



# **C2 Electric Bus Models 2020 to Present**

## **Emergency Response Guide**





# EMERGENCY RESPONSE GUIDE

*Jouley School Bus – C2 Electric Bus: Models 2020 to Present*

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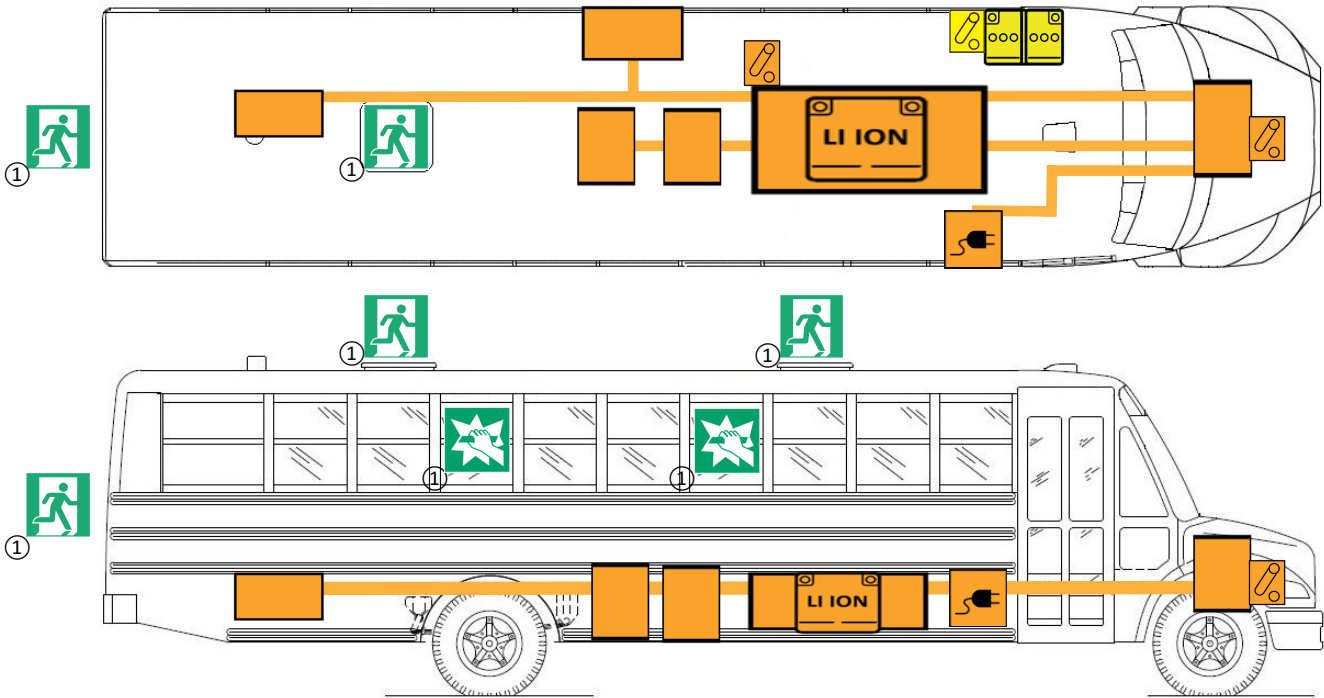
7. In case of submersion






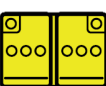




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# EMERGENCY RESCUE SHEET



 Electric Propulsion	 Charge Port	 High Voltage Li-Ion Battery	 High Voltage Component	 High Voltage Power Cable
 Low Voltage Battery	 Emergency Exit <sup>①</sup>	 Break to obtain access	 Disconnect High Voltage	 Disconnect Low Voltage












① Emergency Exits and Emergency Windows locations will vary based on State Specifications.

## WARNING

If high voltage equipment or high voltage cables (orange sheathing) are damaged due to an accident related to the equipment shown above, there may be a short circuit. Be sure to put on insulated protective gear, such as insulated clothes and gloves, before starting rescue operations.

**NEVER CUT HIGH VOLTAGE CABLES (ORANGE SHEATHING)**

# EMERGENCY RESCUE SHEET

1. Identification	
	Electric Bus 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	
	One roof exit and one rear exit. The roof exit location varies depending on state.
	Break the window to obtain access. The window varies depending on state.
5. Stored energy / liquids / gases / solids	
	   
	High voltage charge port

# EMERGENCY RESCUE SHEET

## 6. In case of fire



**Warning: Always wear appropriate fire fighter PPE when fighting vehicle fires.**



Use water as the extinguishing agent for



Monitor the battery with an thermal camera to ensure it



## 7. In case of submersion



Disable direct hazards from section 3 once out of the water

## 8. Towing / transportation / storage



Check battery temperature

## 1. Identification / recognition

The blue Thomas Built Buses logo is located aft of the entrance door and rear surface below drivers side plate recess.

(may be omitted based on state specification)



The blue Thomas Built Buses hood emblem is located forward surface, center in the hood.



\*Optional - The blue and yellow Jouley logo can be located aft of the entrance door.



## 2. Immobilization / stabilization / lifting

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

### CAUTION

- To secure the vehicle, you must engage the air parking brake by pulling / lifting the yellow park brake electric switch.



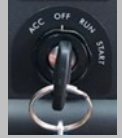
### WARNING

The parking brake is controlled by the yellow park brake electric switch. If the Low Voltage (12 volt) system is disabled, the yellow park brake electric switch is disabled. To set the park brake without power, the Service Brake pedal must be pumped to reduce air pressure until the parking brake engages.

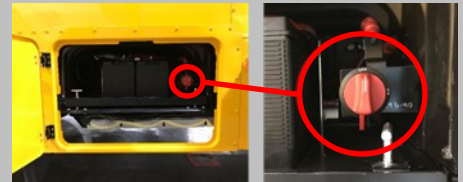


## 3. Disable direct hazards / safety regulations

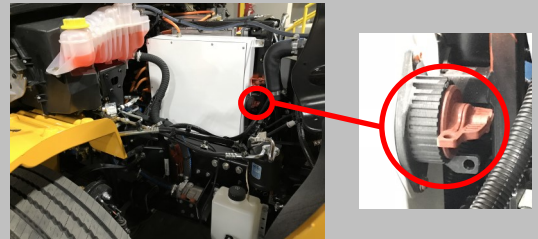
**1** Turn off and remove the ignition key.



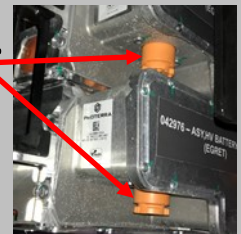
**2** Turn off the low voltage battery disconnect and disconnect all battery ground cables in the battery compartment.



**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)**



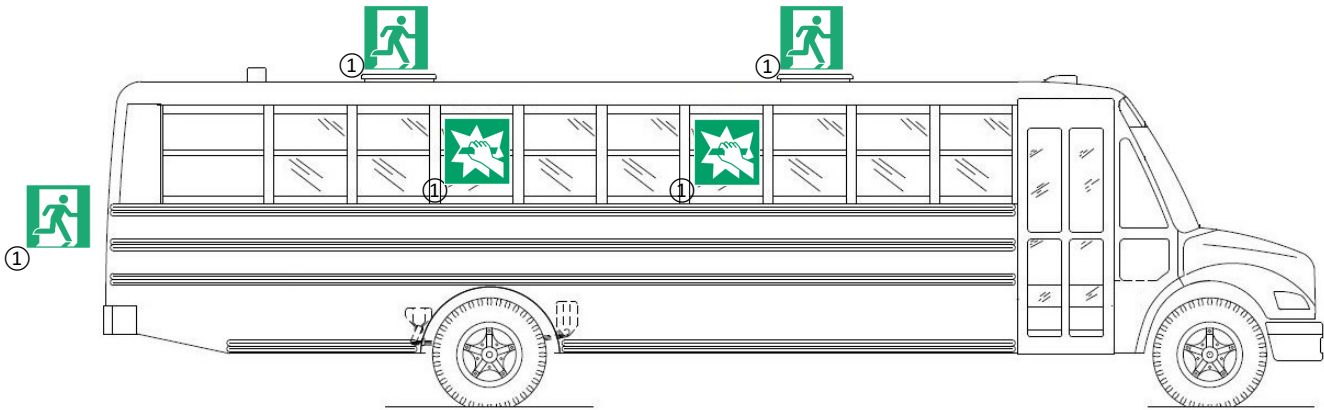
**5** Wait 5 Minutes for the HV components to discharge.



### **WARNING**

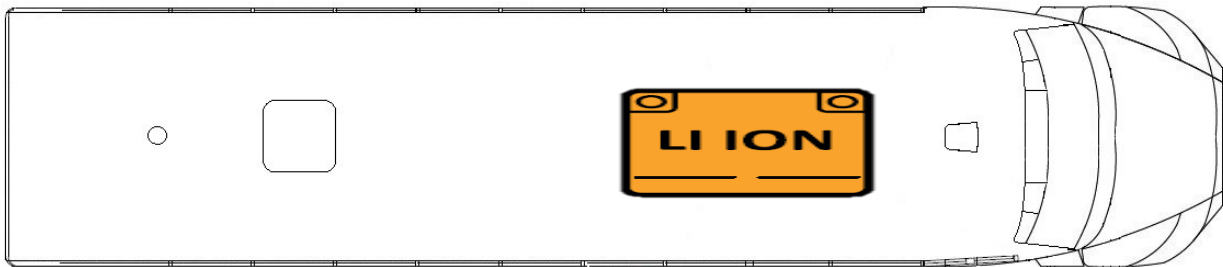
Always wait five (5) minutes after deactivating the high voltage prior to any work on the vehicle. This ensures the systems high voltage is properly dissipated.

## 4. Access to occupants



① Emergency Exits and Emergency Windows locations will vary based on State Specifications.

## 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 an thermal imaging camera to ensure it is not heating up.

### **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

### **WARNING**

**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. Don not store vehicle in outdoors.

Avoid contact with submerged high voltage system and battery in order to minimize risk. The high voltage system of the Jouley is isolated from the chassis and when undamaged the system will not energize the surrounding water, even when fully submerged. Emergency personnel will check for damage and will disable the high voltage system after removing the vehicle from the water.

## 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, either disconnect the driveshaft at the rear axle and support it as necessary, or remove the axle shafts. Failure to do this when towing the vehicle with the rear wheels on the ground could result in damage to the transmission 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 bus.
1. Disconnect the battery ground cables.
  2. Remove both drive axle shafts.
  3. Cover the ends of the hubs with metal plates or plywood cut to fit the axle opening, and drilled to fit the axle shaft studs. This prevents lubricant from leaking out and will keep contaminants from getting into and damaging the wheel bearings and axle lubricant.

**NOTICE - Failure to protect the frame rails from the chains could cause damage, leading to eventual frame failure.**

4. Remove the bumper.

5. Attach the towing device. Due to the many variables that exist in towing, positioning the lifting and towing device is the sole responsibility of the towing-vehicle operator.
6. Lift the vehicle and secure the safety chains. If extra towing clearance is needed, remove the front wheels.
7. Connect the clearance lights, taillights, and signal lights. Connect any special towing lights required by local regulations.

## **WARNING**

Failure to chock the tires or connect the tow truck's air brake system before releasing the spring parking brakes could allow the disabled vehicle to suddenly roll. This could cause property damage or personal injury.

8. Chock the tires on the disabled vehicle and connect the towing vehicle's air brake system to the vehicle being towed. Then, release the spring parking brake and remove the chocks.

## **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.