NSW SPEED EVENTS

ELECTRIC VEHICLE SAFETY POLICY

Application

This Policy applies to Event Organisers where electric vehicles are accepted to compete in a speed event. Entrants of electric vehicles (EV's) must have their vehicles compliant to the additional scrutineering requirements contained in this Plan. An EV includes Hybrid EV, Plug-in Hybrid EV and Battery EV. The Event Safety Plan is to comply with the Electric Vehicle Appendix – Standing Regulations.

Series Production EV's Only

EV's competing in Motorsport Australia NSW Speed Events **must only be a Series Production EV** with no modifications, with the exception of the freedoms permitted for Type RR vehicles for brakes, suspension, wheels and tyres.

A **status indicator** is unique to the make and model of vehicle. Each manufacturer of a Series Production EV provides an EV Emergency Response Guide (ERG) specific to that make and model. This ERG may provide the detail as to how that make/model displays its status. It is the responsibility of the competitor to provide a copy of the vehicles ERG to the event organiser prior to competition commencing.

PPE (Personal Protective Equipment)

Electric Protection Rubber (EPR) gloves must be issued to Scrutineering, Crash Rescue and Flag Posts if Electric or Hybrid vehicles are competing.

Scrutineering

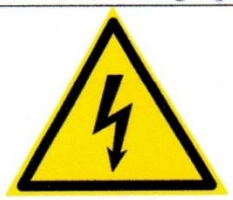
The Scrutineering Checklist for EV's similar to that included on the following page must be used with each Electric or Hybrid vehicle competing in addition to the Scrutineering Requirements contained in the Supplementary Regulations as far as they are applicable to the vehicle.

The competitor is to provide a copy of the vehicles ERG to Scrutineering prior to obtaining scrutineering approval to compete.

This checklist is to be completed in conjunction with the general requirements for Vehicle Scrutineering.

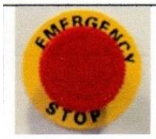
Vehicle make	Vehicle Model	Competition No.	Log Book No.	Event	Date

Electric Vehicle Signage – shall be clearly visible as required and if applicable and fitted:

				
High Voltage (HV) Identifies HV components (may be on items in engine bay)	Emergency Stop Cut power for all systems (may be on the switch or isolation point)	Electric Vehicle (EV) Identifies as an EV 150mm sides (fitted near Comp No.)	Battery Isolator 12v Location of isolator to cut power for 12v systems	Fire Extinguisher Location of Fire Extinguisher activation point
			N/A for Speed Event	N/A for Speed Event

Signage acceptable:

Electric Vehicle Systems – operation check

	Emergency Stop AND/OR Electric Drive/Battery isolation Operation should cut all vehicle power supply and disable drive. **Location:** **Method of operation (i.e. pull lever, activate switch):**	
	Fire Extinguishers **Type:** **Location:**	

Vehicle Status indicator – Electric Drive powered and/or enabled

Detail location and method of electric drive power and status indicator:

Component condition

Vehicle Pass	Represent	Date	Time
Scrutineer		Licence No.	

Common Questions Asked About Electric Vehicles

- **Is the car dangerous to touch?** The cars are not live. The high voltage parts are isolated and have more safety systems than a domestic electric supply

socket. Precautions contained in this Policy including the use of protective gloves are simply top give the absolute protection.

- **What if I touch the car with my knee when I push it?** The car is not connected to the ground like a domestic outlet so to get a shock you must touch the car in two different places. With gloves on the chance of this is reduced. (There must be multiple faults in the car)

- **What happens if it rains?** The electrical components of the car are waterproof. If any water leakage is detected the vehicle shuts off. Rain water doesn't cause an issue for the gloves as fresh water is a poor conductor of electricity.

- **What if the car is damaged?** The batteries have all passed stringent crash tests and if a cable is damaged, the battery and electrical control systems automatically isolate.

- **What if the car catches fire?** Leave in place and let the fire burn out. Note that Lithium Ion batteries can re-combust for up to 24 hours after the initial ignition.

Response

The 5 step Electric Vehicle Response (EVR) procedures included in this Policy are to be followed during any intervention.

Don't put yourself in danger! Please follow this 5 step EVR when attending to an Electric Vehicle. It does not matter if the driver is uninjured or otherwise.

1 – APPROACH

Do not touch any electric vehicle unless wearing Electric Protection Rubber (EPR) gloves then you should approach the car and walk towards the cockpit location.

2 – CHECK STATUS

The status display will be as per the manufacturer's EV Emergency Response Guide (ERG) as provided by the competitor. The actions will need to be tailored to suit each Series Production EV in regard to determining the status of the vehicle.

SAFE Status

(i) Determine the status as indicated – if determined to be SAFE then approach the car as you would normally.

UNSAFE Status

(ii) If the status light is UNSAFE ensure to immediately advise others in the vicinity by verbal warning that the vehicle status is UNSAFE.

(iii) Be aware of the Ready to Move Indicators and approach from the rear or the side in case the electric drive is still turned on to avoid the direction that the vehicle may move in if the accelerator pedal is depressed.

(iv) Activate the relevant procedure as indicated by the relevant EV ERG for the manufacture make/model. If this requires the opening of a door or similar, then undertake this with caution. Once the EV ERG procedure has been undertaken and the vehicle is determined as SAFE then proceed as you would normally.

NOTE:
The EV ERG may also provide further specific detail as to how to complete isolate the HV system. In some case this will be by the disconnection of a main HV system plug or it may require some other procedure such as the cutting of a cable or similar. The manufacturer's information as per the EV ERG is the best information available for this process.

The Event Organiser and Event officials may need to make their own judgements in a crisis incident to determine what is immediately required to resolve a situation.

Status Notification

The status of the vehicle must be communicated to all officials involved both those directly involved and those who may be involved at a later date including the Clerk of the Course, Recovery/Tow officials, Fire officials, Scrutineers etc.

In all cases if the status cannot be confirmed through either the Status Indicators or otherwise it should be assumed the HV systems are live and that the vehicle may move should the accelerator pedal be depressed.

3 – ACT

After following the EVR steps above, and wearing the appropriate PPE, take the normal action to rectify/manage the situation.

4 – RECOVERY

Vehicle recovery can proceed as normal once the vehicle status is confirmed and appropriate PPE must be worn.

Collection of damage parts of the vehicle must be carried out with care and whilst using the appropriate PPE. Damaged parts should be returned to the vehicle and placed in the cockpit where able to do so, keeping the component away from your body and from others.

5 – REPORT

Be sure to communicate the information relating to the electrical status of the car, via the status indicators to other officials. This is especially important if the status changes during the response process. Record and report any other specific details through the normal event incident reporting process.

Important Points to Remember

Do not put yourself in danger, assess each situation before proceeding with the response.

Ensure that the required PPE is ready to use and kept in good condition. The HV parts may not be isolated so the use of the gloves ensures a level of protection is in place until such time as the vehicle is deemed completely SAFE to touch.

If unsure of the status of the vehicle proceed with caution and when touching the vehicle only use the gloved hands. For electric current to flow it must have a pathway, or circuit, to follow. This may be to the ground or back to the vehicle. A single insulated point of touch will limit the ability to create a circuit for current to flow.