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## Fuel Cell Standards

### XVI. Fuel Cell Stack

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## XVI.b Fuel Cell System Schematics

### Overview:

Classroom and lab instruction on reading and understanding both electrical and mechanical schematics

- Industrial symbology for both electrical and gas handling systems
- Reading a schematic and understanding gas flows
- Schematic representations versus actual components
- Where to find schematic representation in OEM service procedures

### Description:

The ability to read electrical and mechanical schematics and applying that skill to actual systems is important to more complex troubleshooting problems and for the safe repair of systems

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### Outcome (Goal):

Students will be able to identify high/low pressure and high/low voltage vehicle systems on fuel cell vehicles by utilizing OEM wiring and mechanical schematic diagrams and match components on the diagram to an actual component or connector.

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### Objectives:

Students shall be able to:

1. Identify fuel cell specific components and locations in mechanical schematic representations



2. Identify fuel cell specific components and locations in electrical schematic representations
  3. Match either pictures or actual components to symbols on the schematics
  4. Identify ports and piping junction to actual components
  5. Identify connector pinouts to actual connector positions
  6. Reference OEM service procedures to find critical information.
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Tasks:

Students will

1. Given a vehicle match the mechanical schematic to actual components by using OEM service instructions.
  2. Given a vehicle will match the electrical schematic to actual components by using OEM service instructions.
  3. Given a generic mechanical schematic show the flow of gas on the mechanical schematic
  4. Will be able to associate actual vehicle high voltage cables and buss bars with cables or buss bars on a vehicle electrical schematic by using OEM service instructions.
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NSF / ATE Grant Award # 1700708

Northwest Engineering and Vehicle Technology Exchange (NEVTEX)

Advanced Vehicle Technician Standards Committee (AVTSC)