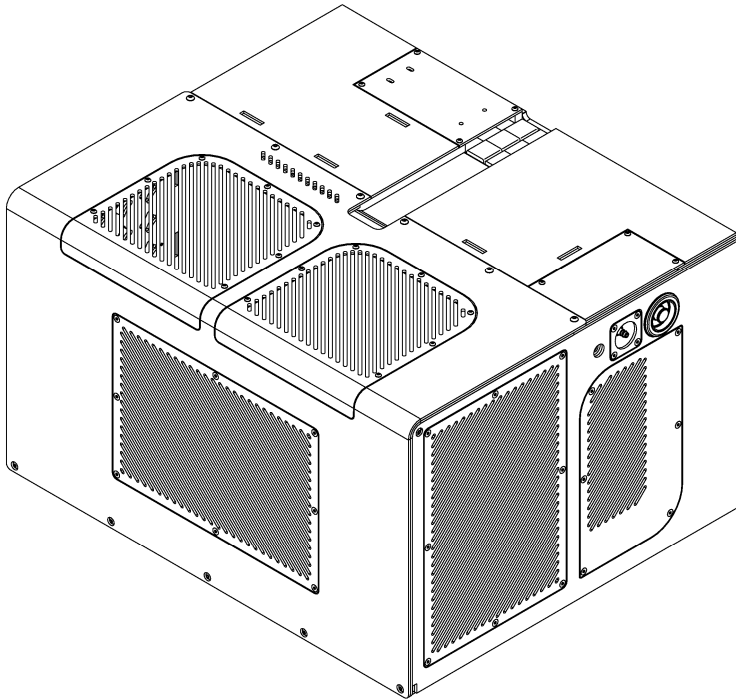


Service Manual

Fuel Cell System-Installation

C95A-33



NUMERA®



31001933 | **04/2017**

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Safety information

The following safety precautions must be observed at all times when operating the fuel cell power system.

NOTE: The following symbols and terms indicate safety information in this manual:



Indicates a hazardous situation that will lead to personal injury or death.



Indicates a hazardous situation which, if not avoided, could result in death or serious injury.



Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury and property damage.

General Information

General hazards, warnings, and cautionary statements

WARNING

Fuel cells are heavy and can cause injury. **DO NOT** put hands, arms, feet or legs between the fuel cell and a solid object.

WARNING

Before connecting the fuel cell, make sure the key or keyless switch is in the OFF position and the parking brake is set.

WARNING

Make sure the capacity of the crane and adjustable 4-point lifting chain is greater than the weight of the fuel cell. The weight of the fuel cell is shown on the fuel cell nameplate.

WARNING

The replacement fuel cell must fit the battery compartment area correctly. Adjust the front spacer plate to prevent fuel cell movement in the battery compartment. Make sure that the fuel cell voltage and weight of the replacement fuel cell are correct as shown on the Nameplate.

1. Read this manual and other relevant documentation in its entirety before operating this equipment. This manual provides specific guidelines for proper installation of the fuel cell system.
2. Ensure that all operators are trained in the proper use of these systems. Provide all operators with a copy of this manual and the fuel cell system operator manual for reference before installing the system.

CAUTION

There are hot surfaces, rotating parts, and hazardous electrical equipment inside the enclosure that could cause burns, cuts, and other injuries. Do not service if any covers are loose or missing.

3. Before installation, perform an inspection of the system to eliminate unwanted material that can hinder operation of the system or create a hazardous situation.
4. **Removal and installation of the fuel cell must be facilitated by a Nuvera approved service technician. All lifting equipment including the lifting eyes and lifting eye fasteners must be provided by Nuvera.**

General Information

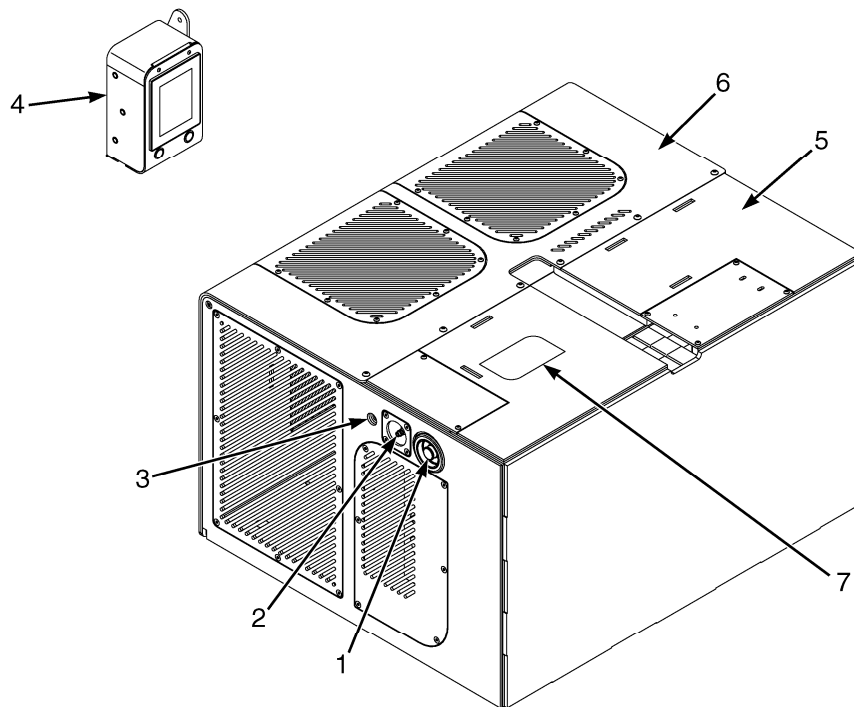
5. **DO NOT perform any maintenance or repairs on the fuel cell system. All maintenance should be performed by an authorized service provider or a Nuvera Fuel Cells LLC. representative.**
Unauthorized maintenance or repairs without proper certifications and training could result in a hazardous situation. Unauthorized maintenance or repairs may also void all warranties on the system.
6. If the fuel cell system appears damaged, broken, or unsafe to operate for any reason, do not install. Contact your authorized local service provider.
7. If a hazardous situation is discovered with the fuel cell system, such as an external or internal fire or large escape of flammable gas, do not install. Contact your authorized local service provider.
8. The fuel cell system is for indoor use only. Not rated for high humidity, wet, or rainy conditions.
9. Do not spray or power wash the fuel cell system with any liquids.
10. The fuel cell system is not rated for use below -4°F (-20° C) or above 113°F (45°C). Do not store or leave unattended in freezer.
11. The fuel cell system uses oxygen from the area in which it is being used, and should not be used in areas of tight construction with inadequate air ventilation.
12. Use only with NFPA Type E or Type CGH industrial electric trucks.

CAUTION

Fuel cells must be discarded according to local environmental regulations. Please contact Nuvera for additional information.

About the Nuvera® Fuel Cell System

Components of the Nuvera® Fuel Cell System



BC990029

Figure 1. External fuel cell system components

Item	Component	Component Description
1	Fueling connector port	Contains a fitting for attaching the dispenser nozzle during fueling.
2	Dewatering connector port	Contains a fitting for attaching the dewatering hose.
3	Dispenser interface connector	Contains a connector for the dispenser interface cable.
4	Human-Machine Interface (HMI)	Allows the operator to monitor functions of the fuel cell system from the truck operator compartment.
5	High pressure (Fuel) compartment	Also called the fuel compartment. Houses the hydrogen gas storage tanks, plumbing and control devices.
6	Low pressure compartment	Houses the fuel cell stack sub-system, pumps and other components, thermal management, hybrid power system, and power electronics.
7	Nameplate	Contains information such as model number, serial number and other specifications.