



PART 2

**SUPER TOURING CAR Race Series
TECHNICAL REGULATIONS
2010 – 2011**

PREAMBLE

The STC Race Series caters for series production based saloon, touring, grand touring and road going sports cars of steel monocoque construction that have been modified for improved performance. The rules allow a reasonable freedom of modification that encourages kiwi ingenuity. STC is aimed at the widest possible variety of cars and permit a level of modification that makes the field very appealing to spectators.

The series accommodates for cars of different levels of modification via a time bracket system that is based on performance which negates the need for regulations designed to create artificial parity.

COMPETITOR RECORD OF AMENDMENTS ISSUED TO THIS SCHEDULE

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

Amendment number	Issue/Effective date	Regulation reference	Subject/Notes

1.0 GENERAL INFORMATION RELATIVE TO THIS SCHEDULE

1.1 This Schedule shall be read in its entirety and shall take precedence over Appendix-2 Schedule A of the 'National Sporting Code' excepting where an item is not specifically covered within Schedule STC, in which case Appendix 2 Schedule A will apply.

1.2 All text changes from the previous issue of this Schedule are highlighted such. Text changes for grammatical and/or formatting reasons are not highlighted.

1.3 All cars competing in Events to which these regulations apply shall have a valid MotorSport NZ logbook.

1.4 TECHNICAL ELIGIBILITY AND SAFETY EQUIPMENT ENQUIRY: Where any doubt may exist in understanding any regulation contained within this Schedule it will be understood that it is the competitors obligation to enquire as to the correct interpretation. All technical eligibility enquiries shall be submitted in writing to:

(1) The Series Technical Officer, as detailed in the Sporting Regulations.

****All enquiries should detail the article in question and the specific subject matter.**

****A written reply will always be given to a written enquiry.**

**On matters of technical eligibility, a verbal statement will have no validity.

2.0 DEFINITIONS

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

****'Airdam'** means a device fitted to front of vehicle to reduce airflow under vehicle.

****'Canards'** mean small 'winglets' fitted to each side of the vehicle in front of the front wheels and/or behind the rear wheels that effect the airflow around the vehicle.

****'Lightweight'** means a replacement item constructed of materials that are lighter than the Original or the original component, which has had material, removed.

****'Original'** means the factory fitted part for that make, model and year.

****'Splitters'** means a sheet of material or device placed under the front of the vehicle approximately parallel to the ground, forward of the front axle centerline, that affects the characteristics of the airflow entering the underside of the vehicle.

*****'Undertrays'** means a sheet of material or device placed under the vehicle between the axel centrelines that effects the airflow under the vehicle.

*****'Diffuser'** means a sheet of material or device placed under the vehicle behind the rear axel centerline that effects the airflow under the vehicle.

3 ELIGIBLE VEHICLES

3.1 Vehicles eligible to compete in this series shall be **Series Production** vehicles of a **Saloon** or **GT** type or **Sports Car** type of steel monocoque construction.

3.2 All vehicles must have **Original** provision for two or more seats.

3.3 **Open wheel** vehicles, kit cars or **sports racing** cars are not permitted.

3.4 Vehicles using Space Frame Construction are not permitted.

3.5 Mid or rear engine cars with more than six cylinders are not permitted.

3.6 Vehicles are categorised into the following Time Bracket classes as detailed in the Sporting Regulations:

- STC-A:
- STC-B:
- STC-C:
- STC-D:

3.7 All changes to the car are limited to those specifically allowed in these regulations.

4.0 SAFETY EQUIPMENT REQUIREMENTS

4.1 The following safety equipment **shall** be fitted to the competing car:

4.1.1 A safety cage shall be installed, in full compliance with Schedule A requirements.

4.1.2 A competition seat, a safety harness, and a fire extinguisher shall be installed, in full compliance with Schedule A.

5.0 BODYSHELL, VEHICLE EXTERIOR and SUB-FRAMES

5.1 Bodyshell exterior must be neat and finished.

5.2 *Airdams* may be fitted. Front guards, rear guard skins, front nose cones (front bumper), rear bumper, bonnets, rear hatches/boot lids, &/or doors may be replaced with items of *light weight* construction.

5.3 Head lights may be replaced with air intakes.

5.4 Monocoque body shell free subject to the following conditions:

5.4a The bodyshell between the original front and rear shock/spring mounting points must remain as a full monocoque construction. If the rollcage & any other added braces were to be hypothetically removed from the car then the vehicle must still be of rigid enough construction not to deform if driven at race speed.

5.4b Engine mounting. The engine fitted shall be in the same orientation and approximate positioning as the *original* (front engine shall remain front engine etc), In the case of front engine vehicles the engines bell housing mounting surface shall be forward of lower edge of the front windscreen, except for engines mounted in their original positions.

5.4c Alterations to the firewall &/or transmission tunnel for the repositioning of the engine or fitment of an alternative engine &/or gearbox must be completed in fully welded sheet steel construction.

5.4d Alterations to the floor pan are limited to the repositioning &/or fitment of alternative drivetrain components &/or the repositioning of the exhaust system &/or fitment of drivers seat &/or fitment of the fuel tank and must be completed in fully welded sheet steel construction.

5.4e The total overall body width measured from the original guard outer most points is not to be increased by more than 150mm.

5.4f Suspension pickup points must remain within 50mm of their *Original* location except for the exceptions listed under 12.3.

5.5 Front &/or rear subframes may be replaced by items of space frame construction provided the monocoque construction and function of the body shell the *original* items were attached to remains and the suspension pickup points are not moved by more than 50mm from their *original* location (except for the exceptions listed under 12.3).

5.6 Wings, *splitters, canards, diffusers &/or undertrays* may be fitted in compliance with schedule A.

5.7 Lightweight replicas may replace side &/or rear windows. Glass front screens should be used wherever practical. Lightweight front screens should only be used where there is no practical alternative.

6.0 VEHICLE INTERIOR

6.1 The **original** dash assembly may be removed provided it is replaced with an item that emulates the **original** and covers the same surface area in plan view as the **original**.

6.2 All interior trim and seats, window winding mechanisms, heater, fresh air ventilation, air-conditioning and accessories, mirror/s, gauges, switches, bonnet, boot and door latches may be removed or replaced.

6.3 The centre line of the driver's seat position must be offset from the centre line of the vehicle by a minimum of 250mm.

7.0 ENGINE SPECIFICATIONS

7.1 Engine including internals, induction, exhaust, Ignition, ECU, cooling, lubrication, engine ancillaries and engine mounts free (in compliance with Schedule A) subject to articles 7.2 to 7.6 inclusive.

7.2 Any eligible engine may be fitted into any eligible bodyshell provided the engine used has the same number of cylinders (or less) as **originally** fitted to the bodyshell (Two rotor Mazda Rotary engines are deemed to be 4 cylinder engines for this purpose of this article).

7.3 Post 1978 vehicles that **originally** had Rotary engines fitted may use Rotary engines with more than two rotors.

7.4 In line Six cylinder piston engines may be fitted to a four cylinder shell provided the engine is produced by the same manufacturer as the bodyshell, the firewall is not modified, and the installation is achieved using the engine mounts and crossmembers/subframes that are original to the vehicle used or the vehicle of the engine used.

7.5 Maximum swept capacity for naturally aspirated engines is 6000cc.

7.6 Maximum swept capacity for forced induction engines is 3600cc.

8.0 FUEL

8.1 The only fuels listed under schedule-A that may be used are 91, 95, 98 or E10.

9.0 FUEL SYSTEM

9.1 Free, in compliance with Schedule A.

10.0 TRANSMISSION and DRIVE TRAIN

10.1 Including clutch, gearbox, differential/s, drive-shaft/s, drive-joints, and mounts are free subject to 10.2 and 10.3.

10.2 Four-wheel drive is permitted on factory four-wheel drive cars only, however 4WD cars may be made 2WD.

10.3 Front wheel drive cars must remain front drive only.

11.0 ELECTRICAL SYSTEM

11.1 Components, accessories and wiring free, in compliance with Schedule A, except that **original** tail and stop lamp assemblies must remain in working condition.

12.0 SUSPENSION

12.1 Springs, platforms, uprights and/or struts, dampers, links, bushes, joints, anti-sway bars, anti-sway bar links/mounts/bushes are free subject to 12.2 and 12.3.

12.2 *Original* type must be retained (McPherson strut to remain McPherson strut, wish bone to remain wish bone etc).

12.3 All suspension link/arm body mounts must remain within 50mm of the *originals* except for the following;

12.3a The front steering rack mount position is free and/or vehicles with steering boxes may be converted to rack & pinion steering.

12.3b Front and rear anti-sway bar mounts are free.

12.3c In the case of live rear axel vehicles the rear live axels locating links body mounts are free.

12.3d Spring &/or shock mounts may be moved more than 50mm provided the spring & shock remain in an upright position.

13.0 BRAKING SYSTEM

13.1 Free, in compliance with Schedule A, except that brake rotors must be of ferrous material.

14.0 STEERING

14.1 Free, in compliance with Schedule A.

15.0 GENERAL

15.1 Nuts, bolts, circlips, pins, springs, clips, paintwork, coolants and lubricants are free.

16.0 ROAD WHEELS

16.1 Free but limited to 254mm (10 inch) width, measured at the bead sealing surface.

17.0 TYRES

17.1 Any slick tyre from the following list may be used:

1) DUNLOP Slick compounds D11, D14, SS12, D21

2) KUMHO S700 slick

3) HOOSIER Radial slick R100 compound, Bias slick R45B compound

4) Pirelli D3

or any road tyre (also known as "DOT" tyres).

17.2 A series entrant may apply to have a slick tyre of similar specification to those listed added to the list (homologated), however this application to the series technical officer must be received at least one week prior to a round and is subject to approval of the organising committee. The organising committee reserves the right to accept or decline any application.

17.3 When the announcement as detailed in Appendix 4, Schedule Z, Article 10.10 of the current New Zealand MotorSport Manual is made by the Clerk of the Course any treaded tyres compliant with Appendix 2, Schedule A, may be fitted