



<b>PRIMARY STRUCTURE</b>	
ALTERNATIVE FRAME - If alternative tube size/mat'l, app'd SEF req'd. <b>If using Alternative Frame Rules, SRCF req'd. No Magnesium in primary structure.</b>	SIDE IMPACT PROTECTION - Min. of two (2) tubes + diagonal must connect the main and front hoops. Upper tube must be between 300 mm and 350 mm (11.8" and 13.8") above the ground. Lower tube can be lower frame member. At least one diagonal per side must connect the upper and lower members between the main and front hoops. All tubes to be 1.0" OD x 0.065" wall or 25.0 mm OD x 1.75 mm wall steel or equivalent. Monocoques require signed SEF.
INSPECTION HOLES - <b>Tech may use ultrasound to measure wall thickness and/or ask 4.5mm holes be drilled.</b>	FRONT BULKHEAD - 1.0" OD x 0.065" wall, or 25.0 mm x 1.75 mm wall, steel tube or equiv. No non-crushable objects forward of bulkhead.
MAIN HOOP - <b>MUST BE STEEL.</b> 1.00" OD x 0.095" wall or 25.0 mm OD x 2.5 mm wall. Must be 1 piece & extend to lowest frame member. 380 mm (15 ins) apart (inside dim.) where attaches to the Major Structure. Above Major Structure, must be within 10 deg. of vertical. Smooth bends with no wrinkles.	FRONT BULKHEAD SUPPORT - Support back to front roll hoop; 3 tubes per side, all 1.00" OD x 0.049" wall steel tube or equiv.. 1 bottom, 1 top within 50 mm (2") of top of bulkhead, 1 node-to-node diagonal (must form a triangle with Front BulkH'd and either top or bottom tube). (25.0 mm x 1.5 mm and 26.0 mm x 1.2 mm metric tubes OK)
MAIN HOOP BRACING - <b>MUST BE STEEL.</b> One brace each side, 1.00" x 0.065" or 25.0 mm x 1.75 mm min., attached within 16 cm (6.3 in.) of top. Min. 30 deg. included angle with hoop. If main hoop is not vertical, bracing must not be on same side of vertical as main hoop. No bends. No rod-ends. Proper construction for removable braces (capping etc.) on <b>BOTH ENDS</b> . Must take load back to bottom of main hoop and <b>node of upper side-impact tube</b> thru proper triangulated structure.	IMPACT ATTENUATOR - Need Impact Attenuator forward of bulkhead, 200 mm (7.8") long x 200 mm (7.8") wide x 100 mm (3.9") high. No wing supports through the IA.
SHOULDER HARNESS MOUNTING BAR/TUBE - 1.00" OD x 0.095" wall or 25.0 mm OD x 2.5 mm wall steel or equiv. Gussets or braces if not straight to main hoop.	IMPACT ATTENUATOR MOUNTING - All cars must have 1.5 mm steel, 4 mm Al, or approved equiv IA anti-intrusion plate. Plate must be securely fastened directly to the bulkhead and capable of taking transverse and vertical loads (welded or min. four 8mm (5/16") bolts). No tape, etc. Same size as outside dims. of Front BulkH'd if bolted or to tube c/l if welded.
FRONT HOOP- Must be closed section metal tube. 1.00" OD x 0.095" wall or 25.0 mm OD x 2.5 mm wall steel, or equiv. Can be multi-piece. Must extend down to lowest frame member. Max. 20 deg. to vertical. No lower than top of steering wheel. Max. 25 cms (9.8 ins) horizontal distance to steering wheel.	SEAT - Insulated against heat conduction, convection and radiation. Lowest point no lower than bottom of side rails OR must have longitudinal 1.00" OD x 0.065" steel tube underneath.
FRONT HOOP BRACING - Two forward facing braces, 1.00" OD x 0.065" or 25.0 mm OD x 1.75 mm steel or equivalent, attached within 5 cm. (2 ins) of top. Extra rearward bracing required if Front Hoop leans backwards more than 10 deg.	MONOCOQUE -Must see laminate test specimen. <b>Steel backing plates (&gt;2mm thick) used at attachment points.</b>
OTHER SIDE TUBES - Design prevents driver's neck hitting bracing or other side tubes	

<b>STEERING, SUSPENSION, BRAKES</b>	
GROUND CLEARANCE - <b>Sufficient clearance so that no part of the car other than the tires will contact the track surface.</b>	STEERING - On at least two wheels with positive stops to prevent linkage lock up or tires contacting any part of the car. 7 degrees max. freeplay at the steering wheel. <b>NO STEER-BY-WIRE</b> on front wheels. Rear steer limited to + or - 3 deg. with mechanical stops.
SUSPENSION - Fully operational with dampers front and rear; 50mm (2.0 in) minimum wheel travel with driver in vehicle.	FASTENERS - Steering, braking, harness & suspension sys. use SAE Grade5, Metric Grade M8.8 or higher (AN/MS) w/ visible positive locking mechanisms, no Loctite or lock washers. Min. of 2 exposed threads. Rod ends in single shear are captured by a washer larger than the ball diameter. Adjustable rod ends have jam nuts to prevent loosening. No button head cap, pan head or round head screws in critical locations, e.g cage structure or harness mount.
SUSPENSION PICK-UP POINTS - Inspected thoroughly for integrity.	VISIBLE ACCESS - To <b>ALL</b> components on Tech form.
BRAKES - Dual hydr. sys. & reservoirs, operating all 4 wheels, (one brake on limited slip OK). System protected by structure/ shields from d/train failure & minor collisions. No plastic brake lines or brake-by-wire. No parts below chassis/tub in side view. <b>Brake pedal capable of 2000N (450 lbs-f), no failures if official exerts max force (seated normally in vehicle).</b>	
STEERING WHEEL - Continuous perimeter, near round (no concave sections) with driver operable quick disconnect. 25 cm (9.8 ins) max. from Front Hoop.	

<b>TECHNICAL INSPECTION (Cont'd)</b>
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<b>INTERIOR</b>
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<p>DRIVER RESTRAINT HARNESS - SFI 16.1, SFI 16.5 or FIA spec 5, 6 or 7 point and be labeled. 50 mm (2") wide shoulder belts OK with HANS. 50 mm (2 in.) lap belts OK for FIA &amp; SFI 16.5, not OK for SFI 16.1. All lap belts must have Quick Adjusters. Reclined drivers must have 6 or 7 point, and Quick Adjuster sub-belts or 2 sets of sub belts.</p>	<p>MAIN HOOP &amp; FRONT HOOP HEIGHTS - Helmet of tallest driver to be 50 mm (2.0 ins) below lines between top of front and main roll hoops and between top of main hoop to rear attachment point of main hoop bracing.</p>
<p>HARNESS MOUNTS - No belts can pass through a firewall. (Belts must mount on driver side of firewalls.) All belts attached securely to primary structure - 1.00" OD x 0.065" steel tube min. Any tabs to be 1.0" x 0.063" thick min. Double shear preferred.</p>	<p>HEAD RESTRAINT - Near vertical. Must take 890 N (200 lbs.f) load. 38 mm (1.5 in) thick, energy absorbing padding. Max. 25.4 mm (1.0") from helmet. Helmet contact point 50 mm min. from any edge. <b>APPLIES TO ALL DRIVERS. May be changed for different drivers.</b></p>
<p>LAP BELT MOUNTING - Must pass over pelvic area at between 45-65 deg. to horiz for upright driver, 60-80 deg. for reclined. Pivoting mounting with eye bolts or shoulder bolts attached securely to Primary Structure.</p>	<p>ROLL BAR PADDING - Rollbar or bracing that could be hit by driver's helmet must be covered with 12 mm (0.5 in) thick, SFI or FIA (hard) padding. Pipe insulation and foam not OK.</p>
<p>SHOULDER HARNESS MOUNTING - Mounting points 7"- 9" (178-229 mm) apart. Angle from shoulder between 10<sup>deg.</sup> up and 20 deg. down to horizontal. Attach to Primary Structure not to put bending loads into Main Hoop Bracing w/o extra bracing.</p>	<p>VISIBILITY - 100 deg. min. field either side. Head rotation OK or mirrors. If mirrors, must be firmly installed and adjusted.</p>
<p>FIREWALL - Fire resistant material; must separate driver (line-of-sight up to mid-height of driver's helmet) from fuel, cooling &amp; oil systems. Wire/cable pass-throughs OK with grommets. Multiple panels OK w/ gaps sealed. No gaps at sides or bottom.</p>	<p>VEHICLE CONTROLS - All controls, including shifter, must be inside cockpit. No hands, arms or elbows outside side impact system to actuate.</p>
<p>FLOOR CLOSEOUT PANEL - Required from foot area to firewall; solid, non-brittle material; multiple panels are OK if gaps less than 3.18 mm (1/8 in).</p>	<p>DRIVER'S FOOT PROTECTION - Feet must be rearward of the Front Bulkhead and no part of shoes above or outside the Major Structure in side or front views when touching pedals.</p>
<p>EGRESS - 5 seconds max. to exit to side of vehicle from fully seated position with all safety equipment; wings must remain fixed in position. <b>ALL DRIVERS.</b></p>	<p>DRIVER'S LEG PROTECTION - Covers inside cockpit over sharp parts or moving suspension and steering components.</p>

<b>ENGINE COMPARTMENT</b>
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<p>ENGINE - Four cycle piston engine, 610 cc maximum swept displacement. No hybrids. <b>Waste heat recovery allowed.</b></p>	<p>EXHAUST OUTLET - Outlet 45 cm (17.7") max. behind rear axle centerline and 60 cm (23.6") max. above the ground.</p>
<p>COMPRESSORS - Turbo or super chargers allowed if not OEM to engine; must be between restrictor and engine.</p>	<p>EXHAUST SHIELDING - Exhaust components outside the body forward of main hoop must be shielded from people approaching the car.</p>
<p>AIR INTAKE SYSTEM ROLL OVER PROTECTION - All parts of air intake system (including throttle body or carb, air intake ducting, air cleaner &amp; air box) must be within a surface defined by the top of the roll bar and the outside top edge of the tires.</p>	<p>SCATTERSHIELDS GENERAL - Required for clutches, chains, belts, CVT rotating parts, etc. No holes. 6mm diam M8.8 or 1/4" diam Grade 5 fasteners minimum. <b>End parallel to lowest part of the sprocket/pulley.</b></p>
<p>AIR INTAKE SYSTEM - Any portion &lt;350 mm above ground has Side Impact protection (per Rule 3.3.8). <b>Supported if cantilevered (isolated to frame, rigid to engine)</b></p>	<p>SCATTERSHIELD MATERIALS-For chains, 2.7mm (0.105") min. thick STEEL, 3 x chain width. For belts, 3mm (0.120") min. thick aluminum 6061-T6, 1.7 x belt width.</p>
<p>ELECTRONIC THROTTLE CONTROLS - ETC or "drive-by-wire" NOT permitted.</p>	<p>CATCH TANKS - Coolant overflow, crankcase breather &amp; lube system vents must have separate catch tanks. 1 qt min. each. 100 deg. C mat'l. Behind firewall, below shoulder level. 3 mm min. dia. vent away from driver. PCV OK if routed to intake sys upstream of restrictor. <b>Cannot attach breather to exhaust.</b></p>
<p>THROTTLE PEDAL - Must have positive stop to prevent oversteering cable.</p>	<p>COOLANT - Only 100% water. <b>NO ADDITIVES WHATSOEVER.</b></p>
<p>THROTTLE - Must have minimum of 2 springs at the TB, each capable of closing the throttle independently. TPS not acceptable as a return spring. Cable must have smooth operation with no binding or sticking; min. 50.8 mm (2 in) from any exhaust component.</p>	<p>GAS CYLINDERS - Proprietary manufacture &amp; labeled, nonflammable gas, regulator on tank, securely mounted, axis not pointed at driver, to rear of Main Hoop within the frame envelope, or in structural sidepod, but not in cockpit, insulated from exhaust, appropriate lines &amp; fittings.</p>
<p>RESTRICTOR - Must be circular; max. diam. 20.0 mm (0.7874 in) for gasoline fueled cars and 19.0 mm (0.7480 in) for E85 fueled cars. Cannot be movable.</p>	<p><b>D'TRAIN FINGER GUARDS - Req'd to cover all drivetrain parts that spin while car is at rest. No holes &gt;12 mm dia.</b></p>
<p>INTAKE MANIFOLD - Securely attached to block or head with brackets &amp; mechanical fasteners. OEM type rubber bushings not sufficient.</p>	<p>HIGH PRESSURE HYDRAULICS - Pumps and lines must have 1 mm thick steel or aluminum shields to protect driver and workers.</p>
<p>FUEL RAIL - Securely attached to block, head or int. manifold with brackets &amp; mechanical fasteners.</p>	<p>VISIBLE ACCESS - To all items on Tech Sheet</p>
<p>ON-BOARD STARTER - Required.</p>	
<p>FLUID LEAKS - Oil, coolant, fuel - none permitted.</p>	



## 2010 FSAE INSPECTION SHEET

CAR NUMBER:
SCHOOL:
SEF DEVIATIONS? YES/NO
ENGINE MODEL:
ENGINE BORE X STROKE:
ABS? YES/NO

### IMPORTANT

THIS FORM MUST STAY WITH THE CAR UNTIL THESE PARTS OF INSPECTION HAVE BEEN COMPLETED

<b>PART 2</b>	
<b>FUEL SYSTEM &amp; TILT TABLE INSPECTION</b>	
FUEL SPILLAGE - No fuel spill permitted when car is tilted to 45 degrees in the direction most likely to create spillage; Tanks must be filled to scribe line	VEHICLE STABILITY - All wheels in contact with tilt table when tilted to 60 degrees to the horizontal.
FUEL STICKER - Fuel sticker in place adjacent to F/T filler. MARK TYPE OF FUEL USED (e.g. 93, 100 or E-85) ON THIS FORM	FUEL TYPE
NON-COMPLIANCE / COMMENTS: <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	
APPROVED BY:	DATE:

<b>PART 3</b>	
<b>NOISE LEVEL &amp; BRAKING PERFORMANCE INSPECTION</b>	
NOISE LEVEL - 110 dB (A) ("A" scale) maximum during a static test, gearbox in neutral, <b>UP TO</b> a specified rpm (see Rule B.10.2.4). Microphone level with the exhaust outlet(s), 0.5 m (19.7") from the outlet(s), at 45 degrees to the outlet. If multiple outlets, all to be checked. If movable tuning or throttling device, see B.10.2.3.	BRAKING PERFORMANCE - Must lock-up all four wheels on dry asphalt at any speed. If adjustments are made to the vehicle after three failed attempts before retest, the car may run on the Practice Track without the final Brake Performance Tech Sticker.
MASTER SWITCH - Master switch on RHS of main roll hoop must cause engine to stop when actuated. (Perform at end of noise test)	ATTEMPTS:
NOISE LEVEL:	ATTEMPTS:
NON-COMPLIANCE / COMMENTS: <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/> <hr/>	
APPROVED BY:	DATE:

CAR NUMBER:

SCHOOL:

PART 1, contd.

Page 6

TECHNICAL INSPECTION (Cont'd)

NON-COMPLIANCE / COMMENTS (CONT'D):

Lined area for non-compliance or comments.

APPROVED BY:

DATE: