 Common Requirements.

3.6.1 Brakes.

3.6.1.1 Brakes may be of four (4), six (6) or eight (8) piston configuration, with no greater than one (1) calliper per wheel.

3.6.1.2 Carbon fibre disc rotors are not permitted. Brake pads are free.

3.6.2 Onboard Air Jacks. Free, but not mandatory.

3.6.3 Traction Control and Launch Control. Traction control and Launch control are strictly forbidden.

3.6.4 Interior Trim. Interior trim and original seats may be removed, with the exception of the original dash pad top. The interior door trim must remain fitted on both front doors, unless the vehicle is fitted with NASCAR style side intrusion bar work (that would foul with original door trim). The trim material may be replaced with either carbon fibre or aluminium. The opening mechanism for both front doors must be operable from inside the vehicle.

3.6.5 Bodywork.

3.6.5.1 The vehicle body may not be altered, however to accommodate the wheel and tyre combination the front and rear guard may be altered by the folding up of the lip of the guard only. The internal wheel arch front and rear may be modified with the fitment of mini wheel tubs to accommodate wheel and tyre combinations.

3.6.5.2 Applications to utilise composite body panels will be considered by the Category Director and Technical Commissioner. Applications should be made in writing, and will be considered on the basis of vehicles that otherwise meet the criteria for a certain division (see para 3.3.8) but are unable to achieve the weight via other means.

3.6.6 Tyres.

3.6.6.1 The brand and compound of tyre is free.

3.6.6.2 Before the commencement of qualifying each competitor may have a maximum of eight (8) tyres marked. These eight marked tyres are the only tyres the competitor may then use in qualifying and the races for that event.

3.6.6.3 In the event a marked tyre is damaged, an application may be made to the Category Director to substitute a tyre of equivalent wear and condition (sans damage), and for this replacement tyre to be marked. The Category Director or his delegate will be the final authority on assessment of the damage and the replacement tyre.

3.6.7 Fuel Tank/Fuel.

3.6.7.1 Fuel tank location - as original. Construction shall be in accordance with iRace National Competition Rules.

3.6.7.2 FUEL: Commercially available Unleaded Pump Fuel (Gasoline).

3.7 Safety.

3.7.1 **Windscreen.** All vehicles shall be fitted with a laminated windscreen.

3.7.2 **Side Glass.** Side glass may be replaced with Lexan or Perspex, with a minimum thickness of 5mm.

3.7.3 **Rollover Protection.** Rollover protection shall comply with iRace National Competition Rules. Windscreen cross bars are permitted. Bar work may extend to the front suspension towers, and to the rear suspension towers.

3.7.4 **Safety Harness.** All vehicles shall be fitted with a drivers safety harness complying with iRace National Competition Rules.

3.7.5 **Window Nets.** All vehicles shall be fitted with a window net in accordance with iRace National Competition Rules.

3.8 Numbers, Category Decals and Promotional Material:

3.8.1 Category Numbers will be allocated by the Series Director. The top three placegetters in the 2009 Touring Car Challenge will be eligible to wear numbers 1 through 3.

3.8.2 To be eligible to compete in a Championship Race and to obtain Championship points and / or prize and bonus money, competitors must comply with the following:

3.8.2.1 **All race numbers must be of the correct size, on a clearly contrasting background.**

3.8.2.2 **Tobacco advertising is completely prohibited on all cars, transporters and clothing.**

3.8.2.3 Each car may be required to carry series stickers as supplied by the Series Director. Positioning of series stickers will be promulgated via bulletin. The top banner of the windscreen shall be made available for stickers of McHitch, the category naming rights sponsor. The area above the door numbers shall be made available for a "McHitch" sign.

3.9 Amendment Process. Amendments, modifications and changes may be made to these rules from time to time, at the discretion of the Category Director and will be promulgated via special bulletin and/or the iRace website.

3.10 In Car Cameras

3.10.1 In car camera installations must be approved by the Scrutineer of the meeting.