



**1981 EDITION**  
**(Abridged for Formula Atlantic**  
**section only governing RMVR**  
**F-ATL class)**

**GENERAL**  
**COMPETITION**  
**RULES**

**4. FORMULA ATLANTIC**

**A. General**

1. A single seat, four open-wheeled racing car with firewall, floor, and safety equipment conforming to the GCR, Appendix A, 1.5.1.
2. Cars must be equipped with on-board self starter controlled by the driver in normal driving position.
3. The driver's seat must be capable of being entered without the removal or manipulation of any part or panel.
4. Cars shall be equipped with a dual braking system operated by a single control. In case of failure or leak at any point in the system effective braking power shall be maintained on at least two wheels.
5. Superchargers are not permitted.
6. Power may not be applied to more than two wheels.
7. Coachwork: (See Terminology 2.24)
  - a. No part of the coachwork and aerodynamic devices shall exceed in height a horizontal plane 90 cm (35.4") above the ground. The safety roll bar/roll cage and the engine air box are not included in this height restriction. Measurements are to be made in any condition; driver on board.
  - b. Behind the front wheels, the coachwork shall not exceed a maximum width of 110 cm (43.307 inches) with the exception of lateral fuel tanks. The overall maximum width behind the front wheels to the leading edge of the rear wheels shall not exceed 130 cm (51.18 inches). The maximum width of any aerodynamic device situated behind the front wheels, including the rear wing, shall not exceed 110 cm (43.307 inches).
  - c. The coachwork ahead of the front wheels may be

extended to an overall maximum width of 150 cm (59.055 inches) provided it does not extend beyond the outsides of the front tires.

- d. Any part of the coachwork ahead of the front wheels exceeding an overall width of 110 cm (43.307 inches) shall not extend above the height of the front wheel rims.
- e. Any specific part of the car which has an aerodynamic influence on the stability of the vehicle must be mounted on the entirely sprung part of the car and shall be firmly fixed while the car is in motion. Aerodynamic devices, including wings and end plates, may not extend to the rear more than one meter (39.4 inches) from the centerline of the rear wheel hubs.
- f. Neither the safety roll bar nor any of the units associated with the functioning of the engine or transmission shall have an aerodynamic effect by creating a vertical thrust.
- g. The leading edge of an aerofoil fixed to the front of the car shall not be sharp. Minimum radius—1.5 cm (0.6 inches).
- h. The fuel filler cap must be recessed within the coachwork line.
- i. Cars registered with SCCA January 1, 1976 and after must be fitted with deformable structures per FIA regulations for Formula II as follows: Deformable Structure: The entire fuel tank area of the car licked by the airstream must incorporate a crushable structure conforming to the following specifications (except for two-seater sports car previously registered with the SCCA and/or conforming to their own specific regulations). The term "licked by the airstream" is considered to define the complete external area of the body/monocoque construction irrespective of such added items as water radiators, inlet ducts, windscreens, etc.
  - 1. The crushable structure must be a sandwich con-

struction based on a fire-resistant core or minimum crushing strength of 25 lbs/sq. in. Water pipes are permitted to pass through this core. The sandwich construction must include two sheets of 1.5mm (.060") thickness, one of which shall be aluminum sheet having a tensile strength of 14 tons/sq. in. and a minimum elongation of five (5) percent.

2. The use of a magnesium sheet will be authorized only if its thickness exceeds 3mm (.120").
3. The minimum thickness of the sandwich construction shall be 10mm (.3937"). The fore and aft fuel tank area, however, shall provide for a crushable structure of at least 100mm (3.937") thickness at such crushable structure's thickest point. The position of this widest point to be at the manufacturer's discretion over a length of at least 35cm (13.78") after which it may be gradually reduced to 10mm (.3937").
- j. The minimum wheel diameter is 13 inches.
8. Exhaust outlets must be  $\pm 15^\circ$  horizontal for the last four inches, positioned not more than 24 inches above the ground and must not extend more than six inches beyond the overall length of the car. In no case can the exhaust terminate more than 45.4" behind the centerline of the rear axle.

#### **B. Engines**

1. Displacement — over 1100 cc and below or equal to 1600 cc. Cars with rotary piston engines covered by the NSU-Wankel patents will be admitted on the basis of a piston displacement equivalence. This equivalence is twice the volume determined by the difference between the maximum and minimum capacity of the working chamber.
2. Engines shall be derived from automobiles recognized by FIA in Appendix J, Group 1 (series production touring), Group 2 (touring), or Group 3 (grand touring) approved by the SCCA, and shall conform to defini-

tions and specifications shown on the FIA Recognition Form of the homologated car, except as permitted below.

The SCCA shall publish a list of approved engines at the beginning of the year. The following engines are approved: Lotus Ford 1600 Twin-Cam, Alfa Romeo 1600 Twin-Cam (incl. GTA), Porsche Pushrod 1582, Datsun 1600 SOHC, BMW 1600 SOHC, Ford 1500 Pushrod, Ford 1600 Pushrod, Fiat 124 DOHC 1438, Renault Gordini 1600, Ford Cortina 1600 SOHC, Toyota 1600 Pushrod, Fiat 1592 DOHC, Toyota 1588 DOHC, Audi 80, Ford BDA 1600 (4-valve), VW Rabbit/Scirocco 1600.

3. The following modifications are permitted.
  - a. The use of any carburetor(s), fuel injection or intake manifold(s), except BDA must use carburetors.
  - b. The use of any exhaust manifold(s).
  - c. The use of any oil sump.
  - d. The use of any oil pump(s).
  - e. The use of a dry sump lubrication system.
  - f. The use of any crankshaft of the stroke specified in the homologation forms for the engine.
  - g. Main bearing caps may be reinforced or substituted.
  - h. The make and location of the ignition coil and condenser may be changed.
  - i. Any distributor and/or transistor ignition may be used provided its installation does not require any modification of the engine.
  - j. Any make or type of spark plug may be used.
  - k. The use of any starter is permitted provided it can be fitted without any modification to the engine.
  - l. Substitution of the clutch and flywheel is allowed provided there is no increase in clutch diameter. The use of dowel pins is permitted.
  - m. Any pistons and piston pins may be used.
  - n. Any camshaft(s) may be used.
  - o. Cam followers may be altered or substituted.
  - p. It is permitted to lighten, balance or modify in shape

by tooling, the standard or optional components of the engine, provided it is always possible to identify them positively as such.

It is not permitted to add any material to these components unless specifically authorized.

- q. Engines may be rebored a maximum of 1.2 mm (0.047 inches) over the standard size provided the resulting increase in total displacement does not exceed 1600 cc.
- r. The use of any alternate engine components considered replacement parts such as seals, bearings, valve guides, nuts, bolts, studs, washers, and gaskets are allowed provided they are of the same type and dimension. Bushings may be added where none are fitted as standard provided that they are concentric and that the centerline of the bushed part is not changed. Water and oil passages may be restricted or plugged.

The substitution of valve springs, valve spring retainers and keepers is permitted. Any pushrods may be used.

- s. Pulleys, except camshaft drive pulleys, may be altered or replaced with others of unrestricted origin. The use of any crankshaft vibration dampener is permitted.
- t. The compression ratio may be increased by machining, using any head gasket(s) or eliminating of head gasket(s).
- u. The installation of any engine vent or breather is permitted.
- v. Generator or alternator is free, and optional.
- w. The use of any rocker arms or rocker arm supports.
- x. Use of any connecting rod of the same basic material.
- y. Valves are free in both size and material, provided the valve centerline is not altered, except BDA must use standard size valves (1.01-inch exhaust, 1.22-inch intake).

- z. Exhaust emission control air pumps and associated lines and nozzles cannot be modified in any way except they may be completely removed. When these nozzles are removed from a cylinder head, the holes must be completely plugged.
- aa. The use of any fuel pump(s) is permitted.
- bb. Valve or cam covers may be substituted, provided the replacement cover affords no additional function than that of the original stock cover.
- cc. Any external surface of the engine may be plated, painted or anodized.
- dd. Engines produced with a cam carrier as a separate and distinct piece from the cylinder head or engine block may replace that cam carrier with a cam carrier of other manufacturer, provided the replacement cam carrier affords no additional function other than the original cam carrier and provided the type and number of camshaft bearings remains the same.
- ee. The replacement of any jack shaft or idler shaft with another of the same basic material as the standard shaft is permitted, provided it performs no additional function over the original shaft.

**C. Transmission**

No more than five forward speeds.

**D. Minimum Weight**

Minimum weight as qualified or raced; without driver:  
930 lbs. (BDA engine: 1000 lbs.)