



Information for First and Second Responders

Emergency Response Guide

Content

1 Identification / Recognition.....	3
1.1 GTP logo/markings.....	3
1.2 System Overview	4
2 Immobilization / Stabilization / Lifting	5
2.1 Safety lights status.....	5
2.2 Vehicle lift points.....	5
3 Disable Direct Hazards / Safety Regulations	6
3.1 Driver master Switch P1, P2	6
3.2 Driver Master Switch P0.....	6
3.3 SDC removal.....	6
4 Access to the Occupants.....	7
4.1 Medical and Safety Incidents.....	7
5 Stored Energy / Liquids / Gases / Solids.....	8
5.1 Electrical: High Voltage (780 V)	8
5.2 Chemical risk of hazardous gases.....	8
5.3 Chemical risk of corrosive liquids	8
5.4 Risk of fire at the car and surrounding area	8
5.5 Risk of battery thermal runaway.....	8
6 In Case of Fire	9
6.1 Electrical: High Voltage (780 V)	9
6.2 Chemical risk of hazardous gases.....	9
6.3 Chemical risk of corrosive liquids	9
6.4 Risk of fire at the car and surrounding area	9
6.5 Risk of battery thermal runaway.....	9
7 In Case of Submersion	10
7.1 Purposely left blank.....	10
8 Towing / Transportation / Storage	11
8.1 Tow hooks.....	11
8.2 Vehicle lift points.....	11
8.3 Area 51 (for vehicle isolation).....	11
9 Important Additional Information	12
9.1 Vehicle supported by off-board hybrid system telemetry data.....	12
10 Explanation of Pictogram Use	13
11 Change Log	15

1 Identification / Recognition



WARNING

Lack of engine noise does not mean vehicle is off. Silent movement or instant restart capability exists until vehicle is fully shut down. Wear appropriate personal protective equipment (PPE).

1.1 GTP logo/marking



1.2 System Overview

Motor Generator Unit MGU
& Gearbox

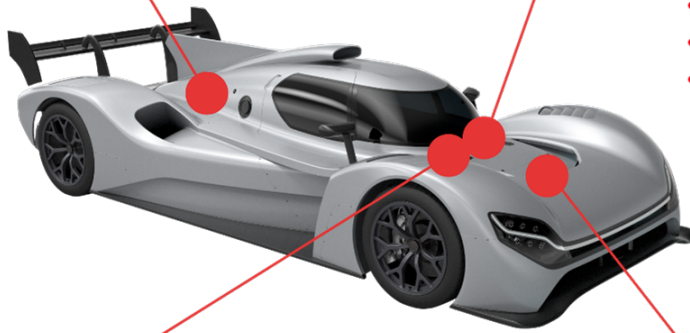


Energy Storage System ESS
& Motor Control Unit MCU



- Electric shock
- Electric arc
- Risk of fire

- Electric shock
- Electric arc
- Hazardous substance
- Risk of fire
- Thermal runaway



Hybrid Control Unit HCU



Electronic Brake System EBS



2 Immobilization / Stabilization / Lifting



WARNING

Be careful to not damage the Energy Storage System (ESS) while stabilizing / lifting the vehicle.



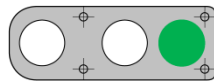
WARNING

The vehicle should be lifted or manipulated only if first responders are trained and equipped at the technician level per National Fire Protection Association (NFPA) and are familiar with the vehicle's lifting points. Use caution to ensure you never come into contact with the high voltage battery or other high voltage components while lifting or manipulating the vehicle.

2.1 Safety lights status

Green safety light status

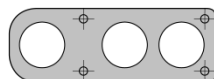
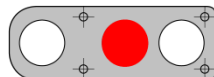
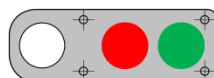
Safety lights green + race control gives green light



- Transport car off the racetrack to team pit box
- Handover of car in team box

Red light or no light

Accident and red safety lights or unknown safety lights status



- ES cover the car with insulated mat and put on the red-light panel
- Transport of car off the racetrack to a quarantine zone
- ES for live line work due to Electrical hazards
- Handover of the car in the quarantine zone

2.2 Vehicle lift points

[Vehicle lift points to be included in future release]

3 Disable Direct Hazards / Safety Regulations

3.1 Driver master Switch P1, P2

Put the DMS P1 to deactivate the HV-system.

3.2 Driver Master Switch P0

Put the DMS P0 to deactivate the LV-system.

3.3 SDC removal

Remove the SDC plug to deactivate HV-system.

4 Access to the Occupants

4.1 Medical and Safety Incidents

- IMSA approved First Aid and Medical Support Team
- Availability throughout race event

[Emergency contact: to be included in future release]

5 Stored Energy / Liquids / Gases / Solids

5.1 Electrical: High Voltage (780 V)



5.2 Chemical risk of hazardous gases



5.3 Chemical risk of corrosive liquids



5.4 Risk of fire at the car and surrounding area



5.5 Risk of battery thermal runaway



6 In Case of Fire

- Class ABC fire extinguisher for general usage
- Water fire extinguisher with Stäubli SPT05 socket for Energy Storage System dousing usage

Douse port details for dedicated fire extinguisher for Energy Storage System ESS:

- Douse port at the chassis surface is Stäubli SPT05 socket (water will not flow unless coupled)
- 9 litre water fire extinguisher refitted with SPT05 socket terminated hose will fill voids in the battery to provide significant heat removal
- Additional flow out of the douse port with a second 9 litre extinguisher beneficial if a large fire
- Water fire extinguishers charged to 7 bar which is sufficient to provide a rapid fill

6.1 Electrical: High Voltage (780 V)



6.2 Chemical risk of hazardous gases



6.3 Chemical risk of corrosive liquids



6.4 Risk of fire at the car and surrounding area



6.5 Risk of battery thermal runaway



7 In Case of Submersion

7.1 Purposely left blank

8 Towing / Transportation / Storage



WARNING

Never transport the vehicle with the tires in a position where they can spin. Doing so can lead to significant damage and overheating. In rare cases extreme overheating may cause the surrounding components to ignite.



WARNING

Possible battery re-ignition! After a fire incident, store outside at a safe distance (50ft/ 15m) from other vehicles and structures!



WARNING

The vehicle is equipped with high voltage components that may be compromised as a result of a collision. Before transporting, it is important to assume these components are energized. Always follow high voltage safety precautions (wearing personal protection equipment, etc.) until emergency response professionals have evaluated the vehicle and can accurately confirm that all high voltage systems are no longer energized. Failure to do so may result in serious injury.

8.1 Tow hooks

8.2 Vehicle lift points

8.3 Area 51 (for vehicle isolation)

9 Important Additional Information



WARNING

Always use appropriate rescue tools and always wear appropriate PPE. Failure to follow these instructions can result in serious injury or death.



WARNING

Regardless of the disabling procedure you use, **ALWAYS ASSUME THAT ALL HIGH VOLTAGE COMPONENTS ARE ENERGIZED!** Cutting, crushing, or touching high voltage components can result in serious injury or death.



WARNING

After deactivation, the high voltage circuit requires 2 minutes to de-energize.



WARNING

When using the high voltage shut down methods recommended by this document, high voltage power is isolated to the battery. The high voltage battery is always energized.

9.1 Vehicle supported by off-board hybrid system telemetry data

10 Explanation of Pictogram Use

	Electrical: High Voltage (780 V)
	Chemical risk of hazardous gases
	Chemical risk of corrosive liquids
	Risk of fire at the car or surrounding area
	Risk of battery thermal runaway
	Class ABC fire extinguisher
	H2O fire extinguisher
	High Voltage measurement equipment
	Nitril gloves
	Protective goggles
	Hexachlorine eye wash solution for HF-neutralization
	Chemical binder (sand, earth, or vermiculite)
	Fire on or near car
	OEM chief electrical specialist

	CO2 fire extinguisher
	Driver
	Driver ok
	Fire brigade
	Get first aid
	Intervention on racetrack
	Green light from race control
	Race gloves
	Helmet
	Racetrack
	Take NO action and await further instructions
	Medical interventions
	Medical check
	Car internal fire extinguisher
	Drive Master Switch DMS
	Marshal
	Robust shoes with insulated sole
	High visible, fire-resistant clothes

11 Change Log

Version No new	Version No old	Change	Date
1.1	1.0	Pictogramm H2O fire extinguisher added Change Log added	2022/08/18

Bosch Engineering GmbH

Motorsport
Robert-Bosch-Allee 1
74232 Abstatt

www.bosch-motorsport.com