Vehicle Electrification System Standards

II. High Voltage Safety and Personal Protective Equipment

II.b High Voltage Wire and Cable

OEM Acronyms:

n/a

Description:

High voltage wire and cable utilizes an orange covering and routes high voltage energy to components connected on the high voltage bus.

Outcome (Goal):

Students shall be able to visually identify high voltage wire and cable on a hybrid, plug-in, or electric vehicle.

Objective:

When provided with a hybrid, plug-in, or electric vehicle, students shall be able to visually identify all high voltage wire and cable with 100% accuracy.

Task:

Using the chassis diagram provided, locate all high voltage cables on the classroom vehicle and the component connected to them and draw a block diagram of high voltage cables, components, and connections.

Required Special Tools and/or Equipment to Complete Task:

Basic hand tools; vehicle lift

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

Use a video recording to demonstrate how to identify high voltage wire and cable on a hybrid, plug-in, or electric vehicle.

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

OEM Service Information

Suggested Vehicle for Tasks and Demonstrations:

Any production-level hybrid, plug-in, or electric vehicle that is onsite.

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

J1673 - High Voltage Wire and Cable

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)

To comment or offer suggestions on this standard, contact Ken Mays:

Ken Mays	**NEVTEX**
541-383-7753	kmays@cocc.edu