

Rules Analysis Table			
Rule	Type	Description	Responsibility
T2.1.2 (c)	Measurement	75mm Tire keep-out-zone	Frame*
T2.3	Measurement	1524mm Wheelbase	Frame
T2.4	Measurement	Smaller track of vehicle must be no less than 75% of larger	Frame
T3.3.2	Measurement	Verify no hole in tube greater than 4mm	Frame
T3.10.4	Measurement	Main Roll Hoop attachment point within 10 degrees of vertical	Frame
T3.10.6	Measurement	Vertical members of Main Hoop 380 mm apart	Frame
T3.11.5	Measurement	Front Hoop no more than 250mm forward of steering wheel	Frame
T3.11.6	Measurement	Front Hoop not inclined at more than 20 degrees of vertical	Frame
T3.12.4	Measurement	Main Hoop Braces not more than 160mm below top-most surface of Main Hoop, angle formed by these must be at least 30 degrees	Frame
T3.13.4	Measurement	Front Hoop Braces not more than 50.8mm below top-most surface of Front Hoop	Frame
T3.13.5	Measurement	Front Hoop is perpendicular to ground	Frame
T3.17.1	Measurement	Driver's legs may not extend past Major Structure	Frame
T3.18.3	Measurement	Soles of driver's feet must be rearward of bulkhead plane when touching pedals	Frame
T3.20.2	Measurement	Anti-Intrusion Plate 1.5mm thick steel	Frame
T3.20.5	Measurement	Continuous weld lengths must be greater than 25mm	Frame
T3.22.1	Measurement	Pedals have 25mm clearance to rear of IA Anti-Intrusion Plate	Bert/Frame
T3.23.2	Measurement	Forward facing edges have radii of 38mm	Frame

T3.24.3	Measurement	Side Impact Tubular Members requirements	Jack
T4.1.1	Measurement	Cockpit size measurement with plate (video)	Frame
T4.2.1	Measurement	Cockpit cross section with plate (video)	Frame
T4.4	Measurement	Floor panels must not have gaps greater than 3mm	Frame
T4.5.5	Measurement	Firewall must extend such that straight line from 150mm below top of tallest driver helmet to component	Chris
T4.5.7	Measurement	Firewall must extend 100mm forward and rearwards of firewall protected components mounted outboard of Side Impact System (note (c) (ii))	Chris
T4.7.1	Measurement	Seated driver must have 200 degrees minimum FOV (100 degrees either side)	Frame
T4.8	Metzgar Inspection	Drivers can exit vehicle in 5 seconds	Full Team
T4.9	Metzgar Inspection	With driver's vision obscured, can operate cockpit BRB in under 1 sec	Full Team
T5.2.2	Measurement	Tab or bracket measurements for harness	Lucas?
T5.3.5	Measurement	Lap Belt at angle between 45 and 60 degrees to horizontal in upright driving position	Lucas
T5.3.6	Measurement	Lap Belt at angle between 60 and 80 degrees to horizontal in reclined driving position	Lucas
T5.4.3	Measurement	Shoulder Harness mounting points between 178 - 229mm apart	Lucas
T5.4.4	Measurement	From driver's shoulders rearward to mounting point, Shoulder Harness between 10-20 degrees below horizontal	Lucas
T5.5.2	Measurement	Anchorage points between groin should be 100mm apart	Lucas
T5.6.2	Measurement	Head Restraint measurements	?
T5.6.3	Analysis	Head Restraint can withstand 890	?

		newtons (where will this appear?)	
T5.7	Measurement	Roll Bar padding must be minimum 12mm thickness	?
T6.1.1	Measurement	Suspension measurements	Mike
T6.2	Measurement	Minimum ground clearance with driver 25.4mm at all times	?
T6.5.2	Inspection	Steering System positive steering stops prevent linkages from locking up	Mike
T6.5.3	Measurement	Steering System free play limited to 7 degrees total	Mike
T6.6.2	Measurement	Jacking Point measurements	Jack
T7.1.4	Inspection	Brake System must be able to lock all wheels in Brake Test (7.2)	Mike
T7.1.9	Inspection	Brake System must be able to withstand 2000N with no failure	Mike
T7.2	Metzgar Inspection	Brake Test	Mike
EV Rules			
EV2.4.5	Measurement	Container conductive surfaces low resistance connection to ground (300mOhm)	BP
EV2.5.1	Inspection	Sidepods do not extend past tires	Jack
EV2.7	Inspection	SMD works (MP)	
EV2.8.2-3	Measurement	When AIRs are opened, ST drops to under 30V in < 5 sec (power supply)	BP
EV2.9.3	Metzgar Inspection	Disconnect HVD in 10 sec in ready to race condition	Team
EV2.10.1	Measurement	Precharge 90% of accumulator voltage before closing 2nd AIR	CarMan
EV2.10.3	Inspection	Pre-charge operates regardless of sequence (state diagram)	CarMan
EV2.11.2	Measurement	AMS can monitor cell voltages and temps and can shut down (EP)	BP

EV2.11.3	Inspection	Cannot reset TS through cockpit reset	
EV2.11.4	Measurement	Can accurately measure cell voltages, validate through SCADA	BP,SCADA
EV2.11.5	Measurement	Can accurately measure cell temps, validate through SCADA	BP,SCADA
EV2.11.9	Measurement	Watchdog timer demonstrated functional	Jeremy
EV3.1	Full Car Inspection	Positioning of TS parts	
EV3.3.2(a)	Measurement	Cable strain relief 15cm of motor terminals	
EV3.4.2	Measurement	Stack up check, measure resistances of all bolts in TS path	
EV3.5.4-6	Inspection	Error checking works, shuts down torque in less than a second	
EV2.5.9	Inspection	When TS deactivated motor spins freely	
EV4.1.1	Measurement	GLV voltage not greater than 30VDC	
EV7.1.1/5	Measurement	Any metal must have 300mOhm connection to ground on CarMan	
EV8.2.2	Measurement	Tone between 1000-3500Hz, 80dB loudness at 2m	
EV8.4.1, EV8.6.1	Inspection	IMD and AMS lights can be seen in sunlight	EPAL
EV8.5.1	Inspection	When voltage greater than 30V at vehicle side of AIRs, an LED lights up	BP
EV9.1.2	Measurement	Measure trip point of IMD, does not exceed 500ohm/v	
EV9.2.2	Measurement	Insulation resistance between GLV and TS 500ohm/v w/ ohmmeter	CarMan
EV9.4	Inspection	Simulate AMS fault with LED on EP and switch on Dyno	
?	Inspection	Car will shut down if cooling exceeds 55C	SCADA

*placeholder until people are assigned to task

Other Notes for this Year		
Rule	Note	Responsibility
T2.2	Need Bodywork	Frame
T2.5	Bodywork needs to be removable (Visible Access)	Frame
T3.2	Create full car image with all components labeled (good for future reference)	
T3.11.4	Check that steering wheel does not go over front roll hoop	Frame/Steering
T3.12.7	Reach out to judges for clarification	
T11.2	Inspect Securing Fasteners & JAM NUTS	Mike
T14	Check how to clean equipment and if we have it all	
T15	Inspect and gather other required equipment	
EV2.3.3	Images of how to get into packs	Jack
EV2.9.7	Email judges with lockout tagout	
EV8.3	Fix dimness of SSOK	
EV8.4.2, EV8.6.2	Fix IMD AMS labeling	
EV9.4.1	BP team pick one AMD testing method	
-	Battery Pack removability plan	
EV11.4	Inventory required equipment, need insulated tools and gloves and blankets	

Notes for Future Teams and Failures	
Rule	Note
T3.8	SES did not pass, need to list all issues somewhere
T3.9.1-5	Percy needs a leg, 95% tests will not be completed
T3.20.7-9	Impact Attenuator not completed

T3.21	Impact Attenuator not completed
T3.25	No inspection holes
T5.1.3	Driver harness will expire next year
T6.7	Rollover stability will not be looked at this year
EV2	Must recheck these rules with fully integrated Pack
EV3.2.3	Wires are not marked in CarMan wiring
EV9.5	Not doing Rain Test
EV11.3	Check supplemental document for battery removability plan

Not Applicable List

T3.4-T3.7, T3.13-T3.16, T3.26-T3.40, T5.2.4, T5.2.6, T8.2.2-T8.2.6, T8.4.4, T9, T10, EV2.1.2, EV2.3.5, EV2.4.9-10, EV2.5.5, EV2.6.3, EV2.6.4, EV2.9.4, EV2.10.6, EV2.12, EV3.2.8, EV4.1.6-7, EV7.1.2-3, EV10