
Fuel Cell Standards

XVII. Cathode Subsystem

XVII.i Humidification Unit

Overview:

Classroom and lab topics

- Primary functions of the humidification unit
- Humidification methodologies
- Schematic representations versus actual components
- Trouble codes associated with humidification faults

Description:

The Humidification unit is responsible for injecting or migrating water vapor from the exhaust of the fuel cell to upstream of the fuel cell in the cathode subsystem before supplying it to the cathode side of the fuel cell membrane. Lack of sufficient or excessive humidification to the stack can result in poor performance and reduced life.

Outcome (Goal):

Student will be able to explain the functions of the humidification system and different methodologies for achieving humidification within the fuel cell stacks requirements



Objectives:

Students shall be able to:

1. When provided with a vehicle student will be able to identify the humidification unit
 2. Identify air leaks and repair
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Tasks:

Students will

1. Students will use a schematic, OEM service instructions and an OEM vehicle or complete fuel cell system to identify the humidification unit location and major connections and valves
 2. Remove and replace the humidification unit if serviceable using the OEM service procedures
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To comment or offer suggestions on this standard, contact Ken Mays:

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