H. FORMULA 1000 PREPARATION RULES

Formula 1000 is a restricted class. Therefore, all allowable modifications, changes, or additions are as stated herein. There are no exceptions. IF IN DOUBT, DON'T. Homologation is required for all cars.

H.1. Definition

A formula for purpose built, open-wheel, open cockpit racing cars. F1000 allows converted Formula Continental, Formula 2000, Formula F, and purpose-built motorcycle-powered tube frame chassis. Re-homologation as an F1000 is required for all converted cars.

H.2. Chassis

A. The chassis shall be of tubular steel construction only. Composite construction (defined as carbon fiber, Kevlar, honeycomb or fiberglass) in a structural application is prohibited, except as specifically allowed in these rules. Stress bearing panels are not permitted except as specifically allowed in these rules. Stress bearing panels are defined as sheet metal affixed to the frame by welding, bonding, rivets, bolts, or screws which have centers closer than 150mm.

B. The soles of the driver's feet shall not extend beyond the front edge of the wheel rims (in normal position; i.e., pedals not depressed) and shall remain behind the front bulkhead. The lower mainframe tubes shall be a minimum of 25cm apart (inside dimension) from the front bulkhead to the rear roll hoop.

C. The area between the upper and lower mainframe tubes from the

front roll hoop bulkhead to the rear roll hoop bulkhead shall incorporate one of the following:

1. Panel(s), minimum of either .060 inch heat-treated aluminum (6061-T6 or equivalent) or eighteen (18) gauge steel, attached outside of the chassis tubes.

2. Reinforced body - at a minimum, consisting of a double layer, five (5) oz., bi-directional, laminated Kevlar material incorporated into the body which shall be securely fastened to the frame.

For either method, fastener centers shall not be closer than 150mm (no stress-bearing panels). The material used for the chassis braces in this area shall be at least equivalent to the roll hoop brace material.

D. A stress-bearing floor pan/undertray is permitted between the front bulkhead and the rear axles. Composite or stabilized materials shall not be used for stress-bearing panels. The mountings for brake and clutch pedals and cylinders (front bulkhead), instruments, (front roll hoop bulkhead), and rear roll hoop bulkhead (behind the driver) may be stress bearing panels, also. The firewall portion of the rear roll hoop bulkhead (panel) shall extend the full width of the cockpit. Forward facing air ducts may be installed to deliver air directly to the engine area. Air duct openings may be located within the cockpit provided the firewall is extended to prevent flame and debris from reaching the driver. (Any shape may be used to form the firewall extension.) All firewall inlets shall prohibit passage of flame and debris.

E. Brackets for mounting components, such as the engine, transmission, suspension pickups, instruments, clutch and brake components, and body panels may be ferrous, aluminum alloy, or magnesium alloy, of any shape, and fastened to the frame in any manner.

F. No engine oil or water tubes are permitted within the cockpit.

G. It is not permitted to construct any suspension member in the form of an asymmetrical airfoil or to incorporate a spoiler in the construction of any suspension member. Symmetrical streamlining of suspension members is permitted.

H. Front and rear impact attenuation structures are strongly recommended. Impact attenuation structures shall be securely attached to the entirely sprung part of the car. Attachment of any front impact attenuation structure shall not extend more than 50mm to the rear of the front bulkhead. Impact attenuation structures may be fabricated from metallic and/or composite materials.

H.3. Bodywork and Airfoils

A. See Table 5. (Airfoils are a requirement for this class.) Forward-facing roll bar/roll cage bracing and required padding will not be considered in the cockpit opening dimensions shown in the table.

B. The driver's seat shall be capable of being entered without the manipulation or removal of any part or panel, except the steering wheel and/or driver's head surround structure. The steering wheel and head surround must be removable by the driver without the use of any tools.

C. Carbon fiber is prohibited in any external panels or any panels licked by the airstream (e.g., radiator ducting or engine air inlet), with the exception of impact attenuation structures. Carbon fiber

may be used in internal panels and components (e.g., instrument panel, radio boxes) unless otherwise restricted.

D. The entrant shall designate a flat rectangular reference area with minimum dimensions of 30cm by 30cm. This reference area is located on the lower surface of the car (the surface licked by the air stream) between the rear of the front tire and the front of the rear tire. The center of the reference area must be no more than 75mm from the longitudinal centerline of the vehicle.

Between the rear of the front tire and the front of the rear tire, no point on the lower surface of the car (the surface licked by the air stream) shall be more than 25mm above the plane determined by the reference area designated by the entrant and on a line perpendicular to that reference plane. No point on the lower surface of the car may be below the plane determined by the reference surface on a line perpendicular to that reference plane, except as specifically permitted herein. Compliance with these requirements shall be accomplished by placing a straight edge on the reference surface designated by the entrant and verifying that the requirements are met. A maximum of four (4) rub blocks of maximum dimension 75mm by 125mm are allowed anywhere on the lower surface of the chassis, and may extend below the reference plane.

E. A diffuser is permitted behind the front of the rear tires. The diffuser may be divided internally into multiple sections. The radius of transitions between the diffuser sides and adjacent horizontal structures may be up to 25mm. The width of the diffuser, as measured between its sides and above any radiused transitions, may not exceed 95cm in any lateral section. Strakes within the diffuser are allowed.

F. Movable aerodynamic devices, including aerodynamic skirts, are prohibited.

G. The maximum permitted width of the bodywork is 150cm. The width of the entire lower surface of the car between the rear of the front tires and the front of the rear tires shall not exceed the maximum width of the bodywork by more than 50mm and shall not exceed 150cm.

H. The safety roll bar/roll cage and engine air box are not included in the maximum height restriction (dimension C in Table 5).

H.4. Engines

A. Motorcycle-based 4-cycle up to 1000cc.

B. Engine internals and compression ratio must remain stock. The competitor must present, on demand, an original factory manual for the engine to allow compliance verification.

C. The stock ECU shall be used. The ECU fuel map may be changed. Devices that modify inputs to the ECU (e.g., Power Commander) may be used. Stand-alone after market ECUs are not permitted.

D. Turbochargers and superchargers are prohibited.

E. Carburetion and fuel injection are unrestricted.

F. The exhaust system and exhaust manifold are unrestricted, within SCCA safety regulations.

G. The lubrication system is unrestricted. A dry sump system is permitted; any oil pan and/or baffling is permitted.

H. Oil coolers are unrestricted.

I. The cooling system is unrestricted. Radiators, if housed in or incorporating a cowl air-scoop deflector, shall comply with bodywork rules.

J. The stock chain tensioner may be replaced with any mechanical chain tensioner.

H.5. Inlet Restrictors
The air inlet system is unrestricted at this time. However, the CRB may require the use of an inlet restrictor at any time by publishing the requirements in FasTrack.

H.6. Fuel system
The fuel system is unrestricted within the following limitations:

A. Fuel Cell Vents: Fuel tank air vents shall be located at least 25cm to the rear of the cockpit.

B. Fuel capacity: maximum 10.83 gallons.

H.7. Electrical System
The electrical system is unrestricted within the following limitations:

A. Self-starter: Cars shall be equipped with an on-board self-starter and an on-board power supply controlled by the driver while in a normal driving position.

H.8. Transmission/Final Drive

A. Rear wheel drive only is permitted.

B. The final drive ratio is unrestricted. Internal transmission gears shall remain stock.

C. Cars may use sequentially shifted motorcycle transmissions. Reverse gear is not required.

D. All gear changes must be initiated by the driver. Mechanical gear shifters, direct-acting electric solenoid shifters, air-shifters and similar devices are permitted. Devices that allow pre-selected gear changes are prohibited.

E. The clutch assembly is unrestricted.

F. Any open, limited-slip, or locking differential is permitted. Electronic control of the differential is prohibited. A solid axle or spool is permitted.

H.9. Suspension

A. All suspension components shall be of steel or ferrous material, except that hubs, hub adapters, hub carriers, bell cranks, pivot blocks, bearings and bushings, spring caps, abutment nuts, anti-roll bar links, shock absorber caps, and nuts may be aluminum alloy or magnesium alloy.

B. Springs: steel only.

C. Shock absorbers: Steel or aluminum alloy body.

D. Control arms and all associated items that attach directly to the chassis members shall be boxed in or captured to prevent intrusion into the cockpit.

E. Front A-arms shall be equipped with anti-intrusion bars to limit intrusion into the cockpit.

H.10. Brakes
Unrestricted, except:

A. All pistons in a given caliper must be of the same size. Calipers must be ferrous or aluminum alloy.

B. Brake rotors are restricted to ferrous material.

H.11. Steering
Unrestricted.

H.12. Wheels and Tires
Thirteen (13) inch diameter wheels with a maximum rim width of ten (10) inches are the only wheel sizes permitted. Material is unrestricted providing it is metal.

H.13. Minimum weight
Minimum weight is 1000 lbs.

F1000 Dimensions - Table 5	
Dimension (Refer to FC drawing)	Measurement (cm)
A. Maximum rear overhang from rear wheel axis	**80**
B. Maximum front overhang from front wheel axis	100
C. Maximum height measured from the ground	90
D. Exhaust height measured from the ground	20-60
E. Maximum height of any aerodynamic device	Rim height
H. Maximum width of entire car	185
I. Maximum rear aerofoil width (includes endplates)	95
J. Maximum width of body and lower surface of the car behind the front wheels	150
K. Maximum front wing width *(includes endplates)*	**135**
L. Minimum cockpit bodywork opening	**45**
M. Minimum cockpit parallel opening length	**30**
N. Minimum cockpit overall opening length	**60**
S. Maximum exhaust length from rear wheel axis	**80**
7. Minimum wheelbase	**200**
5 & 6. Minimum track	**120**
Maximum diffuser width	**95**

Note: Maximum height is measured with the driver aboard. The safety roll bar/roll cage and engine air box are not included in the maximum height restriction (dimension C).