ELECTREK FSGP 2025 SCRUTINEERING **Summary Sheet**

TEAM:	**#:**

☐ Single-Occupant ☐ Multi-Occupant

Driver / Passenger Registration	Sticker & Initials	**Electrical**	Sticker & Initials	**Solar Collector**	Sticker & Initials
Notes:		Notes:		Notes:	
Driver Operations	Sticker & Initials	**Battery Protection System**	Sticker & Initials	**Safety**	Sticker & Initials
Notes:		Session A Notes: Session B Notes:		Notes:	
Lights & Vision	Sticker & Initials	**Mechanical**	Sticker & Initials	**Impound / MOV**	Sticker & Initials
Notes:		Notes:		Impound Method ☐ In Vehicle ☐ External Box MOV Metered Charging ☐ Certified ☐ Not Certified	
Body & Sizing	Sticker & Initials	**Dynamics**	Sticker & Initials	**ASC Support**	Sticker & Initials
Notes:		Notes:		Notes:	

Passed for **FSGP (Track)**	HQ Received Date/Time/Initials	Passed for **ASC (Road)**	HQ Received Date/Time/Initials

Scrutineering Penalties

Station	Regulation	Description of Issue	Penalty Value (Per Day)
			Miles _____ Laps _____
			Miles _____ Laps _____
			Miles _____ Laps _____

ELECTREK FSGP 2025 SCRUTINEERING **Driver / Passenger Registration Station P1**

TEAM:	**#:**

Regulation / Driver Name	**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	Mass [kg] _____ Ballast Tag # _____			
Driver Mass [kg] (includes driving clothes and shoes but not helmet)				
9.7 – Ballast Mass [kg] – ballasted to 80 kg (176 lb)				
Wristband Color	Orange Yellow Green Blue Purple	Orange Yellow Green Blue Purple	Orange Yellow Green Blue Purple	Orange Yellow Green Blue Purple
Wristband ID #				
Ballast Security Tag ID #				

11.1.A.2 **# of solar car drivers registered** – (2 min, 4 max)		
11.2 **Helmets** – Type/Rating – Snell M2010, Snell M2015, Snell M2020, DOT FMVSS, ECE 22.05, AS/NZS 1698		
11.3 **Shoes** – Solid sole, closed-toe, no individually enclosed toes		

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

Sticker & Initials

Station Manager: _____

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

Station Grade: Green = Pass (Track & Tour Ready)
Blue = Pass with Penalty Condition (Track Ready)
Yellow = Needs Improvement (Dynamics Ready)
Red = Fail / Safety Hazard

TEAM:	**#:**

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

Passenger Name	**Passenger 1**	**Passenger 2**	**Passenger 3**	**Passenger 4**
11.1.B Registered with HQ (has ID), is 18 or older				
Passenger Mass [kg] (includes clothes and shoes but not helmet)				
9.7 Ballast Mass [kg] – ballasted to 80 kg (176 lb)				
Passenger Number Punched (1-8, X)	1 2 3 4 5 6 7 8 X	1 2 3 4 5 6 7 8 X	1 2 3 4 5 6 7 8 X	1 2 3 4 5 6 7 8 X
Wristband ID #				
Ballast Security Tag ID #				

Passenger Name	**Passenger 5**	**Passenger 6**	**Passenger 7**	**Passenger 8**
11.1.B Registered with HQ (has ID), is 18 or older				
Passenger Mass [kg] (includes clothes and shoes but not helmet)				
9.7 Ballast Mass [kg] – ballasted to 80 kg (176 lb)				
Passenger Number Punched (1-8, X)	1 2 3 4 5 6 7 8 X	1 2 3 4 5 6 7 8 X	1 2 3 4 5 6 7 8 X	1 2 3 4 5 6 7 8 X
Wristband ID #				
Ballast Security Tag ID #				

11.1.B.1 **# of solar car passengers registered** – (8 max)		

TEAM:	**#:**

Regulation	10.3.A.15 **Roll Cage Clearance** – 50 mm min roll cage to helmet, 30 mm min padding to helmet	9.6.A **Egress** Buckled in seat to standing outside plane of solar car – no wheel chocks, unassisted	
		Primary (< 10 sec)	Secondary (< 15 Sec)
Driver 1			
Driver 2			
Driver 3			
Driver 4			
Passenger 1			
Passenger 2			
Passenger 3			
Passenger 4			
Passenger 5			
Passenger 6			
Passenger 7			
Passenger 8			

Regulation	**Grade**	**Comments**
11.5 **Water/Fluids** – Plan for water/fluid provision (2L min / per occupant)		
11.6 **Radios/Communication** – Driver in radio contact with team, hands free		
11.6.B **Cell Phone in Solar Car** – Hands free and fixed mounting		
9.7.B **Ballast Carriers** – One per occupant, securely mounted within 300 mm of hip point		
9.7.D **Ballast Access** – Ballast bag/ID tags visible through ballast box lid for visual checks		
9.7.C **Common Ballast Box (SOV Only)** – Securely mounted and sealable if equipped		☐ Common Ballast ☐ No Common Ballast

Sticker & Initials

Station Manager: _____

Entrance: All occupants report with ballast, helmet(s), proper driver / passenger uniforms with fully assembled solar car and radio communication;
Yellow status or better in Driver Registration

Station Grade: Green = Pass (Track & Tour Ready)
Blue = Pass with Penalty Condition (Track Ready)
Yellow = Needs Improvement (Dynamics Ready)
Red = Fail / Safety Hazard

TEAM:	**#:**

Regulation	**Grade**	**Comments**
Vision		
9.5.B **Forward/Side Vision** – 6.4 m above @ 12.2 m forward, ground @ 8 m forward, 100° side to side, 50 mm high letters @ 3m forward & @3m to each side		
9.5.E **Rear Vision** – Camera/view screen securely fixed in position & visible in normal driving position		
9.5.E.1 **Rear Vision** – 15 m rearward, 30° L/R off center, single reflex image		
Lighting/Signals/Horn		
9.4.A **Lighting – DRL/Headlamps** – White, visible 20° out/in, 10° up at 30 m		
9.4.B **Lighting – Front Turn** – Amber, visible 80° out, 45° in, 15° up at 30 m		
9.4.B.5 **Lighting – Front Turn – Operation;** If co-located DRL is not disabled during turn indicator operation, turn indicator shall be visible with DRL on		
9.4.C **Lighting – Side Marker** – Amber, visible 60° arc, from 5° to 65° off centerline (viewed from rear), 15° up at 30 m		
9.4.D **Lighting – Brake** – Red, visible 45° L/R, 15° up at 30 m		
9.4.E **Lighting – Rear Turn** – Red/amber, visible 80° out, 45° in, 15° up at 30 m		
9.4.F **Lighting – High Mount Brake** – Red, visible 10° L/R, 10° up at 30 m		
9.4.G **Lighting – BPS Fault** – White, visible 10° L/R, 10° up at 30 m		
9.4.H **Emergency Hazard Lights Format** – Front turn, side markers, rear turn flash in sync		
9.4.I **Horn** – 75-102 dB sound level @ 15 m forward, permanently mounted, steering wheel operated, up to 5 min continuous duration		

Sticker & Initials

Station Manager: _____

Entrance: Driver in fully assembled solar car, radio communication, & Battery Spill Kit;
Yellow status or better in Driver Registration & Electrical

Station Grade: Green = Pass (Track & Tour Ready)
Blue = Pass with Penalty Condition (Track Ready)
Yellow = Needs Improvement (Dynamics Ready)
Red = Fail / Safety Hazard

TEAM:	**#:**

Regulation	**Grade**	**Comments**
Dimensions & Body		
9.1 **Solar Car Dimensions [m]** – Max dimensions: L = 5.0 m, W = 2.2 m, H = 1.6 m		L _____ W _____ H _____
9.3 **Ground Clearance** – 100 mm min		
8.I.I & 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, securely mounted, method to clear rain, distortion free. Must be Polycarbonate or folded Acrylic		
9.8.A **Solar Car Numbers** – High contrast approved color, min 50 mm background, min 250 mm H x 120 mm W numerals, min 40 mm brush stroke, min 25 mm spacing, visible from 3 m at 1.8 m above ground		
9.8.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		
9.8.C **Event Logo** – Space (200 mm H x 500 mm W) on both sides, visible from 3 m @ 1.8 m above ground		
9.8.D **National Flag** – Displayed on both sides of car by windshield (min size 70 mm x 40 mm)		
9.8.E **Front Signage** – Host institution name, space for event logo (150 mm x 150 mm), visible from top and front elevation view		
9.4.A **Daytime Running Lights** – Located at front of car, min 600 mm apart (400 mm for cars narrower than 1300 mm), min 250 mm above ground, within 200 mm from absolute front of car		
9.4.B **Front Turn Indicators** – Located at front of car, min 600mm apart (400 mm for cars narrower than 1300 mm), min 350 mm above ground, within 200 mm from absolute front of car		
9.4.C **Side Marker Turn Indicators** – Located on each side of car, 500 to 1800 mm from absolute front of car, within 400mm from extreme outer side edge		
9.4.D **Rear Brake Lights** – Located at rear of car, min 600mm apart (400 mm for cars narrower than 1300 mm), within 400 mm from extreme outer side edge, min 350 mm above ground, within 200 mm from absolute rear of car		
9.4.E **Rear Turn Indicators** – Located at rear of car, min 600mm apart (400 mm for cars narrower than 1300 mm), within 400 mm from extreme outer side edge, min 350 mm above ground, within 200 mm from absolute rear of car		
9.4.F **High Mount Center Brake Light** – Rearward facing, located within 150mm of the highest point of the car and above top of rear brake lights		
Front of Car to Driver's Headrest Distance [m] – (Used for upward vision calcs)		D _____

TEAM:	**#:**

Regulation	**Grade**	**Comments**
Cockpit		
7.1.A, 10.3.B.1 **Single Occupant Class # of Seats** – (Max of 1)		
7.1.B, 10.3.B.2 **Multi-Occupant Class # of Seats** – (2-4)		
10.3.B.3 **Seating Position** – Seat within ±10° of forward facing		
10.3.B.4 **Back and Head Restraint** – 800 mm min hip point to head restraint top (750 mm min for MOV rear seats)		
10.3.B.5, 10.3.B.6 **Occupant heels below hip point** – >90° angle between shoulders, hips, knees		
10.3.C **Occupant Space Check**		
9.5.A **Visibility –** 700 mm min eye height from ground (all occupants)		
10.3.D **Belly Pan** – Full occupant isolation from road, able to support 80 kg, occupant torso and limbs above lower element of structural chassis		
10.3.A.13 **Padding** – Roll cage padded around helmet meeting SFI-45.1/FIA 8857-2001 A or B or better, wrapping 50% min around roll cage member		
10.3.A.14 **Headrest** – Secure headrest provided with 19 mm min thick padding		
9.5.F **Outside Air Circulation** – Cockpit vents directed at occupant's face / fan present if intake is from wheel openings		
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 high contrast stripe, external release marked "Open" in 20 mm min high letters within 300 mm from opening edge		
Vehicle Mass & Tires		
Vehicle Mass – Ballasted occupants in all seats (multiply kg value by 2.205 to get lb)		LF [kg] _____ RF [kg] _____ LR [kg] _____ RR [kg] _____ Total [kg] _____ Total [lb] _____
10.2.A.2 **Wheel/Tire Sets** – Left to right contact patches at least half overall car width		
10.2.D **Tire Speed & Load Ratings (per tire)** – Tires inflated within manufacturer's rating, tube-type tires need tubes, US DOT or similar		Speed Symbol _____ Max Speed [MPH] _____ Load Index _____ Max Load [kg] _____ Load Range _____ Max Inflation [PSI] _____
10.2.E **Wheel/Rim** – Profile matches bead requirements of tire		
Tire Set Configuration Notes:		

TEAM:	**#:**

Regulation	**Grade**	**Comments**
8.1 **Solar Collector Sizing**		
8.1.A **Cell Type**		Type _____
8.1.B **Size –** SOV: 4m^2, MOV: 5m^2		
5.2.F **Solar Cell Technology** – Solar cells match information given in VDR		
8.1.F **Example Cell and Layout Map** – Matches physical solar collector on car		
8.1.E **No More than 6 Cell Types or Sizes Used**		
8.1.D **Concentrator**		
8.1.G **Solar Collector Connections & Stands** – Solar collector stands are self-supporting, all portions of the collector are carried by solar car (stands, supports, cables, electrical connections, etc)		

Sticker & Initials

Station Manager: _____

Entrance: Driver and ballasted occupants in fully assembled solar car; Yellow status or better in Driver Registration

Station Grade: Green = Pass (Track & Tour Ready)
Blue = Pass with Penalty Condition (Track Ready)
Yellow = Needs Improvement (Dynamics Ready)
Red = Fail / Safety Hazard

TEAM:	**#:**

Regulation	**Grade**	**Comments**
8 **Power** – No power source aside from solar collector		
5.2.D & 8.2.A **Storage Batteries** – Match submitted battery approval form (cell type, qty, pack config, etc)		# of Battery Cells in Vehicle Pack _____
8.2 **Energy Storage System Information** Pack Capacity [kWh] – (5.25 kWh max for SOV, Unlimited for MOV) _____ Pack Chemistry ☐ Li-S ☐ Li-Ion / Li Polymer ☐ LiFePo4 ☐ 8.2.B Other _____		
8.4.D **Battery Ventilation** – Whenever battery is enabled, forced ventilation pulls air from battery enclosure through sealed ducting to exterior vent away from driver airstream (Fan can operate from supplemental if BPS trips)		
8.4.E **External Cooling** – Not permitted unless powered by main battery or in an emergency		
8.4, 8.4.C **Battery Enclosure** – non-conductive inside, no more than 2 enclosures, 10mm labels		
8.4.A, **Isolation** –1 MΩ min terminal to chassis		
8.6.C **External Power Cut Off Switch** – Location, marking, operation, covering, load rated		
8.9 **Electrical Shock Hazards** – Protected and marked with 10 mm min high letters		
8.2.B., 8.2.E **Other Storage Techniques** – Power condensers, flywheels, fuel cells		
8.4.B **Battery Mounting** – Enclosure/modules secure		
8.2.C **Supplemental Batteries** – Must power BPS momentarily for startup checks – must power BPS, BPS strobe & BPS fault dash indicator during BPS fault – specify if it powers other allowable systems		☐Telemetry ☐Horn ☐Driver Ventilation Fans ☐Main Power Contactors
8.4 **Supplemental Pack Location** – Battery enclosure		
8.5.A **Main Fuse** – First in series (+), not exceeding 200% peak current or 75% of wire capacity		
8.5.B **Branch** – Proper fuses on wiring off main bus		
8.5.C **Voltage Taps** – Fused/current limited <10mA		
8.6.A **Main Power Switch** – Non-latching, normally open, able to interrupt peak current, 10 mm labels		
8.7.A **Cable Sizing** – Proper size for system current		
8.8.B **Accelerator** – Free moving, return to zero, located right of brake pedal (if equipped)		
8.9.A **Control** – Driver has sole control		
8.8.C **Cruise Control** – Driver activated only, automatic deactivation by brake pedal/power off		
8.8.D **Reverse** – Under own power		
8.4.F **Security** – Official battery seal applied		

Sticker & Initials

Station Manager: _____

Entrance: Fully assembled solar car & Battery Spill Kit

Station Grade: Green = Pass (Track & Tour Ready)
Blue = Pass with Penalty Condition (Track Ready)
Yellow = Needs Improvement (Dynamics Ready)
Red = Fail / Safety Hazard

TEAM:	**#:**

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

☐ String ☐ Module ☐ Cell – Test Level ☐ Pass ☐ Fail

Nominal Voltage: _____ Vnom @ ___ °C
Max Voltage: _____ Vmax @ ___ °C
BPS Max Trip: _____ Vmax_trip
☐ Filtering ☐ Delay

BPS V Resolution: _____ Bit
BPS V Range: _____-_____ VDC
BPS Sample Rate: _____ S/sec
BPS Disconnect Delay: ___ sec

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

☐ String ☐ Module ☐ Cell – Test Level ☐ Pass ☐ N/A ☐ Fail

Nominal Voltage: _____ Vnom @ ___ °C
Min Voltage: _____ Vmin @ ___ °C
BPS Min Trip: _____ Vmin_trip
☐ Filtering ☐ Delay

BPS V Resolution: _____ Bit
BPS V Range: _____-_____ VDC
BPS Sample Rate: _____ S/sec
BPS Disconnect Delay: ___ sec

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

☐ String ☐ Module – Test Level ☐ Pass ☐ N/A ☐ Fail

Max Current (charge): _____ Imax @ __°C
Max Current (discharge): _____ Imax @ __ °C
BPS I Trip(charge): _____ Imax_trip
BPS I Trip(discharge): _____ Imax_trip
☐ Filtering ☐ Delay

BPS I Resolution: _____ Bit
BPS I Range: _____-_____ VDC
BPS Sample Rate: _____ S/sec
BPS Disconnect Delay: ____ sec

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

☐ String ☐ Module ☐ Cell – Test Level ☐ Pass ☐ N/A ☐ Fail

(Charge) / (Discharge)
Max Operating Temperature: _____ / _____°C
BPS T Trip: _____°C Tmax_trip_charge
BPS T Trip: _____°C Tmax_trip_discharge
☐ Filtering ☐ Delay

BPS T Resolution: _____ Bit
BPS T Range: _____-_____ °C
BPS Sample Rate: _____ S/sec
BPS Disconnect Delay: _____ sec

Regulation	**Grade**	**Comments**
8.6.B **Fault Dash Indication** – Illuminates on BPS trip		
9.4.G.2 **BPS Fault Indicator Strobe** – Illuminates on BPS trip		

Sticker & Initials

Station Manager: _____

Entrance: Fully assembled solar car, battery pack, BPS, & Battery Spill Kit; Yellow status or better in Electrical

Station Grade: Green = Pass (Track & Tour Ready)
Blue = Pass with Penalty Condition (Track Ready)
Yellow = Needs Improvement (Dynamics Ready)
Red = Fail / Safety Hazard

TEAM:	**#:**

Regulation	**Grade**	**Comments**
5.2.B **Mechanical VDR** – vehicle matches mechanical technical report		
8.4.B **Battery Enclosures** – structurally sound and properly secured to chassis		
9.7.B, 9.7.C **Ballast Boxes** – structurally sound and properly secured to chassis		
10.1 **Body Panels and Solar 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** – Designed to meet application loads		
Remove a front and rear wheel to check fit up		
10.8 **Towing Hardpoint** – Accessible for forward towing with body in place (canopy can be removed)		
Occupant Cell		
10.1.A **Covers and Shields** – All moving parts covered to protect against accidental contact		
10.3 **Occupant Cell** – Designed for protection, will not cause undue strain		
10.7.A, Appendix A **Steering Wheel** – Sufficient strength steering wheel with continuous perimeter		
10.3.E, 10.3.E.3 **Safety Belts** – Commercial 5 point meeting FIA D 280.T, SFI 16.1 or SFI 16.5, Properly attached to acceptable attachment points		
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 **Anti-Submarine Belt Placement**		
10.3.E.4 **Safety Belt Chafing Through Seat**		
10.3.A.1 **Roll Cage** – Encompasses occupants from shoulders up, metallic elements		
10.3.A.2 **Structural Chassis** – Designed to encompass occupants in all directions, includes suspension mounts		
10.3.A.16 **Shatter Protection** – Composites near head		
10.5.E & 10.5.F **Pedal Placement** – Brake pedal activation, spacing between pedals		
8.8.B **Accelerator Pedal Placement** – Right foot activation & right of the brake pedal		
Steering		
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		

TEAM:	**#:**

Regulation	**Grade**	**Comments**
Brakes		
10.5.F **Hand Brakes** – Lock to lock use without repositioning hands (if equipped)		
10.5.A **Brakes** – Dual independent and balanced co-reactive braking system		
10.5.B **Brake Pads** – Contact area > 6.0 cm^2, initial thickness >= 6.0 mm, full contact with rotor		
10.5.D **Brake Lines** – Appropriately sized and constructed		
10.5.G.2 **Mechanical Rear Brake Performance** – 15% of vehicle weight (if equipped)		15% of Vehicle Weight [lb] _____ Pull Test [lb] _____
10.5.G.3 (Or Other Areas) – **Volume Limiting Valve** – Locked out		
10.6 **Parking Brake** – Functional parking brake (must hold 10% of vehicle weight in both directions), lockable, independent, non-tire contact style		10% of Vehicle Weight [lb] _____ Pull Test [lb] _____
Fasteners/Hardware		
10.4.C **Rod-Ends** – Secured with sufficiently torqued jam nuts (flex-loc/safety wire not required)		
10.4.F **Hub Nuts** – 10.9 mm thick threaded portion required for single central hub nut		

10.4.E **Critical Areas**	Steering	Brakes	Front Suspension	Rear Suspension	Seat/Safety Harness	Drive Train	Battery Box	Ballast Box	Parking Brake
10.4 **Means of Retention** – Must not use friction, glue, or press fit as the only retention mechanism									
10.4.A **Bolts** – SAE grade 5, M 8.8 or AN/MS, two threads beyond nut, no shaved heads									
10.4.B **Securing Bolts** – Safety wire, cotter pins, flex-loc nuts, or other approved method (Nylock, Loctite, and thread distortion are not sufficient)									
10.4.D **Buckles & Straps** – No plastic luggage type buckles or single push release straps									

Fastener/Hardware Notes:	

Sticker & Initials

Station Manager: _____

Entrance: Fully assembled solar car (will be disassembled as necessary within the station)

Station Grade: Green = Pass (Track & Tour Ready)
Blue = Pass with Penalty Condition (Track Ready)
Yellow = Needs Improvement (Dynamics Ready)
Red = Fail / Safety Hazard

TEAM:	**#:**

Regulation	**Grade**	**Comments**
U-Turn Test		
10.7.C **Turning Radius** – Any portion of the car <200 mm above ground is within 16 m wide lane		Right Turn _____ Left Turn _____
Figure-8 Test		
10.2.A.1 **Tire and Wheel Requirements** – All wheel tires must remain on the ground		
10.1.B **Clearance** – Body and other stationary parts must not contact moving parts (except bearings)		
10.9 **Dynamic Stability** – Vehicle must exhibit sufficient stability during test		
10.9.A **Figure 8** – Vehicle must negotiate Figure-8 in < 8 sec per side without hitting cones		Time for Figure-8 _____
Braking Test		
10.9 **Dynamic Stability** – Vehicle must exhibit sufficient stability during test		
10.5.C, 10.9.D **Braking Performance** – Vehicle must completely stop from >= 50 km/h (31 MPH) @ > 4.72 m/s^2 deceleration without undue veering left or right		Time _____ Starting Speed [MPH] _____
Slalom Test		
10.9 **Dynamic Stability** – Vehicle must exhibit sufficient stability during test		
10.9.C **Slalom** – Negotiate in 11.5 sec or less		Time _____ Starting Speed [MPH] _____
Acceleration Test		
10.9.E **Torque** – Speed @ 18 m from standstill		Speed [MPH] _____
High Speed Stability Test		
10.9.B **Lane Stability** – Vehicle must be able to stay within a 3.5 m wide lane up to 65 MPH (105 km/h) & exhibit sufficient stability and during test		Speed [MPH] _____

Before Passing Team…		
10.5.G.3 – Lock out proportioning valve		☐Yes ☐No
Measure tire pressure [PSI]		LF _____ RF _____ LR RR
MOV: Test all driver / passenger configurations!		

Sticker & Initials

Station Manager: _____

Entrance: All drivers & passengers report to station with fully assembled solar car, ballast, Battery Spill Kit, radio communication, & spare tires; Yellow status or better in Driver Registration, Driver Operations, Lights & Vision, Body & Sizing, Electrical, BPS, & Mechanical

Station Grade: Green = Pass (Track & Tour Ready)
Blue = Pass with Penalty Condition (Track Ready)
Yellow = Needs Improvement (Dynamics Ready)
Red = Fail / Safety Hazard

TEAM:	**#:**

Regulation	**Grade**	**Comments**
3.1.B.1 **Safety Equipment** – Minimum requirements		
First Aid Kit – ANSI Z308.1 Class A or B, Type III or IV		
ABC Fire Extinguisher –13.5 kg (30 lb) total		
Safety Vests – 1 per person		
Battery MSDS		
Spill Kit/method of containment of battery fires – 40 kg (88 lb) of sand		
Shovel / Spade – for applying sand		
Battery handling PPE – gloves, safety glasses, etc		
5 gal metal container for damaged electrochemical cells		
3.1.A **Safety Officer**		

3.1.A.1 **Team Safety Officer Name(s)**	3.1.A.2 **Proof of Training**		3.1.A.3 **Solar Car Driver, Solar Car Passenger, Support Vehicle Driver, or Team Manager** – Can't serve in this role while acting as the designated safety officer
	First Aid	**CPR**	

Sticker & Initials

Station Manager: _____

Entrance: Safety Officer(s) must be present

Station Grade: Pass (Track & Tour Ready)
Blue = *Not available at this station*
Yellow = *Not available at this station*
Red = Fail / Safety Hazard

TEAM:	**#:**

8.11 & 8.12.G **SOV/MOV Impound**	**Result/Comments**
Solution doesn't contain external hardware or removable hinge pins & allows main battery power connectors/conductors to be locked/sealed to prevent unmetered battery charging	☐Pass ☐Fail ☐Impound in Vehicle ☐External Impound Box
In vehicle solution for battery box lid(s) & openings such as air inlet(s)/outlet(s)	☐Pass ☐Fail ☐N/A
In vehicle solution for motor, solar collector & other (describe _____) power port(s)	☐Pass ☐Fail ☐N/A
External impound box fits, fully contains & completely restricts access to battery box	☐Pass ☐Fail ☐N/A
External impound box top has school name & team # in at least 20mm high letters	☐Pass ☐Fail ☐N/A
Max 4 (in vehicle) or 2 (external) seals to secure/unsecure impound (10 mm labels)	☐Pass ☐Fail
Class: ☐SOV (Skip remaining inspections & proceed to grade station) ☐MOV (Proceed with inspections)	
8.12.A **MOV Charger**	**Result/Comments**
Onboard vehicle charger rigidly secured in vehicle	☐Pass ☐Fail
Charger protected from water ingress	☐Pass ☐Fail
Charger able to accept input voltages from 120-240 Vac	☐Pass ☐Fail
Charger power rating [kW]	
Describe DC charge current limiting methodology:	
▪ Considers max battery DC charge current limit from BMS	☐Yes ☐No ☐Unknown
▪ Considers the J1772 control pilot max AC current limit	☐Yes ☐No ☐Unknown
▪ Considers user set max charge rate	☐Yes ☐No ☐Unknown
8.12.B & 8.11.C **MOV Vehicle Power Inlet & MOV Charging Adapter**	**Result/Comments**
Standard EV power inlet receptacle present	☐Pass ☐Fail
Vehicle power inlet securely mounted to vehicle	☐Pass ☐Fail
Adapter needed for J1772 plug to another standard EV power inlet	☐Yes ☐No
▪ Charging adaptor isn't longer than 1m in length	☐Pass ☐Fail ☐N/A
▪ Charging adapter carried in vehicle when not in use	☐Pass ☐Fail ☐N/A
8.12.D **MOV Energy Metering**	**Result/Comments**
Sealed IEF energy meter assigned to team (Meter # _____) (Seal # _____)	
Plug the IEF onboard energy meter into the NEMA 14-50 inline connection	☐Pass ☐Fail
Energy meter display location is can be visibly read while charging	☐Pass ☐Fail
Charger is sealed to prevent unauthorized internal access	☐Pass ☐Fail
Battery box features dedicated charger power port & contactor	☐Pass ☐Fail
8.12.E **MOV Charging Safety**	**Result/Comments**
BPS actively monitors/protects the battery during charge	☐Pass ☐Fail
When Main Power Switch opens for BPS fault, the charger contactor also opens	☐Pass ☐Fail
Charge current is automatically limited as battery nears full charge to avoid faults	☐Yes No ☐Unknown
AC/DC power connection enclosures/covers	
▪ Non-conductive	☐Pass ☐Fail
▪ Only removable with the use of tools	☐Pass ☐Fail
▪ 10 mm high letters with "Caution: High Voltage"	☐Pass ☐Fail
Power conductors sized appropriately for max AC/DC currents	☐Pass ☐Fail
▪ AC power min conductor size [AWG]	
▪ DC power min conductor size [AWG]	

TEAM:	**#:**

8.12.F **MOV Electric Vehicle Supply Equipment (EVSE)**	**Result/Comments**
Team has J1772 EVSE	☐Pass ☐Fail
EVSE can be plugged into standard NEMA 5-15 120Vac outlet	☐Yes ☐No
120Vac compatible (list max AC current in Amps _____)	☐Yes ☐No
240Vac compatible (list max AC current in Amps _____)	☐Yes ☐No
Team has a generator that can be used to charge the vehicle	☐Yes ☐No ☐Unknown
MOV Charging Testing/Metered Charging Certification	**Result/Comments**
With EVSE disconnected & vehicle powered off, verify pinout at a slightly separated NEMA 14-50 connection	
▪ Neutral (W) - no continuity with other terminals	☐Pass ☐Fail
▪ Ground (G) - continuity with vehicle power inlet GND & any exposed charger/chassis metal but no other terminals	☐Pass ☐Fail
▪ L1 (B) - continuity with a vehicle power inlet Line but no other terminals	☐Pass ☐Fail
▪ L2 (R) - continuity with a vehicle power inlet Line but no other terminals	☐Pass ☐Fail
Verify charger power conductor isolation	
▪ AC input power to DC output power conductors	☐Pass ☐Fail
▪ AC input power conductors to vehicle chassis	☐Pass ☐Fail
▪ DC output power conductors to vehicle chassis	☐Pass ☐Fail
Have the team demonstrate charging with their own J1772 EVSE	☐Pass ☐Fail
Have the team demonstrate charging with IEF J1772 EVSE	☐Pass ☐Fail ☐Untested
▪ Proximity Pilot Validation	☐Pass ☐Fail ☐Untested
▪ Control Pilot Validation	☐Pass ☐Fail ☐Untested
Verify the IEF onboard energy meter is reading correctly	☐Pass ☐Fail
Vehicle drive motor is disabled when a J1772 plug is connected	☐Pass ☐Fail
Vehicle charging system is able to detect a broken AC ground scenario	☐Yes ☐No ☐Untested
Inspect & lock/seal all exposed connectors/conductors on the AC/DC charging power lines between this battery box port & the vehicle power inlet to physically prevent any of these connections from being unplugged or tapped into	☐Pass ☐Fail
Energy Storage Pack Capacity (Q) from Electrical Station [kWh]	
Vehicle certification for metered charging in this event	☐Certified ☐Not Certified

Sticker & Initials

Station Manager: _____

Entrance: **External Impound Box Teams:** Battery Box & Impound Box
Impound In Chassis Teams: Fully assembled solar car & Yellow status or better in Electrical & BPS
MOV Teams: Same requirements as Impound In Chassis + EVSE & Battery Spill Kit

Station Grade: Pass (Track & Tour Ready)
Blue = Pass with Penalty Condition (Track Ready)
Yellow = *Not available at this station*
Red = Fail / Safety Hazard

For Impound In Vehicle Teams, battery seals need to be verified before FSGP and photo documentation created for ASC Impound