
Vehicle Electrification System Standards

III. High Voltage Vehicle Safety Systems

III.a Introduction to High Voltage Vehicle Safety Systems

OEM Acronyms:

DVOM – Digital Volt-Ohm Meter

Description:

High voltage vehicle safety systems provide layers of safety to vehicle operators, technicians, and engineers by ensuring that high voltage energy is not permitted to be transferred onto the high voltage bus when the vehicle is powered off and/or disabled.

Outcome (Goal):

Students will be able to identify high voltage vehicle safety systems on hybrid, plug-in, or electric vehicles by utilizing OEM wiring diagrams and using a DVOM.

Objective:

When provided with a hybrid, plug-in, or electric vehicle or sub-system components, students will be able to visually identify high voltage vehicle safety system components.

Task:

Students will use the OEM vehicle service information and determine the location of discrete high voltage vehicle safety system components.



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Northwest Engineering and Vehicle Technology Exchange (NEVTEX)

Advanced Vehicle Technician Standards Committee (AVTSC)

Required Special Tools and/or Equipment to Complete Task:

n/a

Instructor Demonstrations (System Operation, Testing, Servicing, Repair):

Use OEM service information, spare (de-energized) high voltage components, and a training vehicle to demonstrate how to locate high voltage vehicle safety systems.

Information Resources to support Tasks, Demonstrations, Repairs, etc.:

OEM service information

Suggested Vehicle for Tasks and Demonstrations:

Available vehicles

Governing Standards (Safety, Testing, Diagnostics or Repair):

n/a

Industry Resource Organization:

- Society of Automotive Engineers (SAE)
 - Institute of Electrical & Electronic Engineers (IEEE)
 - International Electrotechnical Commission (IEC)
 - American Society for Testing and Materials (ASTM)
 - Occupational Safety & Health Administration (OSHA)
 - National Fire Protection Association (NFPA)
 - Underwriters Laboratories (UL)
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