



Service Manager Bulletin

TITLE:

Volvo Electric Vehicle Technical De-Energization Permit to Work

GROUP:

00

NO:

015

ISSUING DEPARTMENT:

CAR MARKET:

United States and Canada

REVISIONS:

Further explanation of the purpose of the Permit to Work form (PTW)

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Page 1 of 4

“Right first time in Time”

Volvo’s commitment to safety includes taking into consideration the safety and preparedness of our technicians, to properly service our vehicles.

Prior to the start of any service work performed, on an electrically powered vehicle’s high voltage system, a risk assessment / safety check shall be performed. This is also known as a “Permit to Work”.

The Permit to Work document serves as an overarching communication that fully encompasses any and all electric vehicle (EV) repairs such as hybrids and battery electric vehicles. This document is not intended to replace or supersede any national, state, or local safety codes or regulations.

This Permit to Work document shall be filled out by the EV certified technician each time service work is performed on a vehicle that requires the EV Systems to be de-energized. This, for example, can include complete battery removals, lid off repairs ERAD motors or HV AC compressors etc. It also includes times when the repair takes more than one day to complete, and the technician returns to the vehicle on subsequent days.

Volvo recommends the retailer retain a copy of this completed document for a period of (7) years or as required by National, State and Local ordinances, whichever is greater.

*Retention of the Permit to Work document is required for Warranty and Technical auditing purposes. Failure to produce the Permit to Work document, when requested, could result in a debit to a claim.



Along with the use of the Permit to Work, but not all inclusive, please reference VIDA Repair information:

Section Information > Repair > General Safety Information > 3: Electrical system > 300 General Safety information for electrically powered vehicles.

High Voltage Personal Protective Equipment (HV – PPE) Recommendations and Requirements:

- **Class 0 rubber gloves to be worn at all times**
- **Leather gloves worn over Class 0* rubber gloves when removing lid or near sharp areas**
- **Minimum Z87 face shield**
- **No metal to be worn within the electric vehicle designated work area: including jewelry, belt with buckles, etc.**
- **Minimum ARC2 fire retardant long-sleeved shirt or coat**
- **Electrical hazard (EH) rated boots**

All Volvo Special Tools, designated in the VIDA Repair information, are available using normal ordering routines through Parts. Some equipment can be purchased through Wurth and the Volvo Equipment Program.

* The terms Class 0 and ICV rating of 1,000 volts are used interchangeably.



Service Manager Bulletin 00-015

Electric Vehicle Technical Permit-to-Work: High Voltage De-energization

The *Electric Vehicle Technical Permit-to-Work* documentation and procedures must be completed by one that has a current Volvo certified Electric Vehicle Technician training certification.

Section 1: Vehicle information

Repair Order #:		VIN:	
EV-PTW Number:		Date:	

Section 1B: Description of Work being Performed

RO Line Number/Letter:	
Description of diagnostics / repairs being performed:	

Section 2: Safety Controls

Safety Chains:	Must be placed 360° around the vehicle and no less than 36" from the vehicle. Distance from chains to walls/doorways meet appropriate fire code.	<input type="checkbox"/> YES
Warning Sign:	Warning signs applied visibly on three (3) sides around the Electric Vehicle work area (secured to safety chains)	<input type="checkbox"/> YES
Prohibition Sign:	"Must not be operated. Work in progress." The sign must be fitted or hung fully visible on the vehicle, contact details for the person responsible must be stated.	<input type="checkbox"/> YES
Site Assessment:	Site verified to be free of ceiling leaks, no trip hazards, and provided with appropriate accessibility for emergency response personnel	<input type="checkbox"/> YES
Personnel CPR:	Volvo Cars highly recommends that all personnel in the Electric Vehicle work area are CPR certified. Identify each role and their CPR certification: <input type="checkbox"/> YES, the technician performing the work is CPR certified <input type="checkbox"/> YES, the assistant with the emergency rescue hook is CPR certified <input type="checkbox"/> NO, the technician performing the work is NOT CPR certified <input type="checkbox"/> NO, the assistant with the emergency rescue hook is NOT CPR certified	
Assistance:	Technician assistant at electric vehicle work site is equipped with emergency hook and is Volvo Electric Vehicle Awareness trained.	<input type="checkbox"/> YES

Section 2B: High Voltage Personal Protective Equipment (HV-PPE)

Gloves*:	Minimum Class 0* rated Rubber gloves with available with tester. Leather outer gloves to be worn when near sharp objects.	<input type="checkbox"/> YES
Protective Visor*:	Minimum Z87 rated face shield.	<input type="checkbox"/> YES
Clothing*:	Minimum ARC2 rated Non-melting clothing being worn, long sleeve shirt or coat	<input type="checkbox"/> YES

Section 3: Tools and Equipment

1	Company emergency response procedures and evacuation plans are known and understood	<input type="checkbox"/> YES
2	Class 0* rated Emergency hook is available	<input type="checkbox"/> YES
3	Voltage Tester with Cat3 rating	<input type="checkbox"/> YES
4	All vehicle remotes removed from vehicle and placed a minimum of ten (10) feet from vehicle	<input type="checkbox"/> YES
5	Approved and current Volvo diagnostic and repairs procedures available with VIDA access	<input type="checkbox"/> YES
6	Volvo Cars highly recommends a functioning defibrillator charged and available in the Electric Vehicle work area. Identify the current status of the defibrillator: <input type="checkbox"/> YES, a defibrillator is available in the Electric Vehicle work area <input type="checkbox"/> NO, a defibrillator is not available in the Electric Vehicle work area	

Service Manager Bulletin 00-015



Section 4: Authorization

I confirm all the above precautions, safety requirements, tools, and equipment are available as described within their sections. I confirm that I hold the minimum certifications for Volvo Electric Vehicle Technician (EVT).

Electric Vehicle Technician (EVT) – Signature:

Print Name:

Date:

I confirm all the above precautions, safety requirements, tools, and equipment are available as described within their sections. I confirm that I hold the minimum certifications for Volvo Electric Vehicle Awareness and will be at the Electric Vehicle work area during the High Voltage De-Energization process.

Electric Vehicle Awareness Technician (EVAT) – Signature:

Print Name:

Date:

Section 5: High Voltage De-Energization

1	VIDA procedure available	<input type="checkbox"/> YES
2	Isolation/Safety lock devices installed as described below: <ul style="list-style-type: none"> <input type="checkbox"/> All vehicle remotes a minimum of 10 feet from vehicle <input type="checkbox"/> Charge Port <input type="checkbox"/> Manual Service Disconnect (MSD) 	<input type="checkbox"/> YES
3	High Voltage De-Energization successful and vehicle is ready for diagnostics/repairs OR High Voltage De-Energization was NOT successful, and vehicle will be quarantined. (Condition being escalated to the Retailer Technical Support through TIE)	<input type="checkbox"/> YES: (Ready for Repairs) <input type="checkbox"/> NO: (NOT ready for repairs)

Section 6: Cancellation of Electric Vehicle Technical Permit-to-Work

1	Vehicle repairs are complete per VIDA instructions and vehicle IS ready to be re-energized OR	<input type="checkbox"/> YES: (Ready for energization)
2	Vehicle repairs are NOT complete and therefore NOT ready to be re-energized	<input type="checkbox"/> NO: (NOT ready for energization)
Copy of Permit to Work document has been made and will be stored for (7) years.		<input type="checkbox"/> YES

Electric Vehicle Technician (EVT) – Signature:

Print Name:

Date:

Section 7: High Voltage Re-Energization (if applicable)

1	Approved and current Volvo procedures available with VIDA access.	<input type="checkbox"/> YES
2	High Voltage Re-Energization successful OR High Voltage De-Energization was NOT successful, and vehicle will be quarantined. (Condition being escalated to Retailer Technical Support through TIE)	<input type="checkbox"/> YES (Vehicle IS energized) <input type="checkbox"/> NO: (Vehicle is NOT energized)

Electric Vehicle Technician (EVT) – Signature:

Print Name:

Date: