MOTORSPORT AUSTRALIA MANUAL

AUTO TEST APPENDIX GROUP 4H – MOTORKHANA TECHNICAL REGULATIONS



Modified Article Date of Application Date of Publication

A capitalised and italicised word in this document is defined in the FIA International Sporting Code (Code) or the National Competition Rules (NCR), including their Appendices.

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

1. AUTOMOBILES

1.1 AUTOMOBILE REQUIREMENTS

- 1.1.1 Each Automobile must:
 - 1.1.1.1 comply with Schedule A;
 - 1.1.1.2 have road wheels of not less than 10" nominal diameter;
 - 1.1.1.3 except for an *Automobile* entered in a class solely for Production Four-Wheel Drive Vehicles, have not more than two driven wheels;
 - 1.1.1.4 except for a production vehicle originally equipped with four-wheel steering, have not more than two steered wheels:
 - 1.1.1.5 be fitted with tyres on all wheels which:
 - 1.1.1.5.1 are pneumatic, containing gas only;
 - 1.1.1.5.2 are in a safe condition. This does not prohibit tyres without tread pattern, but any such tyres will be subject to close examination by the scrutineers;
 - 1.1.1.5.3 are not fitted with any anti-skid attachments, e.g. studs, chains;
 - 1.1.1.5.4 if the *Competition* is conducted on an unsealed surface, the *Organiser* may by a statement in the *Supplementary Regulations* restrict the types of tyres admissible to the *Competition*. The types of tyres which may be so prohibited are winter tread, bar-tread, mud-and-snow and hand-cut patterns.
 - 1.1.1.6 carry competition numbers;
 - 1.1.1.7 be adequately muffled so as to limit noise emission to a maximum of 95 dB(A) when tested in accordance with the Motorsport Australia-specified method (refer Schedule B, Motorsport Australia Manual, Technical Appendix);
 - 1.1.1.8 be scrutineered for safety and for *Automobile* eligibility before taking part in an *Event*, including practice. Special attention will be paid to brakes, steering and tyres;
 - 1.1.1.9 conform to acceptable standards of condition and of presentation;
 - 1.1.1.10 be fitted with roll over protection if it is an *Automobile* outlined in Articles 3 and 4 of these regulations when competing in a Motorkhana. Roll over protection is not compulsory for other *Automobiles*, however, if it is fitted to an *Automobile*, the structure must comply with Schedule J (refer Motorsport Australia Manual, Technical Appendix); and
 - 1.1.1.11 have all exposed rotating parts on the engine guarded for walk-up protection.

2. PRODUCTION AUTOMOBILES

2.1 CRITERIA FOR A PRODUCTION AUTOMOBILE

- 2.1.1 A Production Automobile is a road going vehicle that has been manufactured or fabricated in a production run and sold to the public. An Automobile may be modified, but if in the areas listed below, the restrictions must be adhered to:
 - 2.1.1.1 Original body shell must be retained. The overall length and silhouette must not be less than the original. Spoilers, air dams and wheel arch flares may be added.
 - 2.1.1.2 Engine, firewall and front seats must remain in their original location.
 - 2.1.1.3 Body panels may be of a different material to a production part.

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- 2.1.1.4 Interior trim such as door trim (except both front doors) or carpet etc may be removed. If a roll cage is fitted, the rear passenger seats may be removed.
- 2.1.1.5 All lighting equipment must be in place (e.g. headlights, tail-lights) but not necessarily in working order (*competitor's* responsibility if road registered).
- 2.1.1.6 The handbrake may be modified but must work equally on both rear wheels.
- 2.1.1.7 Tyres on the Motorsport Australia Production Car Tyre List are allowed with the following prohibitions: all racing slicks, racing re-treads, and tyres marked "not for road use" or "racing purposes only".
- 2.1.1.8 The weight of the *Automobile* must not be less than 95% of the specified kerb weight for the vehicle. Windows may not be removed unless replaced with an alternate material.
- 2.1.2 Classes for Production Automobiles (based on manufacturers' specifications) are:

Class A	2WD, wheelbase up to 2150mm
Class B	2WD, wheelbase 2151 - 2390mm
Class C	2WD, wheelbase 2391 - 2574mm
Class D	2WD, wheelbase 2575mm and over
Class E	4WD (which must be driven in the four-wheel drive mode throughout the competition)
Specials	See Article 4 (including FIA XC)

2.2 CRITERIA FOR A CLASS H AUTOMOBILE

A Class H *Automobile* is a road going vehicle that has been manufactured or fabricated in a production run and sold to the public permitted to be modified within the following restrictions:

- 2.2.1 Each part of the original body between the front firewall and rear suspension mountings, including roof, pillars and floor pan must remain intact;
- 2.2.2 The floor pan and firewall may be modified to accommodate replacement/relocation of the engine and driveline but must retain the ability to separate the engine and driveline from the *Cockpit*;
- 2.2.3 Each front door must remain operational with the original hinges and latch;
- 2.2.4 Each rear door, tailgate and hatch may be modified leaving only the outer skin permanently and securely fixed in place;
- 2.2.5 The Automobile may not be converted from front to rear wheel drive or vice versa; and
- 2.2.6 Windows may be removed but the *Driver* must wear eye protection.

3. SPECIALS

3.1 CRITERIA FOR A SPECIAL

A Specials is either:

- 3.1.1 A PURPOSE-BUILT AUTOMOBILE, WHICH MUST:
 - 3.1.1.1 have a wheel base not less than 1800mm;
 - 3.1.1.2 be of sound and solid construction;
 - 3.1.1.3 be fitted with some form of protection between the engine and *Driver*'s compartment suitable and sufficient to prevent the passage of flame;
 - 3.1.1.4 be fitted with a solid and rigidly attached floor, and covers of solid material which effectively separate the *Passenger* compartment from the exhaust system, the transmission shaft/s and joints, the brakes, the road wheels and their attachments and linkages;
 - 3.1.1.5 have sides on the *Passenger* compartment extending at least from the toe-board to the rear of the *Seat/s*, contiguous with the floor throughout their length, of a height not less than 150 mm above all parts of the uncompressed *Seat* cushion/s;
 - 3.1.1.6 be fitted with a securely attached *Driver's Seat*;

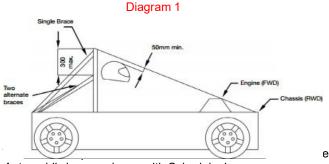
- 3.1.1.7 be fitted with a fuel tank safely and securely installed;
- 3.1.1.8 have any battery safely and securely installed;
- 3.1.1.9 have all brake, fuel and electrical lines securely mounted;
- 3.1.1.10 not have any open carburettor intake/s intruding into the *Passenger* compartment. The use of flame-retardant air cleaner/s is recommended;
- 3.1.1.11 have mudguards (if fitted) securely mounted;
- 3.1.1.12 any form of electronically-controlled traction, braking or suspension control aids are forbidden

Important note: A Special that is intended to be used in a *Competition* other than a *Motorkhana*, and has roll over protection installed, may not employ any of the exemptions/differences to Schedule J (Motorsport Australia Manual, Technical Appendix) outlined below, and must comply with the full requirements for that form of *Competition*.

- 3.1.1.13 be fitted with a roll over protection structure (ROPS) complying with Schedule J or the following requirements:
 - 3.1.1.13.1 For a Special of up to 500 kg and/or with a *Chassis* width equal to or less than 750 mm (measured at the widest point of the roll bar):
 - 3.1.1.13.1.1 Minimum Type 1, Solo Roll Bar as defined by Schedule J (refer to drawing J-25 in Schedule J). As an alternative to the single brace design illustrated, two braces may be employed, which must be fitted not more than 300 mm from the top of the main roll bar (refer Diagram 1). All braces must be straight. More extensive structures of a design outlined in Schedule J are permitted.
 - 3.1.1.13.1.2 The roll over protection structure must be constructed of mild steel of circular cross section, with a minimum yield strength of 250 MPa. Alternatively, the structure may be constructed of a material specified in Schedule J.

Component	Outside Diameter	Wall Thickness
Main hoop	30mm min	1.5mm min
All Other components	25mm min	1.5mm min

- 3.1.1.13.1.3 The entirety of the main roll bar must be behind the *Driver*'s helmet (no minimum or maximum distance is specified) when viewed from the side and the *Driver* is seated in the normal driving position.
- 3.1.1.13.1.4 Minimum of 50 mm clearance is to be maintained above the *Driver*'s helmet (for all *Driver*s of the *Automobile*) when measured perpendicular to an illusory line drawn from the top of the main roll bar to the top of the engine (not including peripherals such as carburettors) or alternatively the *Chassis* at the front of the *Automobile*. Refer Diagram 1.



3.1.1.13.1.5

Automobile in accordance with Schedule J.

- 3.1.1.13.2 For a Special over 500 kg and/or with a *Chassis* width greater than 750 mm (measured as above):
 - 3.1.1.13.2.1 Roll over protection conforming to at least Type 2, half roll cage as defined by Schedule J, must be fitted (refer to drawings J-

18, J-19, J-20 in Schedule J). Braces must be fitted not more than 300 mm from the top of the main roll bar (refer Diagram 1). All braces must be straight. More extensive structures of a design outlined in Schedule J are permitted.

Component	Outside Diameter	Wall Thickness
Main hoop	38mm	2.5mm
All Other components	30mm	1.5mm

- 3.1.1.13.2.2 The structure must conform in all ways to the specifications outlined in Schedule J;
- 3.1.1.13.2.3 notwithstanding the provisions of Schedule I (Motorsport Australia Manual; Technical Appendix), be fitted with at least a lap-type seat belt; or;
- 3.1.2 PRODUCTION-BASED AUTOMOBILE WHICH HAS ANY OF THE FOLLOWING FEATURES:
 - 3.1.2.1 significantly lightened
 - 3.1.2.2 fitted with fiddle brakes
 - 3.1.2.3 fitted with a foot brake operating only on the rear wheels
 - 3.1.2.4 fitted with any racing slicks, racing re-treads, and tyres marked "not for road use" or "racing purposes only".

4. MINI MOKES

4.1 CRITERIA:

- 4.1.1 Mini Mokes must be fitted with either:
 - 4.1.1.1 a roll over protection structure (ROPS) to be constructed in accordance with Schedule J (Motorsport Australia Manual, Technical Appendix), and be of at least a Type 2 Half Roll Cage,

or alternatively

4.1.1.2 the standard original equipment manufacture (OEM) ROPS. The structure must comply with the following material specification:

Component	Outside Diameter	Wall Thickness
Main hoop	38mm	2.5mm
All Other components	30mm	1.5mm

4.1.2 All material is to be mild steel, circular in section, with minimum yield strength of 250 MPa. (Note: diagrams available from Motorsport Australia.) A Mini Moke utilising the OEM ROPS may be used in *Motorkhana Competition*. In either case, the diagonal as per diagram J-5 or J-6 of Schedule J is recommended, but optional.