



BARBADOS AUTO RACING LEAGUE INC.

2007 - 2009

TECHNICAL & CHAMPIONSHIP REGULATIONS



1.0 **GENERAL REGULATIONS**

1.1 Classifications are to be taken in the spirit in which they are intended.

1.2 Racing will be classified as **time bracket racing** *except for races making up the Handicap Championship; however any competitor breaking his time bracket during the handicap will be disqualified.* As this has always been the most fun and competitive racing. However, due to loop holes associated with this type of racing, and to make for easy scrutineering, the following will aid in determining vehicle classification as entered per event. *If these Regulations do not specifically state modifications may be made or specific variations to OEM specifications are permitted, then no additional modifications or variations are permitted. This will be a major factor in the settling of any disputes arising from questions of eligibility.* If a car is found not to comply with these regulations, it shall not be a defense to claim that no performance advantage was obtained.

1.3 Competitors must possess a valid National Competition License in order to take part in any event organised by BARL. This Licence can be issued by any club given the mandate to do so by the Barbados Motoring Federation (BMF) in accordance with its Competition Licence Scheme, upon payment of the prescribed fee. BARL will require that any new competitor be tested before a National Competition Licence is granted.

1.4 **COMPETITOR SAFETY EQUIPMENT**

1.5 All drivers must wear Racing Suits. It is mandatory to wear **'NOMEX'** Racing Suits in all Groups. All under clothing must be either **'Nomex'** cotton including socks.

1.6 Shoes must be laced and closed.

1.7 Helmets must be Snell 95 or BS approved, onwards, **And manufactured after 1995. Must be in good condition** and be worn at all times even during practice. Driver's name and all allergies must be clearly displayed along with blood group on the helmet.

1.8 All cars being used for competition must bear the driver's name on the rear quarter class.

1.9 **VEHICLE SAFETY EQUIPMENT**

(All vehicles being used for competition regardless of group must be equipped with the following safety equipment)

1.10 A Six Point Safety Roll Over Protection Cage with one rear diagonal bar and driver side impact protection bars (door bar) fabricated from seamless steel tubing of not less than 38mm (1½ inch) outside diameter and 2.5mm (0.100 inch) wall thickness, securely connected to the floor of the vehicle in at least six (6) different points preferably by welding is the minimum standard. At the point where the tubing meets the floor of the vehicle it must be welded to a steel plate, which is not less than 3 mm thick and not less than 120 cm² in area. The corners of the plate, if square, should be rounded (see fig 1/1) before they are welded in place on the floor. The plate must be welded to the vehicle. It is possible to fabricate a turret or platform onto the car for the roll cage legs to sit on but the turret must be welded to the car on all sides. In the case of bolted in cages, the fixing points at the floor must be held in place with at least three (3), 10 mm bolts. Side impact protection bars (Door bars) can be bolted in using 10 mm (grade 8) bolts, but welded in bars are much stronger. **Muffler Tube or Aluminum Alloy Tubing is not allowed.**

- 1.11 Adjustable three (3") (**See BMF minimum Safety requirements**) inch wide full harness seat belt consisting of a lap belt fixed at 2 points on the vehicle and two shoulder straps. These belts should always be in good condition with no rips or fraying. The bolts fixing the belts to the vehicle must be at least 11mm, (Grade 8) bolts. Fixing points on the floor must be strengthened from the underneath using a circular 3mm plate of at least 63mm in diameter. The angle scribed by the shoulder straps, with the driver strapped in his seat, from his shoulders to the rear most fixing points of the belts must not exceed 10 degrees in any direction (see fig 1/2). Belts must fit snugly around the driver.
- 1.12 A minimum of one 2-Kg ABC powder fire extinguisher, placed in such a position that the driver can reach the extinguisher when in the driver's seat.
- 1.13 An approved battery isolation switch must be installed inside the vehicle, accessible by the driver when strapped in. There must also be a remote pull cable which must be mounted on either the left or right side of the wiper panel on the outside of the car that will be able to operate the internal switch. When the switch is turned off the engine and fuel pumps must shut down. The location of the pull cable must be marked by a red lightening bolt on a blue triangle (see fig. 1/3).

2.0 **TECHNICAL REGULATIONS**

- 2.1 **(The following Regulations are for all Groups unless superseded by that Group's specific Regulations)**
- 2.2 Only saloon or sports type closed wheel cars are allowed.
- 2.3 All cars must be fitted with a towing eye front and rear. The inner diameter of the eye must not be less than 38mm, and must not be hidden or surrounded by the bodywork of the car. The material used to make the eye must be at least 6mm mild steel. The outer edge of the eye must not protrude more than 76mm past the bumper of the vehicle. The towing eye must be brightly painted making it highly visible.
- 2.4 All competing cars must have at least one (1) rear view mirror.
- 2.5 All Competition vehicles must have a working hand brake, or a dual braking system, preferably both.
- 2.6 All rear wheel and four wheel drive vehicles must have a drive shaft catch hoop of proper construction installed. The catch hoop must be securely mounted at least 6 inches forward of the centre of the drive shaft along its length, and must not interfere with the normal working of the drive shaft as the suspension moves through its travel either way. Split shafts must carry two hoops; one front and one rear but must not interfere with the normal working of the drive shaft as the suspension moves through its travel either way. Hoops should be mounted with at least 4 bolts of 1/4 inch shank, in shear.
- 2.7 The top half of the wheels including the tire of the vehicle must be covered by the fender or flared section of the fender when seen from above.
- 2.8 Hoses or tubes other than metal braided carrying engine coolant or oil inside the cockpit must be protected by a shield to protect the driver in the event that a rupture occurs. The use of steel braided hose is highly recommended.
- 2.9 Hoses or tubes carrying brake fluid or fuel can pass inside the cockpit as long as they are not joined or connected at any point except as they connect at the bulkhead.

- 2.10** All drivers' seats must be solid mounted. Driver's seats with runners are not allowed unless OEM.
- 2.11** Rims/wheels must fit the bolt pattern of the hub exactly. Slotted rims/wheels will only be allowed if machined and fitted properly. It is preferred that no rim/wheel spacers be used. However due to the problems associated with the availability of wheels for certain cars, only spacers of the approved quality, properly fitted, will be allowed. Permission for the use of the above must be sought from the Chief Technical Officer whose word is final.
- 2.12** Tow positions must be clearly marked by a brightly contrasting arrow pointing from above to their locations.
- 2.13** All cars *must* have a working brake light mounted not lower than the bottom of the rear windscreen on an axis parallel to the ground. The light must be clearly visible from behind. It is possible to mount the light externally provided it is maintained at the correct height. The lens must be not less than three (3) inches² in area, must be red and lit by at least a 21 watt bulb. It is not possible to include another switch in the circuit controlling the light other than the primary brake light switch.
- 2.14** Body Shells must not be modified in any way. No Aerodynamic devices can be added to the vehicle unless originally supplied by the manufacturer for that vehicle.
- 2.15** No lightening of any sort is allowed. However, carpets, seats, door panels and roof liners. Also, plastic or flammable interior panels can be removed or replaced with non-flammable materials to facilitate the proper installation of the rollover cage and increase safety.
- 2.16** Neither front headlights nor rear lights may be removed from the car. However, from a safety point of view it is possible to fix a panel in place of the lights. The panel must not have any aerodynamic influence on the car over and above that of the original lens and follow the same basic shape as the original light.
- 2.17** Front grilles should not be removed. Grilles, if removed, must have the space filled with a panel which can be made of a composite material, wire mesh or any similar material.
- 2.18** Water radiators, coolers or oil coolers are free with regard to modification, but must be mounted within the confines of the bodywork of the vehicle. No external mounting of these coolers or radiators is allowed.
- 2.19** No tube type bumpers are allowed of any shape or size whether forming part of the original bumper or standing alone.
- 2.20** It is possible to remove the original bumpers.
- 2.21** It is possible to reinforce the rear bumper as long as it does not extend outside the plan of the car as seen from above.
- 2.22** All reinforcements must be able to be easily checked by the scrutineers.

- 2.23 **Glasses:** All glasses must remain original. It is not possible to remove the front or rear windscreen. In the case where it is not possible to wind up or have permanently fixed in place the driver's door glass, a net of proper quality must be securely affixed in the space normally allocated to the glass. **Plexiglas is not allowed in any Group for safety reasons.**
- 2.24 No Composite body panels will be allowed. However bolt on flares of a composite material are allowed as long as they are fixed to the metal panel.
- 2.25 No on-board timing or remote lap timing devices or data gathering equipment is allowed during qualifying or races. Radio contact between competitor and crew will be not be allowed.
- 2.26 **Fuel:** The use of alcohol fuels such as methanol or ethanol is not allowed from Group 1A to Group 3B.
- 2.27 The use of Nitrous Oxide (N₂O) and Nitro-methane is forbidden in all groups and classes.
- 2.28 **Glass** Where glass is to be replaced with "Lexan" or similar polycarbonate product such as "Palsun" or "Paltuff". The material must be able to be bent back upon itself without breaking or cracking, and should be close to being optically correct when installed within reason. The scrutineers reserve the right to ask for a sample of the material used for the purposes of checking its safety. All "Lexan" panels replacing the original front or rear windscreen glasses must be properly supported from the inside and suitably secured along their perimeters to eliminate the possibility of the "Lexan" panel being blown out of place or in any way becoming detached from the car during the competition.
- 2.29 **Method of Installation (Lexan Panels):** Supports, at least two per panel being installed, should be fabricated from a metallic or structurally efficient composite material to the exact curve of the original glass panel being replaced and must provide robust support to the "Lexan" panel. The support should preferably represent a "T" or "I" section, the top of the "T" or "I" sitting against the "Lexan". The supports should not impede the driver's vision.
- 2.30 **N.B.** Because whole "T" or "I" sections will not bend to the curve of the windscreen easily it is better to first form the shape of the curve from flat material and then weld the flats to the formed curve thereby forming the desired section. I.e. make the supports from separate pieces of material. The supports must be securely fixed by bolting or riveting to the car vertically from the roof seam to the bulkhead seam but must be independent of the "Lexan" panel.
- 2.31 **Rims:** Cars fitted with OEM rims larger than specified in the relevant group will be able to use those OEM rims.
- 2.32 **Alternators:** All cars must have a fully functional alternator unless expressly stated otherwise for the specific Group the car is entered.
- 2.33 **Brakes:** Brakes using "Carbon Fiber" components are not allowed in any group.
- 2.34 **Tires:** The number of tires used by all competitors will be restricted to 8 for local events and 10 for International events. Each competitor will nominate their tires at scrutineering, regardless whether new or used.

2.35 **Engines:** A maximum rebore of 1 mm over standard for maintenance purposes without penalty will be allowed.

2.36 The table below shows the minimum weights of the car in Group 3B and 3C with respect to the cubic capacity of the engine installed.

8 Valve				Multi –Valve	
CCs		Weight		Weight	
0	- 1400 cc	457 kgs	(1008 lbs)	520 kgs	1146 lbs
1401	- 1600 cc	580 kgs	(1279 lbs)	703 kgs	1550 lbs
1601	- 1800 cc	653 kgs	(1440 lbs)	791 kgs	1744 lbs
1801	- 2000 cc	725 kgs	(1598 lbs)	879 kgs	1938 lbs
2001	- 2200 cc	798 kgs	(1759 lbs)	892 kgs	1967 lbs
2201	- 2400 cc	842 kgs	(1856 lbs)	924 kgs	2037 lbs
2401	- 2600 cc	876 kgs	(1931 lbs.)	956 kgs	2107 lbs.
2601	- 2800 cc	908 kgs	(2001 lbs.)	988 kgs	2177 lbs.
2801	- 3000 cc	940 kgs	(2072 lbs.)	1020 kgs	2248 lbs.

- Over 3001 cc - add 32 kgs. For every 200 cc more or 80 kgs. For every 500 cc more
- Rotary Engines 12A (2063 cc) – 892 Kgs. (1967 lbs.)
- Rotary Engines 13B (2354 cc) – 924 Kgs. (2037 lbs.)
- Bike Engine cars must weigh 1.12lbs / cc (minimum wt 1146lbs)

3.0 **TECHNICAL REGULATIONS BY GROUP**

3.1 **GROUP 1A**

3.2 **Option 1**

3.2.1 **Engine capacity:** 0 - 1600cc
(Not turbocharged or super charged , maximum 3 valves per cylinder, but must be standard production type and not modified.)

3.3 **Option 2**

3.3.1 **Engine capacity:** 0 - 1400cc
Maximum 4 valves per cylinder not Sports, GTI or Turbo versions. **No modifications are allowed.**

3.3.2 **No modifications** will include: No extractor manifolds, no changes to inlet manifold, carburetor or fuel injection system, no changes to inlet or exhaust valve sizes, no porting or polishing of inlet or exhaust tracks in cylinder head or manifold.

3.4 Computerized engine management systems must remain standard as supplied with the engine. No mapping, management system changes. E.g. no chips, plug-ins, jumpers or additional device drivers allowed. This includes drivers for systems such as water injection or adjustable ignition/fuel curve kits.

3.5 Should a competitor wish to use a questionable engine type, they must consult the Executive Committee in writing giving all particulars of the unit at least 3 months before they intend to use the engine.

3.6 **Intake / Induction for engine:** Standard but fuel jets may be changed.

3.7 **Exhaust Manifold for engine:** Standard but free after the OEM manifold.

3.8 **Brakes:** Standard OEM, but material of pads and shoes free.

3.9 **Suspension and Steering:** Springs and shock absorbers are free, provided their number, type and attachment points are unchanged.

3.10 **Bodywork/Chassis:** All interior fixtures, seats, carpets, roof lining, gauges, radio and steering wheels are free. Controls must be those provided by the manufacturer and retain their original function but can be modified. i.e brake pedal flanges, hand brake extensions etc.

3.11 **Electrical Systems:** Free unless otherwise stated.

3.12 **Fuel System:** Fuel pumps, filters and lines may be substituted so long as they meet the safety requirements.

3.13 **Gearboxes** - Must be standard as supplied for the engine type fitted to the car. **No close ratio gearboxes allowed.**

3.14 **Rims:** 13 inch diameter x 6 inch wide or 14 inch diameter x 5.5 inch wide.

3.15 **Tires:** 13 inch diameter x 185 mm maximum

3.16 14 inch diameter x 175 mm maximum

3.17 **Tire Type:** Any tire readily available from local suppliers, and having a UTQG thread wear rating greater than **150**. Tires must be easily identifiable and the scrutineers will reject any tire that cannot be identified.

3.18 **Glasses:** Any glass included in the rear quarter panel may be replaced with Lexan.

4.0 **GROUP 1B**

4.1 **Option 1**

4.1.1 **Engine capacity:** 0 -1600cc

(Not turbocharged, maximum 3 valves per cylinder, Modification free, but must look like one production type)

4.1.2 Intake/Induction for engine: Maximum of two (2) throttle butterfly valves not exceeding 40 mm.

E.g. One 40 mm Webber carburetor or two 1½ inch SU carburetors. Jetting is free. Electronic fuel injection only allowed if it came as standard equipment for the type of engine used. No **Ram Air** intake induction system is allowed

4.2 **Option 2**

4.2.1 **Engine capacity:** 0 -1600cc

(Maximum 4 valves per cylinder. **No modifications are allowed.**) Sports, GTI and Turbo versions not allowed.

4.2.2 **No modifications** will include: No extractor manifolds, no changes to inlet manifold, carburetor or fuel injection system, no changes to inlet or exhaust valve sizes, no porting or polishing of inlet or exhaust tracks in cylinder head or manifold.

Computerized engine management systems must remain standard as supplied with the engine. No mapping, management system changes. E.g. no chips, plug-ins, jumpers or additional device drivers allowed. This includes drivers for systems such as water injection or adjustable ignition/fuel curve kits. Should a competitor wish to use a questionable engine type, they must consult the Executive Committee in writing giving all particulars of the unit at least 3 months before they intend to use the engine.

4.3 **Exhaust System:** Free unless otherwise stipulated.

4.4 **Brakes:** Standard OEM, but material of pads and shoes free.

4.5 **Suspension and Steering:** Springs and shock absorbers are free, provided their number, type and attachment points are unchanged. Silent block bushings maybe replaced by a “Uniball” joint.

4.6 **Bodywork/Chassis:** All interior fixtures, seats, carpets, roof lining, gauges, radio and steering wheels are free. Controls must be those provided by the manufacturer and retain their original function but can be modified, i.e. brake pedal flanges, hand brake extensions etc.

4.7 **Electrical Systems:** Free unless otherwise stated.

4.8 **Fuel System:** Fuel pumps, filters and lines may be substituted so long as they meet the safety requirements.

4.9 **Gearboxes:** Standard gearbox as fitted to engine being used. Final drive ratios are free.

4.10 **Rims:** 13 inch Diameter x 7 inch wide or 14 inch Diameter x 6 inch wide.

4.11 **Tires:** 185 mm maximum

4.12 **Tire Type:** Any tire readily available from local suppliers, and having a UTQG tread wear rating greater than **150**. Tires must be easily identifiable and the scrutineers will reject any tire that cannot be identified.

4.13 **Glasses:** Any glass included in the rear quarter panel may be replaced with Lexan.

5.0 **GROUP 2A**

5.1 **Option 1**

5.1.1 **Engine capacity:** 0-1600cc
Naturally aspirated, maximum 3 valves per cylinder. Modification free but must look like one production type. *(Turbocharged or supercharged engines 0-1066cc allowed. Total engine capacity will be calculated using the 1.5 multiplication factor.*

5.1.2 Intake/Induction for engine: Maximum of one (1) throttle butterfly valve per cylinder not exceeding 40mm.

1.1.1. E.g. Two 40mm Weber carburetors. Siamese ported engines will be able to use up to one 45 mm. choke per 2 cylinders Throttle bodies on fuel injected engines must not exceed 36 mm in diameter.

5.1.3 **No Ram Air** intake induction system is allowed

5.2 **Option 2**

5.2.1 **Engine capacity:**

- 0-1600cc
- Maximum 4 valves per cylinder *standard production engines.* **No modifications are allowed to sports and GTI engines.** **No Turbo Versions allowed.**

5.2.2 **No modifications** will include: No extractor manifolds, no changes to inlet manifold, carburetor or fuel injection system, no changes to inlet or exhaust valve sizes, no porting or polishing of inlet or exhaust tracks in cylinder head or manifold. Computerized engine management systems must remain standard as supplied with the engine. No mapping, management system changes. E.g. no chips, plugins / jumpers or additional device drivers allowed. This includes drivers for systems such as water injection or adjustable ignition/fuel curve kits. Should a competitor wish to use a questionable engine type, they must consult the Executive Committee in writing giving all particulars of the unit at least 3 months before they intend to use the engine.

5.3 **Exhaust System:** Free unless otherwise stipulated.

5.4 **Brakes :** Standard OEM, but material of pads and shoes free.

5.5 **Suspension and Steering:** Springs and shock absorbers are free, provided their number, type and attachment points are unchanged. Silent block bushings maybe replaced by a “Uniball” joint.

5.6 **Bodywork/Chassis:** All interior fixtures, seats, carpets, roof lining, gauges, radio and steering wheels are free. Controls must be those provided by the manufacturer and retain their original function but can be modified, i.e. brake pedal flanges, hand brake extensions etc.

5.7 **Electrical Systems:** Free unless otherwise stated.

- 5.8 **Fuel System:** Fuel pumps, filters and lines may be substituted so long as they meet the safety requirements.
- 5.9 **Gearboxes:** Close ratio gearboxes above four (4) forward gears are not allowed, otherwise free. Final drive ratios and differential casings free.
- 5.10 **Rims:** *Up to* 14 inch Diameter x 7 inch wide maximum.
- 5.11 **Tires:** 205 mm maximum width.
- 5.12 **Tires Type:** Any tire readily available from local suppliers, and having a UTQG tread wear rating greater than **150**. Tires must be easily identifiable and the scrutineers will reject any tire that cannot be identified.
- 5.13 **Glasses:** Any glass included in the rear quarter panel may be replaced with Lexan.
- 6.1. **GROUP 2B**
- 6.2. **Engine capacity:** 0 – 1600 cc. Four valves or more per cylinder engines allowed.
0 - 2000 cc. Two or Three valves per cylinder engines allowed.
- 6.2.1 ***Turbocharged or Supercharged Engines, 0 -1333 cc allowed. Total engine capacity will be calculated using the 1.5 multiplication factor; it will also determine the amount of valves per cylinder.***
- 6.3. Intake / Induction for engine: Up to a maximum of one throttle butterfly valve per cylinder not exceeding 45 mm in diameter. Throttle bodies on fuel injected engines must not exceed 40 mm in diameter.
- 6.4. No **Ram Air** Intake Induction Systems are allowed.
- 6.5. **Option of 6.1:** *0-2500 cc.* 2500 cars have been produced for sale to the public with this greater engine capacity. In this case the *engine / gearbox / final drive ratio* shall not be modified in any way whatsoever, and must look like the production type.
- 6.6. **Exhaust System:** Free unless otherwise stipulated.
- 6.7. **Brakes:** Free.
- 6.8. **Suspension and Steering:** Springs and shock absorbers are free, provided their number, type and attachment points are unchanged. Silent block bushings maybe replaced by a “Uniball” joint.
- 6.9. **Bodywork/Chassis:** All interior fixtures, seats, carpets, roof lining, gauges, radio and steering wheels are free. Controls must be those provided by the manufacturer and retain their original function but can be modified, i.e. brake pedal flanges, hand brake extensions etc. Lightening of original bonnet doors and tail gate/trunk is allowed.
- 6.10. **Electrical Systems:** Free unless otherwise stated.
- 6.11. **Fuel System:** Fuel pumps, filters and lines may be substituted so long as they meet the safety requirements.

- 6.12. **Gearboxes:** Close ratio gearboxes above five (5) forward gears are not allowed, otherwise free. Final drive ratios and differential casings are free.
- 6.13. **Rims:** Maximum 15 inch Diameter x 8 inch wide
- 6.14. **Tires:** 13" and 14" X 225 mm and 15" X 215 mm wide tires.
- 6.15. **Tire Type:** Any tire readily available from local suppliers, and having a UTQG tread wear rating greater than **150**. Tires must be easily identifiable and the scrutineers will reject any tire that cannot be identified.
- 6.16. **Glasses:** Any glass included in the rear quarter panel may be replaced with Lexan.

7.0 **GROUP 2C**

7.1 **Engine capacity:**

- 0 – 2000 cc. Four valves or more per cylinder engines allowed.
- 0 – 2500 cc. Two or three valve per cylinder engines allowed.

7.1.1 Turbocharged or Supercharged Engines, 0 -1333 cc allowed. Total engine capacity will be calculated using the 1.5 multiplication factor; it will also determine the amount of valves per cylinder.

- 7.2 Intake / Induction for engine: Up to a maximum of one throttle butterfly valve per cylinder not exceeding 48 mm in diameter. Throttle bodies on fuel injected engines must not exceed 45 mm in diameter. No Ram Air Intake Induction Systems are allowed.
- 7.3 **Option of 7.1:** 0 – 3000 cc. 2500 cars must have been produced for sale to the public with this greater engine capacity. In this case the engine, gearbox and final drive ratio shall not be modified in any way whatsoever, and must look like the production type.
- 7.4 **Exhaust System:** Free unless otherwise stipulated.
- 7.5 **Brakes:** Free.
- 7.6 **Suspension and Steering:** Springs and shock absorbers are free, provided their number, type and attachment points are unchanged. Silent block bushings maybe replaced by a "Uniball" joint.
- 7.7 **Bodywork/Chassis:** All interior fixtures, seats, carpets, roof lining, gauges, radio and steering wheels are free. Controls must be those provided by the manufacturer and retain their original function but can be modified, i.e. brake pedal flanges, hand brake extensions etc. Lightening of original bonnet doors and tail gate/trunk is allowed.
- 7.8 **Electrical Systems:** Free unless otherwise stated.
- 7.9 **Fuel System:** Fuel pumps, filters and lines may be substituted so long as they meet the safety requirements.
- 7.10 **Water pump:** Electrical water pumps are allowed.
- 7.11 **Gearboxes:** Close ratio gearboxes above five (5) forward gears are not allowed, otherwise free.

Final drive ratios and differential casing are free.

7.12 Rims: Maximum 15 inch Diameter x 8 inch wide.

7.13 Tires: 225 mm maximum.

7.14 Tire Type: Any tire readily available from local suppliers, and having a UTQG tread wear rating greater than 150. Tires must be easily identifiable and the scrutineers will reject any tire that cannot be identified.

7.15 Glasses: Any glass included in the rear quarter panel may be replaced with Lexan.

8.0 GROUP 3A

8.1. Engine capacity:

- 0 – 1333 cc Unlimited valves per cylinder turbocharged or supercharged Engines, modification free.
- 0 – 2000 cc Maximum 4 valves per cylinder, naturally aspirated, modification free.
- 0 - 2500 cc. Two or Three valves per cylinder, naturally aspirated, modification free.

8.1.2 Mazda 12A Rotary Engine is deemed to have a piston engine equivalent capacity of 2063 cc, and is eligible to compete in Group 3A.

8.2. Intake / Induction for engine: Up to a maximum of one throttle butterfly valve per cylinder not exceeding 48 mm in diameter. Throttle bodies on fuel injected engines must not exceed 45 mm in diameter.

8.3. Option of 8.1: 0 -3000 cc. 2500 cars must have been produced for sale to the public with this greater engine capacity. In this case the engine, gearbox and final drive ratio shall not be modified in any way whatsoever, and must look like the production type.

8.4. Exhaust System: Free unless otherwise stipulated.

8.5. Brakes : Free.

8.6. Suspension and Steering: Springs and shock absorbers are free, provided their number, type and attachment points are unchanged. Silent block bushings maybe replaced by a “Uniball” joint.

8.7. Bodywork/Chassis: All interior fixtures, seats, carpets, roof lining, gauges, radio and steering wheels are free. Controls must be those provided by the manufacturer and retain their original function but can be modified, i.e. brake pedal flanges, hand brake extensions etc. Fiberglass panels and lightening are allowed providing it does not make the car structurally unsafe or unsound in the opinion of the scrutineers. Fender flares must be no wider than six inches each side of the original width of the car being used.

8.8. Electrical Systems: Free unless otherwise stated.

8.9. Fuel System: Fuel pumps, filters and lines may be substituted so long as they meet the safety requirements.

- 8.10. **Water pumps:** Electrical water pumps are allowed.
- 8.11. **Gearboxes:** Free, however no electronic gearboxes are allowed.
- 8.12. **Rims:** Maximum 15 inch Diameter X 8 inch wide.
- 8.13. **Tires:** Maximum 15 inch Diameter X 215 mm or 14 inch Diameter X 225 mm or 13 inch X 235 mm
- 8.14. **Tire Types:** Tires must be DOT road legal tires i.e. Hoosier: Street TD and Autocross, Kumho V700, Toyo RA1 or R 888 & Yokohama 008R etc. Tires must be readily identifiable and any tire that cannot be identified will be rejected by the scrutineers. It may be possible to use other tires other than those mentioned above but the specifications must be brought to the Committee & the Drivers of the particular group not less than 30 days prior to the date of intended use. The Committee reserves the right to accept or reject any tire other than the above.
- 8.15. **Rear Aerodynamic Device:** One single device may be present, either from a kit or from the original car. If not original, this device must respect the dimensions below:
- It must be rigid and offer no possibility for the penetration of air.
 - It must be made in one single piece (a single profile and no adjustment flap).
 - The wing must be completely contained within the front projection of the car without its door rearview mirrors.
 - The wing must fit in a box with internal dimensions of 45 X 7 X 7 inches and must not be adjustable.
 - Attachment onto the glass is prohibited.
 - The side plates may extend beyond 45 inches when seen from the front, but must not generate any aerodynamic force.
 - The wing should be checked with the car horizontal.
- 8.16. **Glasses:** Any glass may be replaced with Lexan except for the front windscreen.

9.0 **GROUP 3B**

9.1 **Engine capacity:**

- 0 - 1600cc Turbocharged - 4 or more valves per cylinder, modification free.
- 0 – 2400cc 4 or more valves per cylinder naturally aspirated, modification free.
- 0 - 3000cc 2 & 3 valve per cylinder naturally aspirated, modification free.

9.2. Mazda 12A Rotary Engine is deemed to have a piston engine equivalent capacity of 2063 cc and 13B Rotary Engine is deemed to have a piston engine equivalent capacity of 2354 cc, and are eligible to compete in Group 3B

9.3. The introduction of water, nitrous oxides or any other agent into the air intake system is prohibited. Only air may be mixed with the fuel as an oxidant.

9.4. **Exhaust System:** Free unless otherwise stipulated.

9.5. **Brakes :** Free.

9.6. **Suspension and Steering:** Free.

- 9.7. **Electrical Systems:** Free unless otherwise stated.
- 9.8. **Fuel System:** Fuel pumps, filters and lines may be substituted so long as they meet the safety requirements.
- 9.9. **Water pumps:** Electrical water pumps are allowed.
- 9.10. **Gearboxes:** Free, however no electronic gearboxes are allowed.
- 9.11. **Driver Aids:** Launch & Traction control devices are allowed.
- 9.12. **Rims:** Maximum 16 inch diameter X 10 inch wide.
- 9.13. **Tires:** Free.
- 9.14. Unlimited lightening is allowed providing it does not make the car structurally unsafe or unsound in the opinion of the scrutineers
- 9.15. Any glass may be replaced with "Lexan" or similar polycarbonate product such as "Palsun" or "Paltuff".
- 9.16. The "Lexan panel" replacing the front windscreen glass must be at least one quarter (1/4") of an inch thick and fixed to the car e.g. by bolting, riveting or suitable fixing tabs-in such a way that it cannot come loose during competition. All other "Lexan" replacements must be at least sixteenth (1/16") of an inch thick.
- 9.17. The scrutineers reserve the right to disallow methods used for fixing "Lexan" panels and may refer the competitor to a person or persons in whom they have confidence the installation of the material.
- 9.18. Any Competition vehicle which loses a "Lexan" panel or has a "Lexan" panel come loose during a race or qualifying may be disqualified, and will have to be re-scrutineered before it is allowed to compete again.
- 9.19. Holes, vents or other openings are not allowed in the front windscreen panel and the panel must fill/cover the space left by the original glass.
- 9.20. All body work flares and spoilers and wings must be within six inches (6") of the plan and side views of the original car being used. (i.e. six inches in front of the car, six inches overhanging the rear of the car, six inches wider on both sides of the car and six inches higher than the highest part of the roof.)
- 9.21. Minimum Weights: All cars in this group must weigh the minimum weight for the engine capacity installed. **(See weight chart under General Regulations.)**

10.0 **GROUP 3C**

- 10.1. **Engine capacity: All engines used in this group must be derived from production based or homologated engines. The following will apply:**
- 0 – 4000c.c.s normally aspirated engines, modification free.
 - 0 – 2500c.c.s for forced induction engines i.e. (0 - 3750c.c.s. if using 1.5:1 factor.) Modification free

- Mazda 12A Rotary Engine is deemed to have a piston engine equivalent capacity of 2063 cc.
 - Mazda 13B Rotary Engine is deemed to have a piston engine equivalent capacity of 2354 cc.
- 10.2. The use of oxidants other than air, such as methanol and ethanol are allowed. Water injection is allowed.
 - 10.3. **Exhaust System:** Free unless otherwise stipulated.
 - 10.4. **Electrical Systems:** Free unless otherwise stated.
 - 10.5. **Fuel System:** Fuel pumps, filters and lines may be substituted so long as they meet the safety requirements.
 - 10.6. **Water pumps:** Electrical water pumps are allowed.
 - 10.7. **Gearboxes and Final drives:** Free but must have a functional reverse gear. However no electronic gearboxes are allowed.
 - 10.8. Launch & Traction control devices are allowed .
 - 10.9. **Rims:** Maximum 18 inch diameter X 12 in. wide.
 - 10.10. **Tires:** Free.
 - 10.11. Unlimited lightening is allowed providing it does not make the car structurally unsafe or unsound in the opinion of the scrutineers.
 - 10.12. Any glass may be replaced with "Lexan" or similar polycarbonate product such as "Palsun" or "Paltuff".
 - 10.13. The "Lexan panel" replacing the front windscreen glass must be at least one quarter (1/4") of an inch thick and fixed to the car e.g. by bolting, riveting or suitable fixing tabs-in such a way that it cannot come loose during competition. All other "Lexan" replacements least sixteenth (1/16") of an inch thick.
 - 10.14. The scrutineers reserve the right to disallow methods used for fixing "Lexan" panels and may refer the competitor to a person or persons in whom they have confidence the installation of the material.
 - 10.15. Any Competition vehicle which loses a "Lexan" panel or has a "Lexan" panel come loose during a race or qualifying may be disqualified, and will have to be re-scrutineered before it is allowed to compete again.
 - 10.16. Holes, vents or other openings are not allowed in the front windscreen panel and the panel must fill/cover the space left by the original glass.
 - 10.17. All body work flares, spoilers and wings must be within six inches (6") of the plan and side views of the original car being used. (i.e. six inches in front of the car, six inches overhanging the rear of the car, six inches wider on both sides of the car and six inches higher than the highest part of the roof.)
 - 10.18. **Minimum Weights:** All cars in this group must weigh the minimum weight for the engine capacity installed. **(See weight chart under *General Regulations.*)**
 - 10.19. Cars based on tubular framed chassis must carry an additional 68 Kgs. (150lbs)
 - 10.20. **Brakes and Clutch:** Are free.

- 10.21. **Suspension and steering:** Are free except “Active systems”. However no part of the car or exhaust system can touch the ground if both tires on one side are deflated.
- 10.22. **Fuel:** The fuel used must be commercially available automotive or aviation type gasoline or an approved racing blend, ethanol or methanol locally available.

11.0 TECHNICAL REGULATIONS FOR GROUP 4 FOUR WHEEL DRIVE CARS

- 11.1. **GROUP 4:** Four wheel drive cars only. Space frame cars will carry an extra 150 lbs of ballast.
- 11.2. **Engine Capacity:**
- 0-4000 c.c.s for normally aspirated engines.
 - 0-2500 c.c.s for forced induction engines.
- 11.3. For the purposes of calculation the minimum vehicle weights for forced.
- 11.4. For induction engines, the multiplication factor is 1.5.
- 11.5. Modification to the engine is free; however the block must be homologated from a recognized car manufacturer.
- 11.6. **Engine swaps are permitted.**
- 11.7. Twin engine configurations are not permitted.
- 11.8. **Transmission/Gearbox:**
- Transmissions and central differential are free.
 - The gear selection is free.
 - The final drive assembly, differentials, propshafts and driveshafts are free.
- 11.9. **Driver Aids:** Launch and traction controlled devices are allowed.
- 11.10. **Rims:** Maximum size - 19 inch diameter x 10 inch wide.
- 11.11. **Tyres:** Size and compound are free. However only 8 tyres are allowed for local events and 10 tyres for international.
- 11.12. **Suspension and Steering:** Cars must be fitted with a sprung suspension. The use of active suspension is prohibited. Quick release steering wheels are allowed. However they must be clearly identified as such by a sticker on the drivers door.
- 11.13. **Bodywork:** Unlimited lightening is allowed providing it does not make the car structurally unsafe or unsound, in the opinion of the Scrutineers. Aerodynamic devices are free, however all body work flares and spoilers must be within six (6”) inches of the plan and side views of the original car being used. (i.e. Six inches in front of the car, six inches overhanging the rear of the car, six inches wider on each side of the car and six inches higher than the highest part of the roof.)

11.14. Glass: Any glass may be replaced with Lexan or similar polycarbonate. The Lexan panel replacing the front windscreen must be at least ¼ inch thick. See General Prescriptions for fitment.

11.15. Brakes: The operating method and design of the system is free, other than:

- There must be a double circuit operated by the same pedal, and complying with the following:
- The pedal shall normally control all wheels.
- In case of a leakage at any point in the brake system pipes, or any kind of failure in the brake transmission system, the pedal shall still control at least two wheels.
- The brake disc must be made from ferrous material; i.e. no carbon discs allowed.

11.16. Fuel:

- The use of Nitrous Oxide (N₂O) is prohibited.
- Nitro Methane is prohibited.
- Only air may be mixed with fuel.
- Gasoline and racing gasoline are allowed.
- Methanol, Ethanol and Gasohol are allowed.
- Natural gas and Propane are allowed.

11.17. Weight Factor: The minimum vehicle weight must be .545kg per cc. That is:

- 1600 cc's = 872kgs
- 2000 cc's = 1090kgs
- 2300 cc's = 1254kgs

CHAMPIONSHIP REGULATIONS

12.0 BRACKET TIMES FOR GROUPS & CLASSES

Group	Time Bracket
Group 1A (P1)	55.50 secs and over
Group 1B (M1)	53.50 secs. - 55.49 secs.
Group 2A (M2)	52.00 secs. - 53.99 secs.
Group 2B (M3)	50.00 secs. -51.99 secs.
Group 2C (M4)	49.00 secs. - 50.99 secs.
Group 3A (SM1)	47.50 secs. - 49.49 secs.
Group 3B (SM2)	45.50secs. - 47.49 secs.
Group 3C (SM3)	Below 45.49 secs.

- 12.1.** BARL will use either the direct wired or rechargeable AMB Tranx 260 transponder to record times during a qualifying session or race.
- 12.2.** The onus of insuring that a transponder is affixed to their vehicle in the correct manner and working during any qualifying session or race rests solely with the competitor.
- 12.3.** The signal strength of the transponder will be checked when the vehicle is being scrutineered. Competitors desirous of having their transponder checked after it is initially done by the Scrutineers must contact the Pit Manager at least half an hour before their qualifying session or race.

- 12.4. Competitors who enter a qualifying session or race either without a working transponder or not having any transponder affixed to their vehicle, will not be given any official lap times, finish position, points or prizes, and will have to start their next race at the back of the grid.
- 12.5. Times recorded during qualifying and races including the handicap can supersede grouping according to technical classification, and be used to place cars in different groups or classes in accordance with 12.8 and 12.9.
- 12.6. During a qualifying session the fastest time recorded within the Bracket Time for any group or class will be used to determine grid positions. Only times recorded within the Bracket Time for any group or class will be considered legal qualifying times.
- 12.7. The winning car in each group 3C and 4A race will be given a 40 lb weight ballast.

12.8. PENALTIES FOR BREAKING THE GROUP / CLASS TIME BRACKET

- 12.9. **By 0.001 - 0.250 secs:** Lose half the amount of any points scored for that race. Start next race at the back of the grid.
- 12.10. **Over 0.251 secs.:** Lose all of any points scored for that race. Promoted to a higher group or class in conjunction with their recorded lap time. Start next race in higher group or class at the back of the grid.
- 12.11. Competitors in breach of regulations **12.8** and **12.9** above will have the penalties described therein carried forward to the next race meet if, at that race meet, the infraction occurs during the final race for their respective group.
- 12.12. A written or printed warning will be issued by the Clerk of Course and given to the driver of the vehicle breaking the time bracket, advising him/her of their time/s and the action taken by the Clerk of Course in accordance with regulations **12.8** to **12.9**
- 12.13. Group, class or overall track lap records can be set during the running of any official qualifying session or race.

13.0 SCORING

13.1 Points will be allocated according to the following:

1st	15 points	6 th	7 points
2 nd	12 points	7 th	6 points
3 rd	10 points	8 th	5 points
4 th	9 points	9 th	4 points
5 th	8 points	10 th	3 points

13.2 Competitors can only score points from one Group towards the Overall Champion Driver of the year.

- 13.3** Competitors driving in more than one Group must declare in writing to the Committee at the start of their Championship Season, which Group they desire to have any points scored, used towards their tally for the Overall Points Award. A car cannot be entered in more than one Group in an event.
- 13.4** Points will be awarded to drivers in order of finishing their race. Places filled by drivers, who are not eligible, will be disregarded and the points, which would have been allocated, will be awarded to the next eligible driver.
- 13.5** All competitors will be awarded one (1) point for starting the race.
- 13.6** Non finishers who complete two thirds (2/3) of the laps in a race will be awarded two (2) points.
- 13.7** One (1) additional point will be awarded to the driver setting the fastest lap in each race within their Group's Time Bracket.
- 13.8** Four starters constitute a race.
- 13.9** In the case where only four (4) cars start a race, points will be awarded using the normal scoring table. (E.g. first 15 points, second 12 points...etc.), regardless of the number of finishers.
- 13.10** In Groups in which fewer than 4 entries are grid (merged Groups, entries will be treated as separate for the purpose of point allocation), when the race is called and run, points will be awarded accordingly:
- If only one car is in a Group or Class the driver gets 5 points.
 - If only two cars are in a Group or Class the drivers get 7 and 5 points for first and second respectively.
 - If only three cars are in a Group or Class the drivers get 11.25, 9 and 5 points for first , second and third respectively.
- 13.11** Champion Driver for the year will be awarded to the driver with the most points overall for the season. If two or more competitors finish the season with the same number of points, the highest place will be awarded to:
- (a). The holder of the greatest number of first places.
 - (b). If the number of first places is the same, the holder of the greatest number of points for fastest lap times within the Group's Time Bracket.
 - (c). If there is still no clear winner, the holder of the greatest number of second places.
 - (d). If the number of second places is the same, the holder of the greatest number of third places, and so on until a winner emerges.