
Fuel Cell Standards

XVIII. Anode Subsystem

XVIII.f Anode Outlet Valve

Overview:

Classroom and lab topics

- Primary functions of the anode outlet in an OEM system
- Electromechanical operation of the valve
- Schematic representations versus actual components
- Trouble codes associated with anode outlet valve errors
- Anode valve normal position under various operating conditions

Description:

The anode subsystem is generally dead ended so that unreacted hydrogen is not exhausted. This requires mechanisms to rapidly reduce the anode pressure if needed during operation or at stack shutdown while maintaining a pressure seal during normal operation and after shutdown. This is usually accomplished by an anode outlet valve.

Outcome (Goal):

Student will be able to explain the functions of the anode outlet valve.

Objectives:

Students shall be able to:

1. When provided with a vehicle student will be able to identify and troubleshoot the anode outlet valve
2. Identify hydrogen leaks and repair
3. Inspect anode outlet valve system



4. Understand anode valves, their operations and normal position under various operating conditions
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Tasks:

Students will

1. Students will use a schematic, OEM service instructions and an OEM vehicle identify any anode outlet valve locations
 2. When provided with a vehicle student will be able to identify and troubleshoot the anode outlet valve
 3. Remove and replace the anode outlet valve using OEM service instructions
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To comment or offer suggestions on this standard, contact Ken Mays:

Ken Mays

NEVTEX

541-383-7753

kmays@cocc.edu

