

<b>TEAM:</b>	<b>#</b>
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<input type="checkbox"/> Single-Occupant	<input type="checkbox"/> Multi-Occupant	<b>Date/Time Received:</b>
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Station	Grade	Comments
<b>Driver / Passenger Registration</b>		
<b>Driver Operations</b>		
<b>Lights &amp; Vision</b>		
<b>Body &amp; Sizing</b>		
<b>Electrical</b>		
<b>Battery Protection</b>		
<b>Mechanical</b>		
<b>Dynamics</b>		
<b>Support</b>		
<b>MOV/Energy Metering</b> <i>(MOV Teams ONLY)</i>		Metered Charging <input type="checkbox"/> Certified <input type="checkbox"/> Not Certified

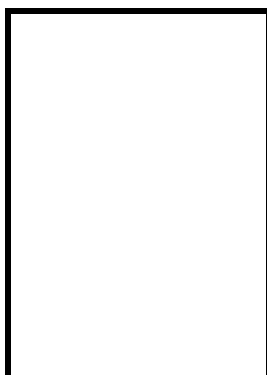
Penalty	Regulation	Value

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Regulation / Driver	Driver 1	Driver 2	Driver 3	Driver 4
11.1.A Driver is registered with HQ (has ID), is 18 or older with valid DL				
9.7.C – Common Ballast	Weight: _____ Ballast Tag # _____			
Driver Weight (includes driving clothes and shoes but not helmet)				
9.7, 11.2 Ballast Weight – ballasted to 80 kg (176 lbs)				
Wristband Color				
Wristband ID #				
Ballast Security Tag ID #				

11.1.A.2 Driver Req. – max of 4, min of 2		
11.3 Helmets – Type/Rating –Snell M2010, Snell M2015 or Snell M2020, DOT FMVSS, ECE 22.05		
11.4 Shoes – Valid shoes		

**\*\*\* FOR MULTI-OCCUPANT VEHICLES, COMPLETE PAGE 2 FOR PASSENGERS \*\*\***



Station Manager:

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Entrance:

All occupants report with ballast material, helmet(s), proper driver/passenger uniforms

Station Grade:

Green = Pass

Blue = Pass / Penalty / Bridging Document Required

Yellow = Needs improvement / Dynamic Test Ready

Red = Fail / Safety Hazard

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**\*\*\* FOR MULTI-OCCUPANT VEHICLES \*\*\***

<b>Passengers</b>	<b>Passenger 1</b>	<b>Passenger 2</b>	<b>Passenger 3</b>	<b>Passenger 4</b>
11.1.B Registered with HQ (has ID), is 18 or older				
Passenger Weight (includes clothes and shoes but not helmet)				
9.7, 11.2 Ballast Weight – ballasted to 80 kg (176 lbs)				
Passenger Number Punched (1-8, X)				
Wristband ID #				
Ballast Security Tag ID #				

<b>Passengers</b>	<b>Passenger 5</b>	<b>Passenger 6</b>	<b>Passenger 7</b>	<b>Passenger 8</b>
11.1.B Registered with HQ (has ID), is 18 or older				
Passenger Weight (includes clothes and shoes but not helmet)				
9.7, 11.2 Ballast Weight – ballasted to 80 kg (176 lbs)				
Passenger Number Punched (1-8, X)				
Wristband ID #				
Ballast Security Tag ID #				

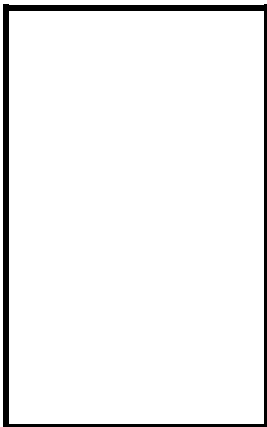
11.1.B.1 Passenger Req. – max of 8		
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<b>Regulation</b>	10.3.A.14 Roll Cage – 50 mm clearance b/w roll cage and helmet, 30 mm clearance b/w padding & helmet	9.6 Egress no wheel chocks, unassisted – 10 sec fully out of solar car (primary), 15 sec (secondary)	
		Primary	Secondary
Driver 1			
Driver 2			
Driver 3			
Driver 4			
Passenger 1			
Passenger 2			
Passenger 3			
Passenger 4			
Passenger 5			
Passenger 6			
Passenger 7			
Passenger 8			

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Regulation	Grade	Comments
11.6 Water/Fluids – plan for water/fluid provision (1L min / per occupant)		
11.7 Radios/Communication – Driver in radio contact with team, hands free		
11.7.B Cell Phone in solar car – hand’s free and fixed mounting		
9.7.B Ballast Carriers – one per occupant within 300 mm of hip point		
9.7.D Ballast Access – located in solar car, and visible		
9.7.C Common Ballast Box – Equipped and sealable?		



Station Manager:

Entrance:

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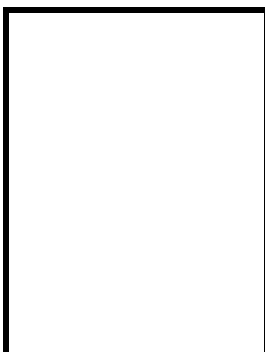
All occupants report with ballast material, helmet(s), proper driver/passenger uniforms with fully assembled solar car and radio communication

Station Grade:

- Green = Pass
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<b>TEAM:</b>	<b>#</b>
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Regulation	Grade	Comments
<b>Vision</b>		
9.5.B Forward Vision - ground @ 8 m, 6.4 m above @ 12.2 m ahead, 100° side to side, 75 mm letters @ 3m front, 50 mm letters @3m side		
9.5.E Rear Vision - 15 m back, 30° L/R single reflex image		
9.5.E Rear Vision – camera fixed in position, view screen viewable in normal driving position		
<b>Lighting / Signals</b>		
9.4.A Lighting – DRL/Headlamps; white, visible 30° L/R, 15° up at 30 m, 25% of vehicle width from CL, front extremities, no farther back than 175 mm		
9.4.B Lighting – Front Turn; amber, visible 30° L/R, 15° up at 30 m, 25% of vehicle width from CL, front extremities, no farther back than 175 mm		
9.4.C Lighting – Side Marker, amber, visible 60° F/B, 15° up at 30 m, between 20-30% back from front of vehicle		
9.4.D Lighting – Brake; red, visible 30° L/R, 15° up at 30 m, 40% of vehicle width from CL, no farther forward than 175 mm		
9.4.E Lighting – Rear Turn; red/amber, visible 80° out, 45° in, 15° up at 30 m, 25% of vehicle width from CL, rear extremities		
9.4.F Lighting – High Mount Brake; red, visible 30° L/R, 15° up at 30 m, high mounted rear of vehicle canopy (700 mm above ground)		
9.4.G Lighting – BPS Trip; white, visible 30° L/R, 15° up at 30 m, high mounted rear of vehicle canopy (700 mm above ground)		
9.4.H. – Front turn, Side Markers, Rear Turn – Emergency Hazard format		
9.4.I Horn – sound level b/w 75-102 dB @ 15 m, permanently mounted, steering wheel operated. Duration for 5 min potential		



Station Manager:

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Entrance:

Driver in fully assembled solar car

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<b>TEAM:</b>	<b>#</b>
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<b>Dimensions and Body</b>		
9.1 Solar Car Dimensions – Max. Dimensions L = 5.0 m, W = 2.2 m, H = 1.6 m		
9.3 Ground Clearance – 50 mm		
8.1.H Charging Configuration – all portions carried by solar car (stands, supports, cables etc)		
8.I.J & 9.2 Operational Configuration – body remains fixed (no reorientation/tilting) when moving under its own power		
9.5.C & 9.5.D Windshield – shatter resistant, method to clear rain, distortion free		
9.9.A Solar Car Numbers – approved color, 50 mm background, 250 mm high, 120 mm wide, 40 mm brush stroke, 25 mm spacing, visible from 3 m at 1.8 m above ground		
9.9.B Institution Name – displayed on car with approved abbreviations and more prominent than any team sponsor logo/name, no disruptive or offensive graphics. Visible from 3 m at 1.8 m above ground		
9.9.C Event Logo –space (200 mm H x 300 mm W) on both sides, visible from 3 m at 1.8 m above ground		
9.9.D National Flag – displayed on both sides of car by windshield (min size 70 mm x 40 mm)		
9.9.E Front Signage – space (600 mm x 150 mm projected) with event logo included and institutional name		
Distance from front of car to driver’s headrest (identify value)		

<b>Cockpit</b>		
7.1.A, 10.3.B.1 Single Occupant Class Number of Occupants – Max. of (1)		
7.1.B, 10.3.B.2 Multi-Occupant Class – Number of Occupants		
10.3.B.3 Seating Position – seat forward facing		
10.3.B.4 Back and Head Restraint – top of head restraint 800 mm (MOV front seats, Single-Occupant), 750 mm (MOV rear seats)		
10.3.B.5, 10.3.B.6 Occupants heels below hip point, angle between shoulders, hips, knees >90 deg		
10.3.C Occupant Space Check		
9.5.A Visibility – eye height = must be 700 mm or greater		

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10.3.D Belly Pan – full isolation and ability to support 80 kg. Occupants torso and limbs above lower element of chassis		
10.3.A.12 Padding – roll cage padded around head meeting SFI-45.1/FIA 8857-2001 A or B or better, coverage of 50% or more.		
10.3.A.13 Headrest – headrest provided with 20 mm thick padding, secured		
9.5.F Outside Air Circulation – cockpit vents / intake vents, fan if from wheel vents		
9.6.B Egress – Can be opened from both inside and outside, no tape used at egress point, positive latch		
9.6.B.4 Egress Opening – 25 mm wide stripe, and external canopy release marked “Open” 20 mm		

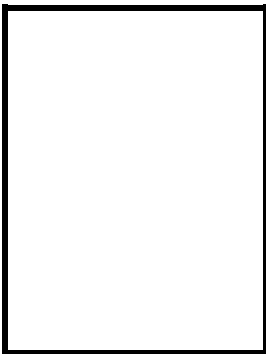
<b>Operational Requirements</b>		
9.8 Data logger – position for exposure to sky and fixed in position		

<b>Vehicle Weight and Tires</b>		
<b>Vehicle Weight</b> <b>LF -                      RF-</b> <b>LR-                      RR-</b> <b>Total:</b>		
10.2.A, 10.2.B Tire Sets – tire configurations meet loading requirement, min 4 points of contact		
10.2.C Tire Ratings – weight <wheel rating> tires inflated w/in manf. rating tube-type tires need tubes US DOT or similar		
10.2.D Wheel/Rim – profile matches bead requirements of tire		
<b>Tire Set Configuration NOTES:</b>		



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<b>Solar Collector Sizing</b>		
<b>8.1.A Cell Type:</b> _____		
8.1.B Size – Single Occupant (Cell Type 1 - 4m <sup>2</sup> , Cell Type 2 – 3.560m <sup>2</sup> , Cell Type 3 – 2.640m <sup>2</sup> )		
8.1.B Size – MOV (Cell Type 1 - 5m <sup>2</sup> , Cell Type 2 – 4.440m <sup>2</sup> , Cell Type 3 – 3.300m <sup>2</sup> )		
5.2.F Solar Cell Technology – Solar cells match information given on approval form		
8.1.G Example Cell and map provided which match physical solar collector on car		
8.1.F No more than 6 cell types or sizes used		
8.1.E Hybrid Solar Collector		
8.1.D Concentrator		
5.2.F Grandfathered Array		
8.1.I Water Sprayer – hand pumped, 5 gal max, ambient temp water only		
8.1.H Stands – carried by the solar car		
8.1.H Umbilical cord – stored in car		



Station Manager:

Entrance:

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Driver and Occupants in fully assembled solar car

Station Grade:

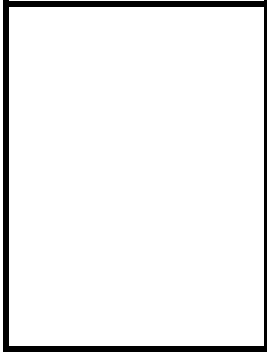
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Regulation	Grade	Comments
8. Power – Solar array is present, no non-solar power sources		
8.2.A.1 SOV Battery Max weights _____ Li-S (15 kg)    _____ Li-ion / Li Polymer (20 kg)    _____ LiFePo4 (40 kg)    _____ 8.2.B. (Other)		
8.2.A.2 MOV Battery Exemption		<b>Battery Weight:</b>
8.4.D Battery Ventilation – pull from exterior vent, operates with battery switch Fan can operate from supplemental if BPS trips		
8.4.E External Cooling – not permitted unless powered by main battery / unless emergency		
8.4.A, 8.4.C Battery Enclosures – isolated w/ 1 MΩ to frame, non-conductive, labeled		
8.6.C External Power Switch – location, marking, operation, rated for load		
8.9 Electrical Shock Hazards – protected and marked w/ 10 mm labels		
8.2.B., 8.2.D Other Storage Techniques – Power condensers or flywheels		
8.4 Battery Removal – batteries can be removed		
8.4 Battery Removal – MOV exemption		
8.4.G Impound Box – lockable box, no external hardware		
5.2.D & 8.2.A Storage Batteries – match submitted approval form		
8.2.A Battery Pack Weight		
8.4.B Battery Mounting - secured		
8.2.C Supplemental Batteries – radios, meters, driver fan, main power switch, horn only, BPS momentarily, fans in BPS trip, BPS Strobe, BPS Fault Driver Indicator		
8.4 Supplemental Battery Location – In battery enclosure		
8.5 Main Fuse - < 200% Ip or 75% of wire capacity, first in series		
8.5.B Branch – other wiring sizes off main bus are properly fused		
8.5.C Voltage Taps – fused or current limited		
8.6 Power Switch – manual switch capable to interrupt Ip, 10 mm labels, normally open		
8.1.H Electrical Connection – between array and car are carried internally		
8.7.A Cable Sizing – proper size for Ip		
8.8.B Accelerator – zero return, brake shutoff on cruise control		
8.8.A Control – driver has sole control		
8.8.C Cruise Control – driver activated only, automatic deactivation		

**TEAM:**

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Station Manager:

Entrance:

\_\_\_\_\_ Fully assembled car

Station Grade:

Green = Pass

Blue = Pass / Penalty / Bridging Document Required

Yellow = Needs improvement / Dynamic Test Ready

Red = Fail / Safety Hazard

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**BPS - OVER VOLTAGE (OV) TEST**

String  Module  Cell – Test Level  Pass  Fail

**Nominal Voltage:** \_\_\_\_\_ Vnom @ \_\_\_\_ °C      **BPS V Resolution:** \_\_\_\_\_ Bit  
**Max Voltage:** \_\_\_\_\_ Vmax @ \_\_\_\_ °C      **BPS V Range:** \_\_\_\_\_ - \_\_\_\_\_ VDC  
**BPS Max Trip:** \_\_\_\_\_ Vmax\_trip      **BPS Sample Rate:** \_\_\_\_\_ S/s  
 Filtering  Delay      **BPS Disconnect Delay:** \_\_\_\_\_ s

**BPS - UNDER VOLTAGE (UV) TEST**

String  Module  Cell – Test Level  Pass  N/A  Fail

**Nominal Voltage:** \_\_\_\_\_ Vnom @ \_\_\_\_ °C      **BPS V Resolution:** \_\_\_\_\_ Bit  
**Min Voltage:** \_\_\_\_\_ Vmin @ \_\_\_\_ °C      **BPS V Range:** \_\_\_\_\_ - \_\_\_\_\_ VDC  
**BPS Min Trip:** \_\_\_\_\_ Vmin\_trip      **BPS Sample Rate:** \_\_\_\_\_ S/s  
 Filtering  Delay      **BPS Disconnect Delay:** \_\_\_\_\_ s

**BPS - OVER CURRENT (OC) TEST**

String  Module – Test Level  Pass  N/A  Fail

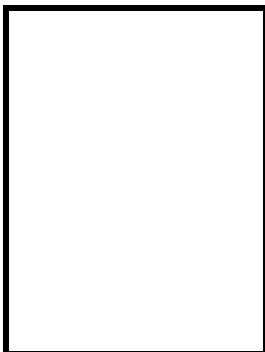
**Max Current (charge):** \_\_\_\_\_ Imax @ \_\_\_\_ °C      **BPS I Resolution:** \_\_\_\_\_ Bit  
**Max Current (discharge):** \_\_\_\_\_ Imax @ \_\_\_\_ °C      **BPS I Range:** \_\_\_\_\_ - \_\_\_\_\_ VDC  
**BPS I Trip(charge):** \_\_\_\_\_ Imax\_trip  
**BPS I Trip(discharge):** \_\_\_\_\_ Imax\_trip      **BPS Sample Rate:** \_\_\_\_\_ S/s  
 Filtering  Delay

**BPS - OVER TEMPERATURE (OT) TEST**

String  Module  Cell – Test Level  Pass  N/A  Fail

**Max Operating Temperature:** \_\_\_\_\_ / \_\_\_\_\_ °C (Charge) / (Discharge)      **BPS T Resolution:** \_\_\_\_\_ Bit  
**BPS T Trip:** \_\_\_\_\_ °C Tmax\_trip\_charge      **BPS T Range:** \_\_\_\_\_ - \_\_\_\_\_ °C  
**BPS T Trip:** \_\_\_\_\_ °C Tmax\_trip\_discharge      **BPS Sample Rate:** \_\_\_\_\_ S/s  
**BPS Disconnect Delay:** \_\_\_\_\_ s

Regulation	Grade	Comments
8.6.B Fault Dash Indicator illuminates on BPS trip		
9.4.G.2 BPS Trip Strobe illuminates on BPS trip		



Station Manager: \_\_\_\_\_

Entrance: \_\_\_\_\_

Fully assembled car / battery pack and BPS

Station Grade:

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Regulation	Grade	Comments
5.2.B Mechanical Report – vehicle matches structural report		
8.4.B Battery Enclosures – structurally sound and properly secured to chassis		
9.7.B, 9.7.C Ballast Carriers – structurally sound and properly secured to chassis		
10.1 Body panels and array – securely fastened to prevent unintended movement		
10.1.C Array Attachment – 2 independent methods		
10.2.A Wheel Configuration Acceptable		
10.2.B Wheels – meet the minimum requirements		
10.8 Towing Hardpoint – accessible for forward towing		
<b>Occupant Cell</b>		
10.1.A Covers and Shields – all moving parts protected against contact. Occupants shielded from steering linkage and other moving parts		
10.3 Occupant Cell – designed for protection, will not cause undue strain		
10.7.A Steering Wheel – continuous perimeter steering wheel. Ref. Appendix A		
10.3.E Safety Belts – commercial 5 pt. that meets FIA D 280.T, SFI 16.1 or SFI 16.5, proper positioning of attachment points, properly attached with nuts and bolts (10.3.E.3)		
10.3.E.1 5-point (min) safety belt (FIA/SFI)		
10.3.E.6, 10.3.E.7, 10.3.E.8 shoulder belt placement		
10.3.E.6, 10.3.E.9 lap belt placement		
10.3.E.6, 10.3.E.10 submarine belt placement		
10.3.E.4 Safety belt chaffing through seat		
10.3.A.1 Roll Cage encompasses occupants from shoulders up, metallic		
10.3.A.2 Structural Chassis designed to encompass occupants in all directions		
10.5.E & 10.5.F Pedal Placement - brake pedal activation, spacing between pedals, right foot activation		
8.8.B Accelerator Pedal Placement - right foot activation & right of the brake pedal		

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<b>Steering</b>		
10.1.B Clearance – moving parts are interference free		
10.1.B, 10.7.D Steering Static Test – can turn lock to lock while still, no excessive play in steering		
10.7.B Steering stops – in place and functional		

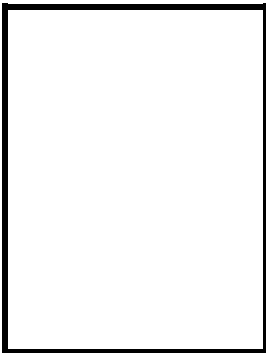
<b>Brakes</b>		
10.5.F Hand Brakes – if equipped – lock-to-lock use without repositioning hands		
10.5.A Brakes – dual independent and balanced co-reactive		
10.5.B Brake Pads – contact area > 6.0 cm <sup>2</sup> , initial thickness >= 6.0 mm, full contact with rotor		
10.5.D Brake Lines – appropriately sized and constructed		
10.5.H Mechanical Rear Brake – Volume limiting valve – locked out		
10.6 Parking Brake – lockable, independent equipped with working parking brake (must hold 10% of vehicle weight in both directions), non-tire contact style		VEHICLE WEIGHT =
		FORWARD PULL:                      REAR PULL:

<b>Hardware</b>								
Critical Areas (Reg 10.4.E)	Steering	Brakes	Front Suspension	Rear Suspension	Seat/Safety Harness	Drive Train	Battery Box	Ballast Box
10.4 - Critical Areas do not use friction or press fit assemblies								
10.4.A Bolts – SAE grade 5, M 8.8 or AN/MS on critical systems, two threads beyond nut, no shaved heads								
10.4.B Securing Bolts – safety wire, cotter pins or flex-loc nuts								
10.4.D No plastic luggage type buckles or single push release straps								

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<b>Fastener/Hardware Notes:</b>	
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10.4.C Securing Rod-Ends – All rod-ends secured with jam nuts		
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Station Manager:

Entrance:

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Vehicle disassembled at station

Station Grade:

Green = Pass

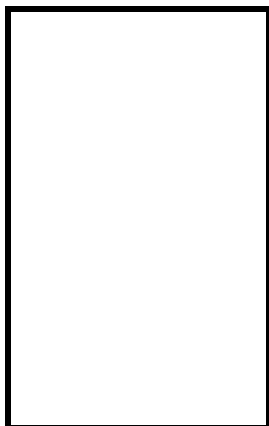
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Regulation	Grade	Comments
<b>U-Turn Test</b>		
10.7.C Turning Radius – any portion of the car <200 mm above ground is within 16 m wide lane		RIGHT TURN:                      LEFT TURN:
<b>Figure-8 Test</b>		
10.2.A Tire and Wheel Requirements – all wheels must remain on the ground		
10.1.B no body work shall contact moving structural members		
10.9 Dynamic Stability – vehicles must exhibit sufficient stability during test		
10.9.A Figure 8 – vehicle must negotiate Figure-8 in <9 seconds per side w/o hitting cones or showing signs of instability		TIME FOR FIGURE-8:
<b>Braking Test</b>		
10.9 Dynamic Stability – vehicles must exhibit sufficient stability during test		
10.5.C, 10.9.D Braking Performance – vehicle must decelerate from $\geq 50$ km/h (31 mph) at $> 4.72$ m/s <sup>2</sup> to a complete stop w/o excessive veering or signs of instability (mechanical braking only)		TIME:                                      SPEED:
<b>Slalom Test</b>		
10.9 Dynamic Stability – vehicles must exhibit sufficient stability during test		
10.9.C Slalom Test – Negotiate slalom course within appropriate time (11.5 s)		TIME:                                      SPEED:
<b>High Speed Stability</b>		
10.9 Dynamic Stability – vehicles must exhibit sufficient stability during test		
10.9.B Stability at Speed – Maintains constant speed in a 3.5 meter lane		SPEED:



Station Manager:

Entrance:

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All drivers & passengers report to station with car, Green, Blue, or Yellow from Driver Registration, Driver Operations, Body & Sizing, Mechanical, Electrical, BPS

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**TEAM:**

#

Regulation	Lead	Chase	Scout	T&T	Other	Comments
<b>Support Vehicles (12.4, 12.4.A – 12.4.E)</b>						
All vehicles registered with Event HQ						# of team vehicles:
Max 15 passenger van						
Roof mounted amber lights						
GPS for observer viewing						
Storage racks are secure and safe						
<b>Support Vehicle Graphics (12.4.F)</b>						
Organization Name						
Solar Car Number on both sides & rear (at least 250 mm tall, with a 40 mm brush stroke)						
Solar Car Number on top passenger’s side of windshield (at least 150 mm tall)						
Event Logo – provided onsite (both sides of each vehicle and trailer)						
Solar Car Caravan Sign						
<b>Radio Communication (12.5)</b>						
Communication with solar car driver, which observer can monitor						
Hands free comm. for all vehicle drivers						
Separate CB channel for ASC communications in all vehicles on route						
<b>Safety Equipment (minimum requirements) (3.1.B.1, 12.4.B – 12.4.C)</b>						
Certified, stocked First Aid Kit						
ABC Fire Extinguisher						
Safety Vest (1 per person in vehicle)						
4 Orange Cones (minimum 12” high)						
Orange Warning Flag						
Battery MSDS, Spill Kit, and method of containment of battery fires / 40 kg of sand						
Shovel / Spade (for applying sand)						
Battery handling PPE (gloves, safety glasses, etc)						
Suitable container(s) for damaged electrochemical cells						

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Regulation	Grade	Comments
<b>Safety Officer (3.1.A)</b>		
3.1.A.1 Team Safety Officer Name(s):  _____		
3.1.A.2 Proof of First Aid & CPR training		
3.1.A.3 Designated Safety Officer is not a Solar Car Driver, Solar Car Passenger, Support Vehicle Driver, or Team Manager		
3.1.A.3 Location of Safety Officer in Lead/Chase		
<b>Road Side Demonstration</b>		
Demonstration of roadside safety procedures by team (role play)		

Station Manager:

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Entrance:

All team vehicles with all equipment.  
Lead and chase vehicles with all equipment and team members who will be in those vehicles.  
Safety officer must be present.

Station Grade:

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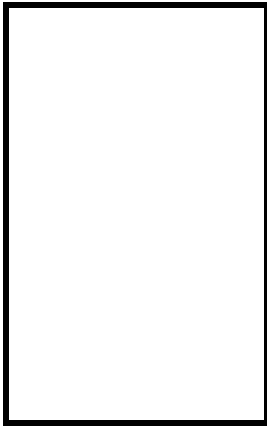
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<b>8.10.A Charger</b>	<b>Result/Comments</b>
Onboard vehicle charger rigidly secured in vehicle	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Charger protected from water ingress	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Charger able to accept input voltages from 120-240 Vac	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Charger power rating (kW)	
Charger DC current request methodology (describe)	
<ul style="list-style-type: none"> <li>▪ Considers max battery DC charge current limit from BMS</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> <li>▪ Considers user set max AC or DC charge current limit</li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> <li>▪ Considers the J1772 control pilot max AC current limit               <ul style="list-style-type: none"> <li>○ Describe how J1772 control pilot max AC current limit is converted to a max DC charge current limit (ex: calculate AC power, multiply by charger efficiency to get DC power, calculate DC current)</li> </ul> </li> </ul>	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>8.10.B Vehicle Power Inlet &amp; 8.10.C Charging Adapter</b>	<b>Result/Comments</b>
Standard EV power inlet receptacle present	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Vehicle power inlet securely mounted to vehicle	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Adapter needed for J1772 plug to another standard EV power inlet	<input type="checkbox"/> Yes <input type="checkbox"/> No
<ul style="list-style-type: none"> <li>▪ Charging adaptor isn't longer than 1m in length</li> </ul>	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<ul style="list-style-type: none"> <li>▪ Charging adapter carried in vehicle when not in use</li> </ul>	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>8.10.D Energy Metering</b>	<b>Result/Comments</b>
IEF energy meter assigned to team (Meter #)	
Vehicle features NEMA 14-50 inline connection for energy meter	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Energy meter display location is can be visibly read after charging	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Charger is sealed to prevent unauthorized internal access	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Battery box features dedicated charger power port and relay	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
<b>8.10.E Charging Safety</b>	<b>Result/Comments</b>
BPS is actively monitoring/protecting the battery during charge	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
When the main power switch controlled by the BPS opens, the output of the MOV charger disconnects from the battery pack	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Onboard charger current is automatically limited as battery approaches full charge to avoid BPS faults	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
AC/DC power connection covers	
<ul style="list-style-type: none"> <li>▪ Non-conductive</li> </ul>	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
<ul style="list-style-type: none"> <li>▪ Only removable with the use of tools</li> </ul>	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
<ul style="list-style-type: none"> <li>▪ 10 mm high letters with "Caution: High Voltage"</li> </ul>	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Power conductors sized appropriately for max AC/DC currents	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
<ul style="list-style-type: none"> <li>▪ AC power min conductor size (AWG)</li> </ul>	
<ul style="list-style-type: none"> <li>▪ DC power min conductor size (AWG)</li> </ul>	
<b>8.10.F Electric Vehicle Supply Equipment (EVSE)</b>	<b>Result/Comments</b>
Team has J1772 EVSE	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
EVSE can be plugged into standard NEMA 5-15 120Vac outlet	<input type="checkbox"/> Yes <input type="checkbox"/> No
120Vac compatible (list max current in A)	<input type="checkbox"/> Yes <input type="checkbox"/> No
240Vac compatible (list max current in A)	<input type="checkbox"/> Yes <input type="checkbox"/> No

**TEAM:**

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Team has a generator that can be used to charge the vehicle	<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>8.10.G MOV Impound</b>	<b>Result/Comments</b>
Solution allows main battery power connectors/conductors to be locked/sealed such that unmetered battery charging can't occur	
▪ Battery box lid(s)	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
▪ Motor power port(s)	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
▪ Solar array power port(s)	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
▪ Other connector/conductor (describe)	<input type="checkbox"/> Pass <input type="checkbox"/> Fail <input type="checkbox"/> N/A
<b>MOV Charging Testing/Metered Charging Certification</b>	<b>Result/Comments</b>
Plug in the IEF onboard energy meter in their vehicle	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Verify pinout at the terminal block inside the meter enclosure	
▪ Neutral (W) - no continuity with other terminals	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
▪ Ground (G) - continuity with vehicle power inlet GND & any exposed charger chassis metal but no other terminals	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
▪ L1 (B) - continuity with one of the vehicle power inlet Lines but no other terminals	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
▪ L2 (R) - continuity with one of the vehicle power inlet Lines but no other terminals	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Verify charger power conductor isolation	
▪ AC input power to DC output power conductors	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
▪ AC input power conductors to vehicle chassis	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
▪ DC output power conductors to vehicle chassis	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Have the team demonstrate charging with their own J1772 EVSE	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Have the team demonstrate charging with IEF J1772 EVSE	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
▪ Proximity Pilot Validation	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
▪ Control Pilot Validation	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Verify the IEF onboard energy meter is reading correctly	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Vehicle drive motor is disabled when a J1772 plug is connected	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Vehicle charging system is able to detect and prevent charging in a broken AC ground scenario	<input type="checkbox"/> Yes <input type="checkbox"/> No
Vehicle charging system is able to detect and prevent charging in an AC ground fault scenario	<input type="checkbox"/> Yes <input type="checkbox"/> No
Lock/seal all exposed connectors/conductors on the AC/DC charging power lines between this battery box port and the vehicle power inlet to physically prevent any of these connections from being unplugged or tapped into	<input type="checkbox"/> Pass <input type="checkbox"/> Fail
Vehicle certification for metered charging in this event	<input type="checkbox"/> Certified <input type="checkbox"/> Not Certified



Station Manager:

Entrance:

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Fully assembled car.  
Bring Electric Vehicle Supply Equipment (EVSE).  
Minimum of yellow in Electrical & BPS.

Station Grade:

Green = Pass  
*Blue = Not available at this station*  
*Yellow = Not available at this station*  
Red = Fail / Safety Hazard