
Fuel Cell Standards

XVII. Cathode Subsystem

XVII.b Air Filtration System

Overview:

Classroom and lab review of

- Primary functions of the air filtration system
 - OEM filters and special coating to remove harmful ions
 - Logic in determination of air filtration faults
 - Faults caused by air flow restriction in the filter
 - Review of air filter maintenance requirements in OEM service instructions
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Description:

The air filtration unit filters the high volume of air required for the cathode subsystem. It acts as a barrier to small particulates and detrimental ions. It smooths the flow of air across the mass flow sensor and mitigates the sound created by the inrush of large volumes of air at high power.

Outcome (Goal):

Student will be able to explain the functions, service, and test for faults of the air filtration system

Objectives:

Students shall be able to:

1. Identify air leaks and repair



2. Locate, inspect and replace the air filter
3. Identify faults with the air filtration system.
4. Utilize OEM service information as a resource to perform inspection and testing of the air filtration system.

Tasks:

Students will

1. Locate, remove and replace the air filtration assembly using OEM service instructions
2. Remove and replace the air filter using OEM service instructions
3. List air filter inspection and replacement frequencies using OEM service instructions
4. Identify faults associated with the air filtration system (Question: Is there a specific tool that students will use to identify the faults? Example: Is Mass Airflow gr/sec of air used for testing/determining faults??)

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

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