Models 2021 to Present

Emergency Response Guide
0. Rescue Sheets

Page 3

2. Immobilization / stabilization / lifting

Page 6

3. Disable direct hazards / safety regulations

Page 7

4. Access to the Occupants

Page 8

5. Stored energy / liquids / gases / solids

Page 8

6. In case of fire

Page 9

7. In case of submersion

Page 9

8. Towing / transportation / storage

Page 10
## 1. Identification

| Electric Van with charging port |

## 2. Immobilization / stabilization / lifting

| Use only these lifting points |

## 3. Disable direct hazards / safety regulations

| Shutdown high voltage possible in two places |

## 4. Access to the Occupants

| Door exits |

## 5. Stored energy / liquids / gases / solids

<table>
<thead>
<tr>
<th>High voltage charge port</th>
<th>LI ON</th>
<th>Fire</th>
<th>Poison</th>
<th>Infectious</th>
<th>Oxidising</th>
<th>Corrosive</th>
<th>Flammable</th>
<th>Electrical</th>
<th>Explosive</th>
<th>Combustible</th>
<th>Radioactive</th>
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</thead>
</table>
### 6. In case of fire

<table>
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<th>Icon</th>
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Disable direct hazards from section 3 once out of the water

### 7. In case of submersion

Disable direct hazards from section 3 once out of the water

### 8. Towing / transportation / storage

Check battery temperature
2. Immobilization / stabilization / lifting

1. Apply the Parking Brake.
2. Chock the wheels to immobilize the vehicle.

⚠ CAUTION

- A transmission parking brake is NOT installed in this vehicle as is typical with a diesel / automatic transmission vehicle.
3. Disable direct hazards / safety regulations

1. Turn off and remove the ignition key.

2. Turn off the low voltage battery disconnect and disconnect all battery ground cables located under the engine access cover in the cab.

3. Turn off the HV disconnect on the High Voltage Junction Box Located under the hood.

4. Remove Manual Service Disconnects (MSDs). (only performed when wearing High Voltage Arc Flash PPE)

5. Wait 5 Minutes for the HV components to discharge.

⚠ WARNING
Always wait five (5) minutes after deactivating the high voltage prior to any work on the vehicle. The ensures the systems high voltage is properly dissipated.
4. Access to occupants

There are three door exits located in the front of the vehicle on either side.

5. Stored energy / liquids / gases / solids
6. In case of fire

Lithium-ion batteries contain liquid, flammable electrolyte.

Burning batteries can also ignite other batteries in the vicinity.

The extinguishing agent must be applied continuously until fully cooled down; otherwise, there will be a risk of a new ignition.

- A burning lithium-ion battery generally cannot be extinguished directly. Water as the extinguishing agent can be used for cooling lithium-ion batteries.
- A battery fire may continue to burn for several hours or re-ignite, so it is recommended to continue to cool the battery with excessive amounts of water.
- The temperature of the battery can be monitored with a thermal imaging camera to ensure it is not heating up.
- Re-check the temperature of the battery once an hour to ensure the temperature is not increasing. If the temperature is increasing continue to cool the battery with water.

Do not store a vehicle containing a damaged or burning lithium-ion battery within 15 feet of a structure or other vehicles.

⚠️ WARNING

Always wear appropriate PPE when fighting vehicle fires.

For fighting vehicle fires with lithium-ion batteries, no special protective equipment is required, or any additional protective equipment in addition to the PPE normally required for conventional vehicle fires.
7. In case of submersion

In the recovery of submersion or partly submerged vehicles equipped with a high-voltage system, the procedure for handling is the same as a conventional vehicle. A high-voltage system immersed in water might pose an increased risk of electric shock. Until the voltage has been proven dead by a trained professional, appropriate safety measures must be taken.

After the vehicle has been recovered from the water, follow the previously described process for disabling the high-voltage system.

⚠ **DANGER**

Handling a submerged vehicle without appropriate training and personal protective equipment (PPE) can result in serious injury or death.

A submerged vehicle should be handled by emergency personnel while wearing the appropriate PPE.

⚠ **WARNING**

Removal of a submerged service disconnect can result in an electrical short and potential fire leading to serious injury or death.

Submersion in water (especially salt water) can damage low and high voltage components. Although not a common occurrence, this could result in an electrical short and potential fire once the vehicle is no longer submerged.

⚠ **WARNING**

Damaged high voltage batteries can produce flammable gas and potential fire leading to serious injury or death.

Vent the passenger compartment once the vehicle is out of the water. Do not store vehicle in outdoors.

The high-voltage system of the MT50e is isolated from the chassis. When undamaged the system will not energize the surrounding water, even when fully submerged.

Emergency responders will check for damage and, after removing the vehicle from the water, disable the high-voltage system.
8. Towing / transportation / storage

Towing (Front Hookup Only)

⚠ **DANGER**

Be careful of electric shock caused by current flowing to the vehicle if high voltage equipment or cables are damaged.

⚠ **WARNING**

Do not tow an unbraked vehicle if the combined weight of both vehicles is more than the sum of the gross axle weight ratings (GAWR) of the towing vehicle. Otherwise brake capacity will be inadequate, which could result in personal injury or death.

**IMPORTANT**

- When it is necessary to tow the vehicle, make sure the instructions below are closely followed to prevent damage to the vehicle.

- When towing or pushing the vehicle, regardless of the distance or speed traveled remove both drive axle, axle shafts. Failure to do this when towing the vehicle with the rear wheels on the ground could result in damage to the e-Axle and other parts.

- The vehicle should never be towed from the rear. The gross axle weight rating (GAWR) of the front axle may not be sufficient to support the increased load when towing from the rear. This could damage the front axle.

- Towing rules and regulations vary from federal, state, local, and transit authority. These laws must be followed when towing the van.

1. Block the front and back of at least one of the vehicles tires so the truck can’t move during the procedure.
2. Engage the parking brake
3. Starting on the left-hand side wheel, place a drip pan under the end of the wheel hub.
4. Remove the axle shaft nuts, washers and tapered dowels if used.
5. Remove the axle shaft from the drive axle housing.

   **CAUTION:** Do not use a chisel or any other wedge device to loosen the shaft. Chisels and wedges will damage the flange of the wheel hub.

6. Place a plastic bag over the flanged end of the axle shaft first. Pull the bag over the splined end and fold it back down so you can put a couple wraps of electrical tape around the shaft holding the bag in place.
7. Now go back to the wheel end and remove the axle shaft gasket and discard.
8. Wipe the end of the hub to remove any oil.
9. Now install a wheel end cover.
10. Reinstall the wheel end fasteners and tighten in a criss-cross pattern. Do not overtighten.
11. Go to the right side of the rear-rear axle and repeat

Storage of Damaged Battery

1. If the lithium-ion battery has been damaged, it is possible that the battery can increase in temperature and lead to a fire. Use a thermal imaging camera to ensure that battery is not increasing in temperature or above 60° C. If needed initiate cooling with water.
2. Before handling the damaged battery ensure there is no smoke or signs of heat. If after observing the battery pack with no signs of heat and the high voltage system has been disabled, the battery may be moved to a safe location.
3. Ensure the damaged battery or vehicle with damaged battery has a 15 foot buffer area around it from buildings or materials.