

2013 Rules Changes

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FSAE Workshop 2012

2013 Rules Changes - Summary

For the benefit of the teams, below is a summary of the major rules changes for the 2013 Formula SAE competitions. It is not a complete list and is not binding. If there are any differences between this summary and the official rules, the Rules will prevail. Therefore, it is the responsibility of the competitors to read the published Rules thoroughly.

<u>Rule Number</u>	<u>System</u>	<u>Change</u>
All	Numbering system	Changed to: <ul style="list-style-type: none">- Part T – General Technical Requirements (Was in Part B)- Part IC – Internal Combustion Engine Vehicles (New, was in Part B)- Part EV – Technical Regulations - Electric Vehicles (New)- Part S – Static Event Regulations (Was Part C)
A2.1	FSAE Series	FSAE Japan is now officially part of the Series.
A4.2	Student Status	Clarification on teams with members from more than 1 university added.
A4.6	Drivers	Restrictions banning “professional drivers” NOT added.
A5.2	ESO	Requirement added for an Electrical Systems Officer for Electric Teams
A5.3	ESA	Added requirement for Electric Teams for an Electrical Systems Advisor, e.g. a PE or Chartered Engineer.

2013 Rules Changes – Summary (Cont'd)

<u>Rule Number</u>	<u>System</u>	<u>Change</u>
A7.2	Entries	Teams can enter one IC and one EV car in NA competitions.
A8.1	Required Documents	New Business Logic Case form. Other new forms required for Electric Vehicles.
A8.4	Submission Penalties	Penalties added for late submission of Electrical System Form (EV9.1), Electrical FMEA (EV9.2), and ESO & ESA Form (A5).
A8.6	Responsibilities	Transfer of Team Captain responsibilities emphasized.
T1.2.2	Modifications & Repairs	Recharging accumulators and batteries allowed.
T2.1.2	Vehicle Configuration	"Open Wheel" vehicle defined.
T3.3	Definitions	Node-to-Node triangulation definition added.
T3.4-3.6	Material Requirements	Protection for HV Accumulators and EV Tractive Systems called out.
T3.5.6	Hybrid Chassis	Requirements for hybrid tube-and-monocoque chassis called out.

2013 Rules Changes – Summary (Cont'd)

<u>Rule Number</u>	<u>System</u>	<u>Change</u>
T3.18.1	Frontal Impact Structure	Requirement that driver's legs must also be protected.
T3.10.4	Percy's Position	Minimum distance between "H" Point and pedals added.
T3.11.5	Main Hoop	Bends in side view above SIS/Major Structure need bracing.
T3.27	Use of Composites	Composite Tubular Space Frames-note added.
T3.29	Monocoque Inspections	Section added.
T3.31	Laminate Testing	Additional requirement for different lay-ups added.
T3.32	Monocoque Front B'hd	Clarification added.

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T4.1.2	Cockpit Template	Clarification on shifter & shift mechanism removal.
T5.2.1	Belt Mounting	Note added re bent Shoulder Harness Bar.
T5.6.2	Head Restraint	Size and location requirements added.
T6.5.1	Steering	Electrically actuated steering prohibited.
T6.5.7	Steering	Requirements for cable actuated steering added.
T7.2.2	Brake Test	Brake Test procedure for EV's called out.
T7.3.4	Brake Over-Travel Sw.	Type of switch allowed defined.
T7.4	Brakes	Brake Panic Switch NOT added.
T7.4	Brake Light	Minimum size & shape of brake light defined. Must have black background.
T8.4.1	Drive Train Shield	Shield must now cover drive sprocket too.
T.14.2	Helmet	FIA 8860-2000 helmet added to list.
T.14.14	Fire Extinguishers	AFFF extinguishers banned.

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Part IC	IC Engine Vehicles	IC engine requirements separated from General Requirements.
IC.1.5.7-8	Accelerator Actuation	Additional requirements to prevent cable damage or jamming.
IC.2.1	Fuel	Basic North American fuel changed to 91 (R+M)/2, Premium.
IC4.4.4	Batteries	Restriction clarified as not applying to LiFePO4 batteries. Firewall requirement added for other Lithium batteries.
IC.4.7	Inertia Switch	Requirement NOT added.
Part EV	Electrical Vehicles	Complete section added. Max. 300 VDC NA, 600 VDC elsewhere.

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S.3	Business Logic Case	Added requirement for a 1 or 2 pages (Replaces the Student Activity Disclosure Form)
S.4.5	Cost Report	Plan is to put all Cost Reports on line.
D.5.8.2	Acceleration Score	Tmax changed to 150% Tmin.
D.7.3	Autocross	Starting order and procedure clarified.
D7.8.1	Autocross Scoring	Tmax changed to 145% Tmin.
D.8.21	Fuel Efficiency	Change in formula to Fuel Efficiency from Fuel Economy
D.8.23	Fuel Efficiency Formula	Based on CO2 per litre. Applies to IC and EV cars.